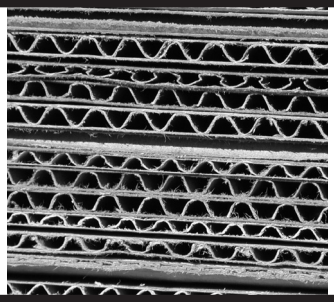
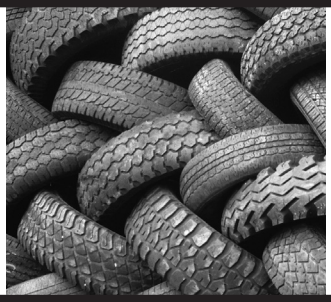
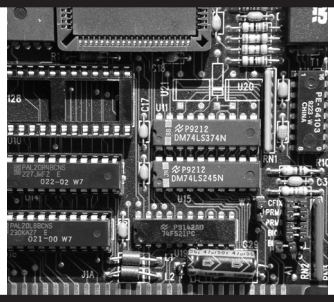
SCRAP SPECIFICATIONS CIRCULAR

2016

GUIDELINES FOR NONFERROUS SCRAP • FERROUS SCRAP • GLASS CULLET

PAPER STOCK • PLASTIC SCRAP • ELECTRONICS SCRAP • TIRE SCRAP

EFFECTIVE 1/21/2016

ISRI
Voice of the Recycling Industry™
Institute of Scrap Recycling Industries, Inc.

Scrap Specifications Circular 2016

Guidelines for

Nonferrous Scrap

Ferrous Scrap

Glass Cullet

Paper Stock

Plastic Scrap

Electronics Scrap

Tire Scrap

EFFECTIVE 1/21/2016

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PREFACE

The standard specifications included in this Circular are intended to assist members in the buying and selling of their materials and products.

These specifications are derived from many sectors of the metals, paper stock, plastics, glass, and electronics industries and are constructed to represent the quality or composition of the materials bought and sold in the industry. The specifications are internationally accepted and are used throughout the world to trade the various commodities.

Parties to a transaction may specify particular variations or additions to these specifications as are suited for their specific transactions and for their individual convenience. Any deviation from the standard specifications, however, should be mutually agreed to and so stipulated in writing by the parties to the transactions.

ISRI maintains an Arbitration Service as a means of enabling members to settle differences between themselves or between one of them and a non-member.

In addition, the "Guidelines for Metals Transactions" contain supplementary information that will aid members in completing their business transactions. It is recommended that these Guidelines be reviewed and that members use them in conjunction with the actual specifications in the conduct of their business.

ISRI's *Scrap Specifications Circular* is posted in PDF format at least once per year on the ISRI web site. To ensure you have the most up-to-date version, visit www.isri.org/specs.

Issued by:

ISRI
Voice of the Recycling Industry™

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Industries, Inc.

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CIRCULAR 2016 BECAME EFFECTIVE Jan. 21, 2016,
AND PREVAILS UNTIL SUPERSEDED.

Rules Governing the Procedures for the Addition, Amendment, or Withdrawal of Specifications

1.0 *Initiation of Request.* Any person may file a request to add, amend or withdraw a specification by submitting such request in writing to the ISRI President.

2.0 The President shall refer such request to the Chairman of ISRI's Specifications Committee (the "Committee"), with copies to:

A. ISRI's Officers;

B. The chairman of any ISRI Division and/or Committee that might be affected by the specification.

3.0 *Notice.* Following its receipt, notice of the request shall be inserted in the *ISRI Focus* and a daily national trade publication such as *American Metal Market*. Such notice shall state:

A. The date, time and place at which the request will be considered by the Committee;

B. That the proceeding at which the request will be considered shall be open to the public;

C. That interested parties may participate in the proceeding by personal appearance or by submitting written comments;

D. A summary of the specification and the matter to be considered at the hearing.

4.0 *Committee Action.* Following presentation by all interested parties, the Committee shall review the request and:

A. Act upon it immediately, as set forth in Section 4.1; or

B. Refer it to a subcommittee for review and recommendation for action by the full Committee at its next meeting.

4.1 The Committee shall summarize the positions advocated by the various parties interested in the request and recommend to ISRI's Board of Directors what action should be taken.

5.0 *Board of Directors Action.* The Board of Directors, at its quarterly meeting at which the report and recommendation of the Committee has been made, shall adopt, amend, or reject the recommendation or table it pending further review and recommendation by the Committee.

5.1 Notice of the action taken by the Board shall be given to all interested parties who actively participated in the Committee proceeding and any other persons who have requested in writing notice of the Board's action. Notice of said action also shall be inserted in the *ISRI Focus* following the Board meeting at which said action was taken.

6.0 *Appeal.* On or before thirty days after the date of the notice required in Section 5.1, any party may appeal the decision of the Board by written notice to the President. Said appeal shall state the reasons thereof and the requested action to be taken. Notice of said appeal shall be given in accordance with Section 3.0.

6.1 The appeal shall be heard by the Board at its next quarterly meeting following receipt thereof.

6.2 The appellant and all interested parties shall be given at least twenty days notice of the date, time and place of the hearing, and like notice shall be inserted in the *ISRI Focus* at least twenty days prior to the hearing.

6.3 At the hearing, the appellant and any other interested party may appear either in person or by written presentation and state their reasons for the appeal.

6.4 The Board, following said hearing, shall review and act upon the appeal request. Notice of the Board's action shall be given in accordance with Section 5.1.

7.0 *Records.* ISRI shall maintain for not less than five years following the date of termination of the proceedings, records of the original request, summaries of the deliberations and recommendations of the Committee, action of the Board, summaries of the appeal and final decision, if any, of the Board, together with the positions of interested parties, copies of notices sent to interested parties and inserted in the *ISRI Focus* and national trade publications, written statements, and the reasons for recommendation and final action by the Committee and the Board.

7.1 Said records shall be available for review by the public upon reasonable notice.

Guidelines for Nonferrous Scrap: NF-2016

Note: When the individual scrap grades in this Circular, denoted by the various code words, are used, an agreement between parties is also bound by the terms of "Apple" as it appears below, unless the terms and conditions of a specific contract provide otherwise, in which case the specific contractual provisions shall govern.

CODE ITEM

Apple **Nonferrous Terms**

a. Delivery of more or less of the specified quantity up to 3 percent is permissible.

b. A ton shall be understood to be 2,000 pounds, unless otherwise specified.

c. If any portion of the goods covered by a contract are unshipped or undelivered within the time specified in a contract, then that portion is subject to cancellation by the buyer and/or the buyer has the right to hold the seller responsible for substantiated damages.

If, because of embargo and/or other conditions of force majeure, a delivery or shipment cannot be made by the time specified, the contract shall remain valid and shall be completed promptly upon lifting of the embargo and/or conditions of force majeure and the terms of said contract shall not be changed.

d. If for any portion of a contract the buyer fails in a timely manner to open a Letter of Credit and/or fails to provide proper conveyance and/or shipping instructions as specified in the contract, then that portion is subject to cancellation by the seller and/or the seller has the right to hold the buyer responsible for substantiated damages.

If, because of embargo and/or other conditions of force majeure, a delivery or shipment cannot be made by the time specified, the contract shall remain valid and shall be completed promptly upon lifting of the embargo and/or conditions of force majeure and the terms of said contract shall not be changed.

e. If a significant weight or quality difference is apparent, the seller should be notified promptly and, if requested, another weight or quality determination should be taken. Seller and/or buyer should be given the opportunity to appoint an independent surveyor or a representative to verify weights and/or quality.

For purposes of this section, the meaning of the word "significant" shall be determined by agreement between buyer and seller, depending on the commodities and their values.

f. If it is mutually determined that goods delivered do not conform to the description specified in the contract, then the shipment is subject to rejection or downgrade.

Disposition of, replacement of, and/or financial adjustment for rejected material shall be subjected to mutual agreement between buyer and seller. Seller is responsible for freight costs.

Buyer is expected, however, to exert every effort to limit rejections only to that portion of the shipment which is unsortable and to return the rejected portion promptly upon request, if government regulations permit.

RED METALS

Barley **No. 1 COPPER WIRE**
Shall consist of No. 1 bare, uncoated, unalloyed copper wire, not smaller than No. 16 B & S wire gauge. Green copper wire and hydraulically compacted material to be subject to agreement between buyer and seller.

Berry **No. 1 COPPER WIRE**
Shall consist of clean, untinned, uncoated, unalloyed copper wire and cable, not smaller than No. 16 B & S wire gauge, free of burnt wire which is brittle. Hydraulically briquetted copper subject to agreement.

Birch **No. 2 COPPER WIRE**
Shall consist of miscellaneous, unalloyed copper wire having a nominal 96% copper content (minimum 94%) as determined by electrolytic assay. Should be free of the following: Excessively leaded, tinned, soldered copper wire; brass and bronze wire; excessive oil content, iron, and non-metallics; copper wire from burning, containing insulation; hair wire; burnt wire which is brittle; and should be reasonably free of ash. Hydraulically briquetted copper subject to agreement.

Candy **No. 1 HEAVY COPPER**
Shall consist of clean, unalloyed, uncoated copper clippings, punchings, bus bars, commutator segments, and wire not less than 1/16 of an inch thick, free of burnt wire which is brittle; but may include clean copper tubing. Hydraulically briquetted copper subject to agreement.

Cliff **No. 2 COPPER**
Shall consist of miscellaneous, unalloyed copper scrap having a nominal 96% copper content (minimum 94%) as determined by electrolytic assay. Should be free of the following: Excessively leaded, tinned, soldered copper scrap; brasses and bronzes; excessive oil content, iron and non-metallics; copper tubing with other than copper connections or with sediment; copper wire from burning, containing insulation; hair wire; burnt wire which is brittle; and should be reasonably free of ash. Hydraulically briquetted copper subject to agreement.

Clove **No. 1 COPPER WIRE NODULES**
Shall consist of No. 1 bare, uncoated, unalloyed copper wire scrap nodules, chopped or shredded, free of tin, lead, zinc, aluminum, iron, other metallic impuri-

CODE ITEM

ties, insulation, and other foreign contamination. Minimum copper 99%. Gauge smaller than No. 16 B & S wire and hydraulically compacted material subject to agreement between buyer and seller.

Cobra **No. 2 COPPER WIRE NODULES**
Shall consist of No. 2 unalloyed copper wire scrap nodules, chopped or shredded, minimum 97% copper. Maximum metal impurities not to exceed 0.50% aluminum and 1% each of other metals or insulation. Hydraulically compacted material subject to agreement between buyer and seller.

Cocoa **COPPER WIRE NODULES**
Shall consist of unalloyed copper wire scrap nodules, chopped or shredded, minimum 99% copper. Shall be free of excessive insulation and other non-metallics. Maximum metal impurities as follows:

Aluminum	.05%	Antimony	.01%
Tin	.25%	Iron	.05%
Nickel	.05%		

Hydraulically compacted material subject to agreement between buyer and seller.

Dream **LIGHT COPPER**
Shall consist of miscellaneous, unalloyed copper scrap having a nominal 92% copper content (minimum 88%) as determined by electrolytic assay and shall consist of sheet copper, gutters, downspouts, kettles, boilers, and similar scrap. Should be free of the following: Burnt hair wire; copper clad; plating racks; grindings; copper wire from burning, containing insulation; radiators and fire extinguishers; refrigerator units; electrotype shells; screening; excessively leaded, tinned, soldered scrap; brasses and bronzes; excessive oil, iron and non-metallics; and should be reasonably free of ash. Hydraulically briquetted copper subject to agreement. Any items excluded in this grade are also excluded in the higher grades above.

Drink **REFINERY BRASS**
Shall contain a minimum of 61.3% copper and maximum 5% iron and to consist of brass and bronze solids and turnings, and alloyed and contaminated copper scrap. Shall be free of insulated wire, grindings, electrotype shells and non-metallics. Hydraulically briquetted material subject to agreement.

Droid **INSULATED COPPER WIRE SCRAP**
Shall consist of No. 2 copper wire (see Birch) with various types of insulation. To be sold on a sample or recovery basis, subject to agreement between buyer and seller. Existence of jelly wire subject to agreement between buyer and seller.

Drove **COPPER-BEARING SCRAP**
Shall consist of miscellaneous copper-containing skimmings, grindings, ashes, irony brass and copper, residues and slags. Shall be free of insulated wires; copper chlorides; unprepared tangled material; large motors; pyrophoric material; asbestos brake linings; furnace bottoms; high lead materials; graphite crucibles; and noxious and explosive materials. Fine powdered material by agreement. Hydraulically briquetted material subject to agreement.

CODE ITEM

Druid **INSULATED COPPER WIRE SCRAP**
Shall consist of No. 1 bare, uncoated, unalloyed copper wire (see Barley), not smaller than No. 16 B & S wire gauge (unless smaller wire gauge is mutually agreed upon), with various types of insulation. To be sold on sample or recovery basis, subject to agreement between buyer and seller.

Ebony **COMPOSITION OR RED BRASS**
Shall consist of red brass scrap, valves, machinery bearings and other machinery parts, including miscellaneous castings made of copper, tin, zinc, and/or lead. Shall be free of semi-red brass castings (78% to 81% copper); railroad car boxes and other similar high-lead alloys; cocks and faucets; closed water meters; gates; pot pieces; ingots and burned brass; aluminum, silicon, and manganese bronzes; iron and non-metallics. No piece to measure more than 12″ over any one part or weigh over 100 lbs. Heavier pieces acceptable upon mutual agreement between buyer and seller.

Ebulent **LEAD-FREE BISMUTH BRASS SOLIDS**
Shall consist of scrap castings alloyed with copper, tin, bismuth, and zinc. Castings shall be free of leaded brass attachments and have less than 0.2% alloyed lead or as agreed between buyer and seller. Examples that meet this specification include, but are not limited to, CDA 89833/35/36/37/41/42 and 45.

Ecstatic **LEAD-FREE BISMUTH BRASS TURNINGS**
Shall consist of scrap borings and turnings alloyed with copper, tin, bismuth, and zinc. Turnings shall be unmixed and have less than 0.2% alloyed lead or as agreed between buyer and seller. Examples that meet this specification include, but are not limited to, CDA 89833/35/36/37/41/42 and 45.

Eland **HIGH GRADE—LOW LEAD BRONZE/BRASS SOLIDS**
It is recommended these materials be sold by analysis.

Elder **GENUINE BABBITT-LINED BRASS BUSHINGS**
Shall consist of red brass bushings and bearings from automobiles and other machinery, shall contain not less than 12% high tin-base babbitt, and shall be free of iron-backed bearings.

Elias **HIGH LEAD BRONZE SOLIDS AND BORINGS**
It is recommended that these materials be sold on sample or analysis.

Enerv **RED BRASS COMPOSITION TURNINGS**
Shall consist of turnings from red brass composition material and should be sold subject to sample or analysis.

Engel **MACHINERY OR HARD BRASS SOLIDS**
Shall have a copper content of not less than 75%, a tin content of not less than 6%, and a lead content of not less than 6% nor more than 11%, and total impurities, exclusive of zinc, antimony, and nickel of not more than 0.75%; the antimony content not to exceed 0.50%. Shall be free of lined and unlined standard red car boxes.

CODE	ITEM
Erin	**MACHINERY OR HARD BRASS BORINGS** Shall have a copper content of not less than 75%, a tin content of not less than 6%, and a lead content of not less than 6% nor more than 11%, and the total impurities, exclusive of zinc, antimony, and nickel of not more than 0.75%; the antimony content not to exceed 0.50%.
Fence	**UNLINED STANDARD RED CAR BOXES (CLEAN JOURNALS)** Shall consist of standard unlined and/or sweated railroad boxes and unlined and/or sweated car journal bearings, free of yellow boxes and iron-backed boxes.
Ferry	**LINED STANDARD RED CAR BOXES (LINED JOURNALS)** Shall consist of standard babbitt-lined railroad boxes and/or babbitt-lined car journal bearings, free of yellow boxes and iron-backed boxes.
Grape	**COCKS AND FAUCETS** Shall consist of mixed clean red and yellow brass, including chrome or nickel-plated, free of gas cocks, beer faucets, and aluminum and zinc base die cast material, and to contain a minimum of 35% semi-red.
Honey	**YELLOW BRASS SCRAP** Shall consist of mixed yellow brass solids, including brass castings, rolled brass, rod brass, tubing and miscellaneous yellow brasses, including plated brass. Must be free of manganese-bronze, aluminum-bronze, unsweated radiators or radiator parts, iron, and excessively dirty and corroded materials. Must also be free of any type of munitions including, but not limited to, bullet casings.
Ivory	**YELLOW BRASS CASTINGS** Shall consist of yellow brass castings in crucible shape, no piece to measure more than 12 inches over any one part; and shall be free of brass forgings, silicon bronze, aluminum bronze and manganese bronze, and not to contain more than 15% nickel plated material.
Label	**NEW BRASS CLIPPINGS** Shall consist of the cuttings of new unleaded yellow brass sheet or plate, to be clean and free from foreign substances and not to contain more than 10% of clean brass punchings under 1/4 inch. To be free of Muntz metal and naval brass.
Lace	**BRASS SHELL CASES WITHOUT PRIMERS** Shall consist of clean fired 70/30 brass shell cases free of primers and any other foreign material. For material to be exported from the United States, all shells must be sufficiently mutilated to prevent reuse and reloading.
Lady	**BRASS SHELL CASES WITH PRIMERS** Shall consist of clean fired 70/30 brass shell cases containing the brass primers, and containing no other foreign material. For material to be exported from the United States, all shells must be sufficiently mutilated to prevent reuse and reloading.
Lake	**BRASS SMALL ARMS AND RIFLE SHELLS, CLEAN FIRED** Shall consist of clean fired 70/30 brass shells free of bullets, iron and any other foreign material. For material to be exported from the United States, all shells must be sufficiently mutilated to prevent reuse and reloading.
Lamb	**BRASS SMALL ARMS AND RIFLE SHELLS, CLEAN MUFFLED (POPPED)** Shall consist of clean muffled (popped) 70/30 brass shells free of bullets, iron and any other foreign material. For material to be exported from the United States, all shells must be sufficiently mutilated to prevent reuse and reloading.
Lark	**YELLOW BRASS PRIMER** Shall consist of clean yellow brass primers, burnt or unburnt. Shall be free of iron, excessive dirt, corrosion and any other foreign material.
Maize	**MIXED NEW NICKEL SILVER CLIPPINGS** Shall consist of one or more nickel silver alloys and the range of nickel content to be specified, free of chrome or any other plating material. Leaded nickel silver clippings should be packed and sold separately. Not to contain more than 10% of clean punchings under 1/4 inch.
Major	**NEW NICKEL SILVER CLIPPINGS AND SOLIDS** Shall consist of new, clean nickel silver clippings, plate, rod and forgings, and other rolled shapes, free of chrome or any other plating material. Must be sold on nickel content specifications such as 10%–12%–15%– 18%–20%. Leaded nickel silver clippings should be packed and sold separately. A description as to its physical characteristics should be made in offering all nickel silver material.
Malar	**NEW SEGREGATED NICKEL SILVER CLIPPINGS** Shall consist of one specified nickel silver alloy. Not to contain more than 10% of clean punchings under 1/4 inch.
Malic	**OLD NICKEL SILVER** Shall consist of old nickel silver sheet, pipe, rod, tubes, wire, screen, soldered or unsoldered. Must not be trimmed seams alone, and must also be free of foreign substances, iron rimmed material and other metals.
Melon	**BRASS PIPE** Shall consist of brass pipe free of plated and soldered materials or pipes with cast brass connections. To be sound, clean pipes free of sediment and condenser tubes.
Naggy	**NICKEL SILVER CASTINGS** To be packed and sold separately.
Niece	**NICKEL SILVER TURNINGS** To be sold by sample or analysis.

CODE	ITEM
Nascent	**LEADED BRASS SCRAP TURNINGS** Shall consist of scrap borings and turnings alloyed with copper, zinc, and lead. Turnings shall be unmixed and have less than 0.01% alloyed bismuth and silicon each and other impurities as agreed between buyer and seller.
Niche	**LEADED BRASS SCRAP ROD ENDS AND FORGINGS** Shall consist of scrap rod ends and forgings alloyed with copper, zinc, and lead. Solids shall have less than 0.01% alloyed bismuth and silicon each and other impurities as agreed between buyer and seller.
Night	**YELLOW BRASS ROD TURNINGS** Shall consist strictly of rod turnings, free of aluminum, manganese, composition, Tobin and Muntz metal turnings; not to contain over 3% free iron, oil or other moisture; to be free of grindings and babbitts; to contain not more than 0.30% tin and not more than 0.15% alloyed iron.
Noble	**NEW YELLOW BRASS ROD ENDS** Shall consist of new, clean rod ends from free turning brass rods or forging rods, not to contain more than 0.30% tin and not more than 0.15% alloyed iron. To be free of Muntz metal and naval brass or any other alloys. To be in pieces not larger than 12" and free of foreign matter.
Nomad	**YELLOW BRASS TURNINGS** Shall consist of yellow brass turnings, free of aluminum, manganese and composition turnings, not to contain over 3% of free iron, oil or other moisture; to be free of grindings and babbitts. To avoid dispute, to be sold subject to sample or analysis.
Ocean	**MIXED UNSWEATED AUTO RADIATORS** Shall consist of mixed automobile radiators, to be free of aluminum radiators, and iron-finned radiators. All radiators to be subject to deduction of actual iron. The tonnage specification should cover the gross weight of the radiators, unless otherwise specified.
Pales	**BRASS CONDENSER TUBES** Shall consist of clean condenser tubing which may be plated or unplated, free of excessive corroded material as mutually agreed. Upon mutual agreement between buyer and seller, may be in the form of whole bundles including iron and/or brass heads as well as iron and/or brass baffles.
Pallu	**ALUMINUM BRASS CONDENSER TUBES** Shall consist of clean sound condenser tubing which may be plated or unplated, free of nickel alloy and corroded material.
Palms	**MUNTZ METAL TUBES** Shall consist of clean sound Muntz metal tubing which may be plated or unplated, free of nickel alloy, aluminum alloy, and corroded material.
Parch	**MANGANESE BRONZE SOLIDS** Shall have a copper content of not less than 55%, a lead content of not more than 1%, and shall be free of aluminum bronze and silicon bronze.

ALUMINUM

CODE	ITEM
Tablet	**CLEAN ALUMINUM LITHOGRAPHIC SHEETS** To consist of 1000 and/or 3000 series alloys, to be free of paper, plastic, excessively inked sheets, and any other contaminants. Minimum size of 3" (8 cm) in any direction.
Tabloid	**NEW, CLEAN ALUMINUM LITHOGRAPHIC SHEETS** To consist of 1000 and/or 3000 series alloys, uncoated, unpainted, to be free of paper, plastic, ink, and any other contaminants. Minimum size of 3" (8 cm) in any direction.
Taboo	**MIXED LOW COPPER ALUMINUM CLIPPINGS AND SOLIDS** Shall consist of new, clean, uncoated and unpainted low copper aluminum scrap of two or more alloys with a minimum thickness of 0.015 inches (.38 mm) and to be free of 2000 and 7000 series, hair wire, wire screen, punchings less 1/2 inch (1.25 cm) diameter, dirt, and other non-metallic items. Grease and oil not to total more than 1%. Variations to this specification should be agreed upon prior to shipment between the buyer and seller.
Taint/ Tabor	**CLEAN MIXED OLD ALLOY SHEET ALUMINUM** Shall consist of clean old alloy aluminum sheet of two or more alloys, free of foil, venetian blinds, castings, hair wire, screen wire, food or beverage containers, radiator shells, airplane sheet, bottle caps, plastic, dirt, and other non-metallic items. Oil and grease not to total more than 1%. Up to 10% Tale permitted.
Take	**NEW ALUMINUM CAN STOCK** Shall consist of new low copper aluminum can stock and clippings, clean, lithographed or not lithographed, and coated with clear lacquer but free of lids with sealers, iron, dirt and other foreign contamination. Oil not to exceed 1%.
Talc	**POST-CONSUMER ALUMINUM CAN SCRAP** Shall consist of old aluminum food and/or beverage cans. The material is to be free of other scrap metals, foil, tin cans, plastic bottles, paper, glass, and other non-metallic items. Variations to this specification should be agreed upon prior to shipment between the buyer and seller.
Talcred	**SHREDDED ALUMINUM USED BEVERAGE CAN (UBC) SCRAP** Shall have a density of 12 to 17 pounds per cubic foot (193 to 273 kg/m3). Material should contain maximum 5% fines less than 4 mesh (U.S. standard screen size) (6.35 mm). Must be magnetically separated material and free of steel, lead, bottle caps, plastic cans and other plastics, glass, wood, dirt, grease, trash, and other foreign substances. Any free lead is basis for rejection. Any and all aluminum items, other than used beverage cans, are not acceptable. Variations to this specification should be agreed upon prior to shipment between the seller and buyer.

CODE	ITEM
Taldack	**DENSIFIED ALUMINUM USED BEVERAGE CAN (UBC) SCRAP** Shall have a biscuit density of 35 to 50 pounds per cubic foot (562 to 802 kg/m3). Each biscuit not to exceed 60 pounds (27.2 kg). Nominal biscuit size range from 10" to 13" x 101/4" (25.4 x 33 x 26 cm) to 20" x 61/4" x 9" (50.8 x 15.9 x 22.9 cm). Shall have banding slots in both directions to facilitate bundle banding. All biscuits comprising a bundle must be of uniform size. Size: Bundle range dimensions acceptable are 41" to 44" x 51" (104 to 112 cm) to 54" x 54" (137 x 137 cm) to 56" (142 cm) high. The only acceptable tying method shall be as follows: Using minimum 5/8" (1.6 cm) wide by .020" (.05 cm) thick steel straps, the bundles are to be banded with one vertical band per row and a minimum of two firth (horizontal) bands per bundle. Use of skids and/or support sheets of any material is not acceptable. Must be magnetically separated material and free of steel, lead, bottle caps, plastic cans and other plastic, glass, wood, dirt, grease, trash, and other foreign substances. Any free lead is basis for rejection. Any and all aluminum items, other than used beverage cans, are not acceptable. Items not covered in the specifications, including moisture, and any variations to this specification should be agreed upon prior to shipment between the seller and buyer.
Taldon	**BALED ALUMINUM USED BEVERAGE CAN (UBC) SCRAP** Shall have a minimum density of 14 pounds per cubic foot (225 kg/m3), and a maximum density of 17 pounds per cubic foot (273 kg/m3) for unflattened UBC and 22 pounds per cubic foot (353 kg/m3) for flattened UBC. Size: Minimum 30 cubic feet (.85 m3), with bale range dimensions of 24" to 40" (61 to 132 cm) by 30" to 52" (76 to 132 cm) by 40" to 84"(102 to 213 cm). The only acceptable tying method shall be as follows: four to six 5/8" (1.6 cm) x .020" (5 mm) steel bands, or six to ten #13 gauge steel wires (aluminum bands or wires are acceptable in equivalent strength and number). Use of skids and/or support sheets of any material is not acceptable. Must be magnetically separated material and free of steel, lead, bottle caps, plastic cans and other plastic, glass, wood, dirt, grease, trash, and other foreign substances. Any free lead is basis for rejection. Any and all aluminum items, other than used beverage cans, are not acceptable. Variations to this specification should be agreed upon prior to shipment between the buyer and seller.
Taldork	**BRIQUETUED ALUMINUM USED BEVERAGE CAN (UBC) SCRAP** Shall have a briquette density of 50 pounds per cubic foot (800 kg/m3) minimum. Nominal briquette size shall range from 12" to 24" (30.5 x 61 cm) x 12" to 24" (30.5 x 61 cm) in uniform profile with a variable length of 8" (20.3 cm) minimum and 48" (122 cm) maximum. Briquettes shall be bundled or stacked on skids and secured with a minimum of one vertical band per row and a minimum of one girth band per horizontal layer. Briquettes not to overhang pallet. Total package height shall be 48 (122 cm) maximum. Banding shall be at least 5/8" (1.6 cm) wide by .020" (5 mm) thick steel strapping or equivalent strength. The weight of any bundle shall not exceed 4,000 pounds (1.814 mt). Material must be magnetically separated and free of steel, plastic, glass, dirt and all other foreign substances. Any and all aluminum items other than UBC are unacceptable. Any free lead is basis for rejection. Items not covered in the specification, including moisture, and any variations to this specification should be agreed upon prior to shipment between the buyer and seller.
Tale	**PAINTED SIDING** Shall consist of clean, low copper aluminum siding scrap, painted one or two sides, free of plastic coating, iron, dirt, corrosion, fiber, foam, or fiberglass backing or other non-metallic items.
Talk	**ALUMINUM COPPER RADIATORS** Shall consist of clean aluminum and copper radiators, and/or aluminum fins on copper tubing, free of brass tubing, iron and other foreign contamination.
Tall	**E.C. ALUMINUM NODULES** Shall consist of clean E.C. aluminum, chopped or shredded, free of screening, hair-wire, iron, copper, insulation and other non-metallic items. Must be free of minus 20 mesh material. Must contain 99.45% aluminum content.
Tally	**ALL ALUMINUM RADIATORS FROM AUTOMOBILES** Shall consist of clean aluminum radiators and/or condensers. Should be free of all other types of radiators. All contaminants including iron, plastic, and foam not to exceed 1% of weight. Any deviation to this specification, including oxidation and aluminum content, to be negotiated between buyer and seller.
Talon	**NEW PURE ALUMINUM WIRE AND CABLE** Shall consist of new, clean, unalloyed aluminum wire or cable free from hair wire, ACSR, wire screen, iron, insulation and other non-metallic items.
Tann	**NEW MIXED ALUMINUM WIRE AND CABLE** Shall consist of new, clean, unalloyed aluminum wire or cable which may contain up to 10% 6000 series wire and cable free from hair wire, wire screen, iron, insulation and other non-metallic items.
Tarry A	**CLEAN ALUMINUM PISTONS** Shall consist of clean aluminum pistons to be free from struts, bushings, shafts, iron rings and non-metallic items. Oil and grease not to exceed 2%.
Tarry B	**CLEAN ALUMINUM PISTONS WITH STRUTS** Shall consist of clean whole aluminum pistons with struts. Material is to be free from bushings, shafts, iron and non-metallic items . Oil and grease not to exceed 2%.
Tarry C	**IRONY ALUMINUM PISTONS** Shall consist of aluminum pistons with non-aluminum attachments to be sold on a recovery basis or by special arrangement between buyer and seller.

CODE	ITEM
Tassel	**OLD MIXED ALUMINUM WIRE AND CABLE** Shall consist of old, unalloyed aluminum wire and cable which may contain up to 10% 6000 series wire and cable with not over 1% free oxide or dirt and free from hair wire, wire screen, iron, insulation and other non-metallic items.
Taste	**OLD PURE ALUMINUM WIRE AND CABLE** Shall consist of old, unalloyed aluminum wire and cable containing not over 1% free oxide or dirt and free from hair wire, wire screen, iron, insulation and other non-metallic items.
Tata	**NEW PRODUCTION ALUMINUM EXTRUSIONS** Shall consist of one alloy (typically 6063). Material may contain "butt ends" from the extrusion process but must be free of any foreign contamination. Anodized material is acceptable. Painted material or alloys other than 6063 must be agreed upon by buyer and seller.
Toto	**ALUMINUM EXTRUSIONS "10/10"** Material to consist of new production and old/used 6063 extrusions that may contain up to (but not exceed) 10 percent painted extrusions and 10 percent 6061 alloy extrusions. Must not contain other alloys of aluminum. Material should be free of zinc corners, iron attachments, felt, plastic, paper, cardboard, thermo break, and dirt and other contaminants.
Tutu	**ALUMINUM EXTRUSION DEALER GRADE** Shall consist of old extruded aluminum of one alloy, typically alloy 6063, 6061, or 7075. Material must be free of iron, thermo break, saw chips, zinc corners, dirt, paper, cardboard, and other foreign contamination. Percentages of paint or other alloys to be agreed upon by buyer and seller.
Teens	**SEGREGATED ALUMINUM BORINGS AND TURNINGS** Shall consist of aluminum borings and turnings of one specified alloy. Material should be free of oxidation, dirt, free iron, stainless steel, magnesium, oil, flammable liquids, moisture and other non-metallic items. Fines should not exceed 3% through a 20 mesh (U.S. standard) screen.
Telic	**MIXED ALUMINUM BORINGS AND TURNINGS** Shall consist of clean, uncorroded aluminum borings and turnings of two or more alloys and subject to deductions for fines in excess of 3% through a 20 mesh screen and dirt, free iron, oil, moisture and all other non-metallic items. Material containing iron in excess of 10% and/or free magnesium or stainless steel or containing highly flammable cutting compounds will not constitute good delivery. To avoid dispute, material should be sold on basis of definite maximum zinc, tin and magnesium content.
Tense	**MIXED ALUMINUM CASTINGS** Shall consist of all clean aluminum castings which may contain auto and airplane castings but no ingots, and to be free of iron, brass, dirt and other non-metallic items. Oil and grease not to total more than 2%.

CODE	ITEM
Tepid	**AIRCRAFT SHEET ALUMINUM** Should be sold on recovery basis or by special arrangements with purchaser.
Terse	**NEW ALUMINUM FOIL** Shall consist of clean, new, pure, uncoated 1000 and/or 3000 and/or 8000 series alloy aluminum foil, free from anodized foil, radar foil and chaff, paper, plastics, or any other non-metallic items. Hydraulically briquetted material and other alloys by agreement between buyer and seller.
Tesla	**POST CONSUMER ALUMINUM FOIL** Shall consist of baled old household aluminum foil and formed foil containers of uncoated 1000, 3000 and 8000 series aluminum alloy. Material may be anodized and contain a maximum of 5% organic residue. Material must be free from radar chaff foil, chemically etched foil, laminated foils, iron, paper, plastic and other non-metallic contaminants.
Tetra	**NEW COATED ALUMINUM FOIL** Shall consist of new aluminum foil coated or laminated with ink, lacquers, paper, or plastic. Material shall be clean, dry, free of loose plastic, PVC and other non-metallic items. This foil is sold on a metal content basis or by sample as agreed between buyer and seller.
Thigh	**ALUMINUM GRINDINGS** Should be sold on recovery basis or by special arrangements with purchaser.
Thirl	**ALUMINUM DROSSES, SPATTERS, SPILLINGS, SKIMMINGS AND SWEEPINGS** Should be sold on recovery basis or by special arrangements with purchaser.
Thorn	**ALUMINUM BREAKAGE** Shall consist of aluminum with miscellaneous contaminants like iron, dirt, plastic and other types of contaminants. Material can either be sold based on aluminum recovery or content as agreed upon by buyer and seller. Must contain a minimum of 33% aluminum unless otherwise agreed upon by buyer and seller.
Throb	**SWEATED ALUMINUM** Shall consist of aluminum scrap which has been sweated or melted into a form or shape such as an ingot, sow or slab for convenience in shipping; to be free from corrosion, dross or any non-aluminum inclusions. Should be sold subject to sample or analysis.
Tooth	**SEGREGATED NEW ALUMINUM ALLOY CLIPPINGS AND SOLIDS** Shall consist of new, clean, uncoated and unpainted aluminum scrap of one specified aluminum alloy with a minimum thickness of .015" (.38 mm) and to be free of hair wire, wire screen, dirt and other non-metallic items. Oil and grease not to total more than 1%. Also free from punchings less than 1/2" (1.27 cm) in size.

CODE	ITEM
Tough	**MIXED NEW ALUMINUM ALLOY CLIPPINGS AND SOLIDS** Shall consist of new, clean, uncoated and unpainted aluminum scrap of two or more alloys with a minimum thickness of .015" (.38 mm) and to be free of hair wire, wire screen, dirt and other non-metallic items. Oil and grease not to total more than 1%. Also free from punchings less than 1/2" (1.27 cm) in size.
Tread	**SEGREGATED NEW ALUMINUM CASTINGS, FORGINGS AND EXTRUSIONS** Shall consist of new, clean, uncoated aluminum castings, forgings, and extrusions of one specified alloy only and to be free from sawings, stainless steel, zinc, iron, dirt, oil, grease and other non-metallic items.
Troma	**Aluminum Auto or Truck Wheels** Shall consist of clean, single-piece, unplated aluminum wheels of a single specified alloy, free of all inserts, steel, wheel weights, valve stems, tires, grease and oil and other non-metallic items. Variations to this specification should be agreed upon prior to shipment between the buyer and seller.
Trump	**ALUMINUM AUTO CASTINGS** Shall consist of all clean automobile aluminum castings of sufficient size to be readily identified and to be free from iron, dirt, brass, bushings, and non-metallic items. Oil and grease not to total more than 2%.
Trill	**ACSR** Aluminum Conductor Steel Reinforced (ACSR) wire is a combination of steel and aluminum wire, of various configurations, with the expected aluminum recovery agreed upon by the buyer and the seller. Material to be free of other wires and cables unless mutually agreed upon.
Twang	**IAW** Insulated aluminum wire, which may or may not contain other wires or metal shielding, with the expected aluminum recovery agreed upon by the buyer and the seller. The material to be free of other wires and cables unless mutually agreed upon.
Twirl	**FRAGMENTIZER AIRCRAFT ALUMINUM SCRAP (2000 and 7000 series)** The material as received must be dry and not to contain more than 2% free zinc, 1% maximum free magnesium, and 1.5% maximum free iron and stainless with a maximum of 2% analytical iron. Not to contain more than a total 5% maximum of non-metallics, of which no more than 1% shall be rubber and plastics. To be free of excessively oxidized material. Any variations to be sold by special arrangement between buyer and seller.
Twist	**ALUMINUM AIRPLANE CASTINGS** Shall consist of clean aluminum castings from airplanes and to be free from iron, dirt, brass, bushings, and non-metallic items. Oil and grease not to total more than 2%.

CODE	ITEM
Twitch	**FLOATED FRAGMENTIZER ALUMINUM SCRAP (from Automobile Shredders)** Derived from wet or dry media separation device, the material must be dry and not contain more than 1% maximum free zinc, 1% maximum free magnesium, and 1% maximum of analytical iron. Not to contain more than a total 2% maximum of non-metallics, of which no more than 1% shall be rubber and plastics. To be free of excessively oxidized material, air bag canisters, or any sealed or pressurized items. Any variation to be sold by special arrangement between buyer and seller.
Tweak	**FRAGMENTIZER ALUMINUM SCRAP (from Automobile Shredders)** Derived from either mechanical or hand separation, the material must be dry and not contain more than 4% maximum free zinc, 1% maximum free magnesium, and 1.5% maximum of analytical iron. Not to contain more than a total 5% maximum of non-metallics, of which no more than 1% shall be rubber and plastics. To be free of excessively oxidized material, air bag canisters, or any sealed or pressurized items. Any variation to be sold by special arrangement between buyer and seller.
Twire	**BURNT FRAGMENTIZER ALUMINUM SCRAP (from Automobile Shredders)** Incinerated or burned material must be dry and not contain more than X% (% to be agreed upon by buyer and seller) ash from incineration, 4% maximum free zinc, 1% maximum free magnesium, and 1.5% maximum of analytical iron. Not to contain more than a total 5% maximum of non-metallics, of which no more than 1% shall be rubber and plastics. To be free of excessively oxidized material, air bag canisters, or any sealed pressurized items. Any variation to be sold by special arrangement between buyer and seller.
Zorba	**SHREDDED NONFERROUS SCRAP (predominantly aluminum)** Shall be made up of a combination of the nonferrous metals: aluminum, copper, lead, magnesium, stainless steel, nickel, tin, and zinc, in elemental or alloyed (solid) form. The percentage of each metal within the nonferrous concentrate shall be subject to agreement between buyer and seller. Material generated by eddy current, air separation, flotation, screening, other segregation technique(s), or a combination thereof. Shall have passed one or more magnets to reduce or eliminate free iron and/or large iron attachments. Shall be free of radioactive material, dross, or ash. Material to be bought/sold under this guideline shall be identified as "Zorba" with a number to follow indicating the estimated percentage nonferrous metal content of the material (e.g., "Zorba 90" means the material contains approximately 90% nonferrous metal content). May also be screened to permit description by specific size ranges. (Refer also to Zorba under Mixed Metals.)

CODE ITEM

ZINC

Saves **OLD ZINC DIE CAST SCRAP**
Shall consist of miscellaneous old zinc base die castings, with or without iron and other foreign attachments. Must be free of borings, turnings, dross pieces, chunks, melted pieces and skimmings. All unmeltables, dirt, foreign attachments, and volatile substances (such as rubber, cork, plastic, grease, etc.) are deductible. Material containing in excess of 30% iron will not constitute good delivery.

Scabs **NEW ZINC DIE CAST SCRAP**
Shall consist of new or unused, clean, zinc base die castings. Castings to be unplated, unpainted, and free from corrosion.

Scoot **ZINC DIE CAST AUTOMOTIVE GRILLES**
Shall consist of clean, old or used zinc base die cast automotive grilles, free from soldered material. All foreign attachments and extraneous materials are deductible.

Scope **NEW PLATED ZINC DIE CAST SCRAP**
Shall consist of new or unused clean, plated zinc base die castings, free from corrosion.

Score **OLD SCRAP ZINC**
Shall consist of clean dry scrap zinc, such as sheets, jar lids, clean unalloyed castings and anti-corrosion plates. Borings and turnings are not acceptable. Material must not be excessively corroded or oxidized. All foreign attachments and extraneous materials are deductible.

Screen **NEW ZINC CLIPPINGS**
Shall consist of any new pure zinc sheets or stampings free from corrosion. To contain no foreign material or attachments. Printers zinc, such as engravers zinc, lithograph sheets and addressograph plates subject to special arrangements. Printers zinc to be free of routings.

Scribe **CRUSHED CLEAN SORTED FRAGMENTIZERS DIE CAST SCRAP, AS PRODUCED FROM AUTOMOBILE FRAGMENTIZERS**
To be clean, free of dirt, oil, glass, rubber, and trash. To contain a maximum of 5% unmeltables such as free iron, copper, aluminum and other metals.

Scroll **UNSORTED ZINC DIE CAST SCRAP**
Produced from automobile fragmentizers. Material to contain about 55% zinc-bearing scrap. Other nonferrous metals such as aluminum, stainless steel, red metal, etc., to be about 40%. Insulated copper wire about 1%. Trash, dirt, glass, rubber, oil, iron, not to exceed 5%. Any variations to be sold by special arrangement between buyer and seller.

Scrub **HOT DIP GALVANIZERS SLAB ZINC DROSS (Batch Process)**
Shall consist only of galvanizers unsweated zinc dross in slab form from hot dip galvanizing (Batch Process) with a minimum zinc content of 92% and shall be free of skimmings and tramp iron. Broken pieces under 2" in diameter shall not exceed 10% of the weight of each shipment. Slabs shall not weigh over 100 pounds each. Heavier pieces acceptable upon mutual agreement between buyer and seller. Material from continuous galvanizing operation is not acceptable. Blocks are acceptable upon mutual agreement.

Scull **ZINC DIE CAST SLABS OR PIGS**
Shall consist of melted zinc base die cast materials, in smooth clean solid slabs or pigs. Material to be free from drosses and to contain a minimum zinc content of 90%. To contain a maximum of 0.1% nickel and maximum of 1% lead. Blocks are acceptable upon mutual agreement.

Seal **CONTINUOUS LINE GALVANIZING SLAB ZINC TOP DROSS**
Shall consist of unsweated zinc dross removed from the top of a continuous line galvanizing bath, in slab form not weighing in excess of 100 pounds each, with a minimum zinc content of 90%. Heavier pieces acceptable upon mutual agreement between buyer and seller. Shall be free of skimmings. Broken pieces under 2" in diameter shall not exceed 10% of the weight of each shipment.

Seam **CONTINUOUS LINE GALVANIZING SLAB ZINC BOTTOM DROSS**
Shall consist of unsweated zinc dross removed from the bottom of a continuous line galvanizing bath, in slab form not weighing in excess of 100 pounds each, with a minimum zinc content of 92%. Heavier pieces acceptable upon mutual agreement between buyer and seller. Shall be free of skimmings. Broken pieces under 2" in diameter shall not exceed 10% of the weight of each shipment.

Shelf **PRIME ZINC DIE CAST DROSS**
Shall consist of metal skimmed from the top of pot of molten zinc die cast metal. Must be unsweated, unfluxed, shiny, smooth, metallic and free from corrosion or oxidation. Should be poured in molds or in small mounds weighing not over 75 pounds each.

MAGNESIUM

Wafer **MAGNESIUM CLIPS**
Shall consist of clean magnesium clips in crucible size, free of copper, aluminum, and zinc flashings and excessive oil and grease. To be free of all foreign attachments.

Walnut **MAGNESIUM SCRAP**
Shall consist of magnesium castings, magnesium engine blocks and transmission casings, bomber and car wheels, extrusions, and sheet. Material to be free from brass and copper inserts and all foreign attachments. To be free of anodes, hollow castings and explosives. Percentages of and penalties for dirt, oil, grease, and iron to be subject to agreement between buyer and seller. Excessively large pieces to be negotiated between buyer and seller.

CODE	ITEM
Wine	**MAGNESIUM ENGRAVER PLATES** To be free of copper, aluminum, zinc, and electrotype plates. To be clean and free of all foreign attachments. Magnesium plates shipped loose by agreement between buyer and seller.
Wood	**MAGNESIUM DOCKBOARDS** Shall consist of clean magnesium dockboard cut or broken to size agreed upon by buyer and seller. To be free of all foreign attachments.
World	**MAGNESIUM TURNINGS** It is recommended that these materials be sold by special arrangement between buyer and seller.

LEAD

CODE	ITEM
Racks	**SCRAP LEAD—SOFT** Shall consist of clean soft scrap lead, free of other materials such as drosses, battery plates, lead covered cable, hard lead, collapsible tubes, foil, type metals, aluminum, zinc, iron and brass fittings, dirty chemical lead and radioactive materials. Review packaging specifications and regulatory status pertaining to shipping with buyer prior to sale.
Radio	**MIXED HARD/SOFT SCRAP LEAD** Shall consist of clean lead solids and lead shots, free of other materials, such as drosses, battery plates, lead covered cable, collapsible tubes, type metals, aluminum, zinc, iron and brass fittings, dirty chemical lead and radioactive materials. Review packaging specifications and regulatory status pertaining to shipping with buyer prior to sale.
Rains	**SCRAP DRAINED/DRY WHOLE INTACT LEAD** To be free of any liquid. Cases to be either plastic or rubber and be complete including caps. Non-lead (nicad, ni-fe, carbonaire, etc.) not acceptable. Industrial, steel cased, aircraft (aluminum cased) and partial, cracked or broken batteries and batteries without caps subject to special agreement. Review packaging specifications and regulatory status pertaining to shipping with buyer prior to sale.
Rakes	**BATTERY LUGS** To be free of scrap lead, wheel weights, battery plates, rubber and/or plastic case material and other foreign material. A minimum of 97% metallic content is required. Review packaging specifications and regulatory status pertaining to shipping with buyer prior to sale.
Relay	**LEAD COVERED COPPER CABLE** Free of armored covered cable and foreign material subject to negotiation between buyer and seller.
Rents	**LEAD DROSS** Should be clean and reasonably free of other materials such as iron, dirt, harmful chemicals or other metals. To be free of radioactive materials, aluminum and zinc. May be bought on an assay basis or as agreed to by buyer and seller. Other metals present such as antimony, tin, etc., to be accounted for as agreed between buyer and seller. Material to be readily dumped from drums. An extra charge may be assessed if material has to be mechanically removed. Review packaging specification and regulatory status pertaining to shipping with buyer prior to sale.
Rink	**SCRAP WET WHOLE INTACT LEAD BATTERIES** Consisting of SLI (starting, lighting & ignition), automotive, truck, 8-D and commercial golf cart and marine-type batteries. Cases to be either plastic or rubber and to be complete. Non-lead (i.e., ni-cad, ni-fe, carbonaire, etc.) not acceptable. Other types i.e. aircraft (aluminum) gel-cel, lawnmower, etc., and partial, cracked or broken batteries or batteries without caps and the amount of liquid content and any variations to the specification subject to special agreement. Review packaging specifications and regulatory status pertaining to shipping with buyer prior to sale.
Rono	**SCRAP INDUSTRIAL INTACT LEAD CELLS** Consisting of plates enclosed by some form of complete plastic case. Partial, cracked or broken cells, cells without caps and the amount of liquid content and any variations to the specification subject to special agreement. Review packaging specifications and regulatory status pertaining to shipping with buyer prior to sale.
Roper	**SCRAP WHOLE INTACT INDUSTRIAL LEAD BATTERIES** Consisting of bus, diesel, locomotive, telephone and/or steel cased batteries. Submarine batteries subject to negotiation. Partial, cracked, broken batteries or batteries without caps and the amount of liquid content and any variations to the specification subject to special agreement. Review packaging specifications and regulatory status pertaining to shipping with buyer prior to sale.
Ropes	**WHEEL WEIGHTS** To consist of lead tire balances with or without iron clips. Not to include scrap lead, lugs or plates unless specifically agreed to. To be free of foreign material. Review packaging specifications and regulatory status pertaining to shipping with buyer prior to sale.

NICKEL/STAINLESS/HI TEMP

CODE	ITEM
Aroma	**NEW NICKEL SCRAP** Shall consist of clean new sheet, plate, bar, tube, and any other wrought nickel scrap solids. Nickel minimum 99%; Cobalt maximum 0.25%; Copper maximum 0.50%. Free of castings, as well as any foreign attachments or other contamination.
Burly	**OLD NICKEL SCRAP** Shall consist of old and/or new sheet, plate, bar, tube, and any other wrought nickel scrap solids. Material to contain a minimum of 98% nickel; Copper maximum 0.50%. This grade to be free of castings, soldered, brazed, sweated, or painted material, other metallic coating, foreign attachments, or any other contamination.

CODE	ITEM
Dandy	**NEW CUPRO NICKEL CLIPS AND SOLIDS** Shall consist of clean, new, segregated (normally accepted analysis grades) either 70/30, 80/20, or 90/10 cupro nickel tube, pipe, sheet, plate, or other wrought solid forms. Must be free of foreign attachments or any other contamination.
Daunt	**CUPRO NICKEL SOLIDS** Shall consist of old, and/or new, segregated (normally accepted analysis grades) either 70/30, 80/20, 90/10 cupro nickel tube, pipe, sheet, plate, or other wrought solid forms. Maximum 2% sediment allowable. Any other forms of cupro nickel solids such as castings, gates, risers, spills, etc., packaged separately, may or may not be included, only upon agreement between buyer and seller. Must be free of foreign attachments and all other contamination. Other particulars concerning physical description, analysis and packaging to be agreed upon between buyer and seller.
Decoy	**CURPO NICKEL SPINNINGS, TURNINGS, BORINGS** Shall consist of clean, segregated (normally accepted analysis grades) either 70/30, 80/20, 90/10 cupro nickel spinnings, turnings, or borings. Particulars concerning physical description, analysis, and packaging, to be agreed upon between buyer and seller.
Delta	**SOLDERED CUPRO NICKEL SOLIDS** Shall consist of segregated (normally accepted analysis grades) either 70/30, 80/20, 90/10 cupro nickel solids, soldered, brazed, or sweated material. Must be free of trimmed seams and edges and all other contamination.
Depth	**MISCELLANEOUS NICKEL-COPPER AND NICKEL-COPPER IRON** Shall consist of miscellaneous scrap in which the basic elements, by weight, are nickel and copper, such as copper nickel peelings, plating racks, and hangers, and all nickel and copper in attached or combined form. In all cases, miscellaneous nickel copper scrap should be sold by description and analysis.
Hitch	**NEW R-MONEL CLIPPINGS AND SOLIDS** Shall consist of clean, new, R-Monel sheet, plate, bar, rod, tube, pipe, or any other wrought scrap. Must be free of any foreign attachments or all other contamination.
House	**NEW MIXED MONEL SOLIDS AND CLIPPINGS** Shall consist of new, clean R and K-Monel solids and clippings. Free of cast material, foreign attachments and all other contamination.
Ideal	**OLD MONEL SHEET AND SOLIDS** Shall consist of clean R and K-Monel solids such as sheet, plate, pipe, rods, forgings, screen and wire cloth. Must be free of soldered, brazed, welded, or sweated material, cast material, foreign attachments, and all other contamination.
Indian	**K-MONEL SOLIDS** Shall consist of clean K-Monel solids.

CODE	ITEM
Junto	**SOLDERED MONEL SHEET AND SOLIDS** Shall consist of soldered and/or brazed miscellaneous grades of Monel alloys in either wrought or cast form. Must be free of trimmed seams and edges, non-metallic filling, foreign attachments, and all other contamination. Particulars concerning physical description, assay, and packaging to be agreed upon between buyer and seller.
Lemon	**MONEL CASTINGS** Shall consist of various types of clean Monel castings, assaying minimum 60% nickel. Must be free of foreign attachments or any other contamination.
Lemur	**MONEL TURNINGS** Shall consist of mixed Monel turnings and borings containing a minimum of 60% nickel content, on a dry basis.
Pekoe	**200 SERIES STAINLESS STEEL SCRAP SOLIDS** Shall consist of all types of clean AISI Series Stainless Steel Scrap Solids, which contain a maximum of .5% copper, free of foreign attachments and other contamination.
Sabot	**STAINLESS STEEL SCRAP** Shall consist of clean 18-8 type stainless steel clips and solids containing a minimum 7% nickel, 16% chrome, and have a maximum of .50% molybdenum, .50% copper, .045% phosphorous, and .03% sulfur, and otherwise free of harmful contaminants. Particulars concerning physical description, grading, additional analysis, and preparation to be agreed upon between buyer and seller.
Ultra	**STAINLESS STEEL TURNINGS** Shall consist of clean 18-8 type stainless steel turnings containing a minimum 7% nickel and 16% chrome, and to be free of nonferrous metals, nonmetallics, excessive iron, oil and other contaminants. Particulars concerning physical description, assay, and packaging to be agreed upon between buyer and seller.
Vaunt	**EDISON BATTERIES** Nickel-iron batteries to be sold free of crates, copper terminal connectors, and excess liquid. Must be free of nickel cadmium batteries.
Zurik	**SHREDDED NONFERROUS SENSOR SORTED SCRAP (predominantly stainless steel)** Shall be made up of a combination of the nonferrous metals: stainless steel, insulated copper wire, aluminum, copper, lead, magnesium, nickel, tin, and zinc, in elemental or alloyed (solid) form. The percentage of each metal within the nonferrous concentrate shall be subject to agreement between buyer and seller. Material generated by computer sensing equipment (e.g., induction sensor sorting or X-ray) technique(s). Shall have passed one or more magnets to reduce or eliminate free iron and/or large iron attachments. Shall be free of radioactive material, dross, or ash. Material to be bought/sold under this guideline shall be identified as "Zurik" with a number to follow indicating the estimated

percentage nonferrous content of the material (e.g., "Zurik 90" means the material contains approximately 90% nonferrous metal content). May also be screened to permit description by specific size ranges. (Refer also to Zurik under Mixed Metals.)

MIXED METALS

Darth **BALLASTS (FLUORESCENT)**
Shall consist of whole and complete fluorescent light ballasts containing copper inside. Must not contain polychlorinated biphenyls (PCBs). Electronic ballasts subject to agreement between buyer and seller.

Vader **SEALED UNITS**
Shall consist of whole steel-cased compressors originating from condensers from air conditioner units, freezers, refrigerators or the like, containing a motor inside. Free of hazardous materials, including chlorofluorocarbons (CFCs) or other refrigerants and polychlorinated biphenyls (PCBs). No loose iron or extra iron attachments such as framework permitted.

Elmo **MIXED ELECTRIC MOTORS**
Shall consist of whole electric motors and/or dismantled electric motor parts that are primarily copper-wound. May contain aluminum-wound material, subject to agreement between buyer and seller. No excessive steel attachments such as gear reducers, iron bases, and pumps, or loose free iron allowed. Specification not to include sealed units or cast iron compressors.

Shelmo **SHREDDED ELECTRIC MOTORS (also called "shredder pickings" or "meatballs")**
Shall consist of mixed copper-bearing material from ferrous shredding, comprised of motors without cases. May contain aluminum-wound material and insulated copper harness wire, subject to agreement between buyer and seller. Trace percentages of other contaminants and fines may be present. No free iron or sealed units.

Zebra **(High Density)**
Shall consist of high-density nonferrous metals produced by media separation technology containing brass, copper, zinc, nonmagnetic stainless steel, and copper wire. Material to be dry and free from excess oxidation. The percentage and types of metals other than these, as well as the percentage and types of nonmetallic contamination, are to be agreed upon between the buyer and seller.

Zeppelin **(Light Density)**
Shall consist of light-density nonferrous metals produced by media separation technology and contain thin-gauge aluminum and magnesium. Material to be dry and free from excess oxidation. The percentage and types of metals other than aluminum and magnesium, as well as the percentage and types of nonmetallic contamination, are to be agreed upon between the buyer and seller.

Zorba **SHREDDED NONFERROUS SCRAP (predominantly aluminum)**
Shall be made up of a combination of the nonferrous metals: aluminum, copper, lead, magnesium, stainless steel, nickel, tin, and zinc, in elemental or alloyed (solid) form. The percentage of each metal within the nonferrous concentrate shall be subject to agreement between buyer and seller. Material generated by eddy current, air separation, flotation, screening, other segregation technique(s), or a combination thereof. Shall have passed one or more magnets to reduce or eliminate free iron and/or large iron attachments. Shall be free of radioactive material, dross, or ash. Material to be bought/sold under this guideline shall be identified as "Zorba" with a number to follow indicating the estimated percentage nonferrous metal content of the material (e.g., "Zorba 90" means the material contains approximately 90% nonferrous metal content). May also be screened to permit description by specific size ranges. (Refer also to Zorba under Aluminum.)

Zurik **SHREDDED NONFERROUS SENSOR SORTED SCRAP (predominantly stainless steel)**
Shall be made up of a combination of the nonferrous metals: stainless steel, insulated copper wire, aluminum, copper, lead, magnesium, nickel, tin, and zinc, in elemental or alloyed (solid) form. The percentage of each metal within the nonferrous concentrate shall be subject to agreement between buyer and seller. Material generated by computer sensing equipment (e.g., induction sensor sorting or X-ray) technique(s). Shall have passed one or more magnets to reduce or eliminate free iron and/or large iron attachments. Shall be free of radioactive material, dross, or ash. Material to be bought/sold under this guideline shall be identified as "Zurik" with a number to follow indicating the estimated percentage nonferrous content of the material (e.g., "Zurik 90" means the material contains approximately 90% nonferrous metal content). May also be screened to permit description by specific size ranges. (Refer also to Zurik under Nickel/Stainless/Hi Temp.)

OTHER

Ranch **BLOCK TIN**
Block tin must assay minimum of 98% tin, and to be free of liquids, solder, and brass connections, pewter, pumps, pot pieces, and dirt.

Ranks **PEWTER**
Shall consist of tableware and soda-fountain boxes but should contain a minimum of 84% tin. Siphon tops to be accounted for separately. Material must be free of brass, zinc, and other foreign metals.

Raves **HIGH TIN BASE BABBITT**
Shall contain a minimum of 78% tin and be free of brassy or zincy metals.

Roses **MIXED COMMON BABBITT**
Shall consist of lead base bearing metal containing not less than 8% tin, free from Allens metal, ornamental, antimonial and type metal. Must be free from all zinc and excessive copper in the alloy.

Identification Checklist for Precious Metals

This Identification Check List for Precious Metals sets up a general basis for identifying types and grades of precious metals scrap by the scrap processor who will be familiar both to the precious metals refiner and to the plants generating precious metals scrap.

By checking this identification list, the scrap processor gives the refiner a fairly accurate conception of the material the processor has on hand and offers a basis for the refiner to quote an estimated price for the material.

Due to the high values and the constantly changing character of precious metal scrap, it is often the practice in the industry to require a sample to be submitted before giving refining schedules.

I. Scrap Sources

REFINED SILVER METAL – 99.9 MIN. PERCENT
Silver-bearing materials:
Anodes
Assemblies—Electrical
Batteries
- Silver/Copper Plated
- Silver/Cadmium
- Silver/Zinc Silver/Magnesium

Blanking Scrap—Punchings
Brazing Alloys
Brushes—Electric Motors
Bullion
Chemical Salts
Clad Bi-Metal Parts
Coin Silver
Contacts
Dental Amalgam
Films
- Industrial X-Ray
- Medical X-Ray
- Lithographic
- Photographic Negatives

Filters—Plating
Flake—From Hypo Solution Recovery Systems
Hooks—Plating—Nodules
Jewelry Sweeps
Paints—Paste
Paper-Reproduction
Plated Parts—Electrical—Electronic
Plated Serving Pieces
Plated Utensils
Plated Wire
Powders—Granulated
Punchouts
Relays—Electrical
Resins
Silver Lined Bearings—Diesel Locomotives and Aircraft
Sludges—Plating and Precipitates
Solutions—Plating
Sterling Silver
Tin Lead Alloys—Contaminated
Turnings
Wave Guides
Wiping Rags

REFINED GOLD METAL – 99.5 MIN. PERCENT
REFINED GOLD SPONGE – 99.5 MIN. PERCENT
Gold-bearing materials:
Brazing Alloys
Clad Metal Parts
Contacts
Dental Alloys
Dental Scrap
Dental Sweeps and Grindings
Diodes
Filled Scrap
Filters-Plating
Flakes
Flashings
Foil
Hooks—Plating—Nodules
Jewelry Scrap
Jewelry Sweeps and Grindings
Paints and Paste
Peelings
Placer Gold
Plated Parts—Electrical
Plated Wire
Powders
Printed Circuit Boards
Printed Circuit Boards with Components
Punchouts
Resins—Plating
Salts—Chemical
Sludges—Plating
Solutions
Sponge
Tin Lead Alloys—Contaminated
Transistors
Wiping Rags
Wire

REFINED PALLADIUM METAL—99.9 MIN. PERCENT
REFINED PALLADIUM SPONGE—99.9 MIN.
Palladium-bearing materials:
Catalysts
Chemical Salts
Clad Materials
Contact Points

Dental Alloys
Dental Scraps
Dental Sweeps
Jewelry Scrap (Sweeps)
Paste
Plated Parts
Powders
Relays—Electrical
Sludges
Solutions
Wire

REFINED PLATINUM METAL—99.9 MIN. PERCENT
REFINED PALLADIUM SPONGE—99.9 MIN. PERCENT
Platinum-bearing materials:
Catalysts
Chemicals
Clad Materials
Contacts
Dental Alloys
Dental Scrap
Dental Sweeps, Grindings
Jewelry Scrap
Jewelry Sweeps
Laboratory Ware
Magneto Points
Powders and Paste
Solutions—Plating
Spark Plugs—Aircraft
Thermocouple Wire

Scrap containing combinations of precious metals (gold, silver, platinum and palladium):
Assemblies—Components
Bullion
Carbon
Catalysts
Chemicals
Chips
Drillings
Electronic Scrap
High Temperature Resistant Alloys
Paints
Paste
Powders
Relays—Electrical
Resins
Ribbons
Rings
Salts
Solutions
Sweeps
Telephone Switching Scrap
Thick Film
Wire

II. SCRAP CATEGORIES

A. Solution
1. Acid
2. Basic
3. Matrix if known

B. Resin

C. Sludges

D. Burnable Material
1. Carbon
2. Filters
3. Film
4. Papers
5. Unprepared Sweeps
6. Others

E. Sweeps (Prepared)

F. Printed Circuit Board
1. Punch Outs
2. Non Assembled
3. Assembled

G. Glass to Metal Tubes, etc.
1. Solid Precious Metal Parts
2. Alloyed Metal Parts
3. Plated Metal Parts
4. Ceramics
5. Thick Film
6. Other...

H. Metal Scrap

I. Non-Magnetic
1. Impure Gold
2. Impure Silver
3. Copper Base
4. Aluminum Base
5. Brass Base
6. Bronze Base
7. Molybdenum Base
8. Beryllium Base
9. Lead Base
10. Tin Base
11. Other....

II. Magnetic
1. Kovar Base
2. Stainless Steel Base
3. Iron Base
4. Nickel Base
5. Other....

I. Catalyst
1. Carbon
2. Alumina
3. Rare Earth
4. Silica
5. Other....

Guidelines for Ferrous Scrap: FS-2016

General Information

a. Cleanness. All grades shall be free of dirt, nonferrous metals, or foreign material of any kind, and excessive rust and corrosion. However, the terms "free of dirt, nonferrous metals, or foreign material of any kind" are not intended to preclude the accidental inclusion of negligible amounts where it can be shown that this amount is unavoidable in the customary preparation and handling of the particular grade involved.

b. Off-grade material. The inclusion in a shipment of a particular grade of iron and steel scrap of a negligible amount of metallic material which exceeds to a minor extent the applicable size limitations, or which fails to a minor extent to meet the applicable requirements as to quality or kind of material, shall not change the classification of the shipment, provided it can be shown that the inclusion of such off-grade material is unavoidable in the customary preparation and handling of the grade involved.

c. Residual alloys. Wherever the term "free of alloys" is used in the classifications given herein, it shall mean that any alloys contained in the steel are residual and have not been added for the purpose of making an alloy steel. Steel scraps shall be considered free of alloys when the residual alloying elements do not exceed the following percentages:

Nickel	.45%	Molybdenum	.10%
Chromium	.20%	Manganese	1.65%

The combined residuals other than manganese shall not exceed a total of 0.60 percent.

d. Deviations. Any deviations from the general classifications of iron and steel scrap may be consummated by mutual agreement between buyer and seller.

200 **No. 1 heavy melting steel.**
Wrought iron and/or steel scrap 1/4 inch and over in thickness. Individual pieces not over 60 x 24 inches (charging box size) prepared in a manner to insure compact charging.

201 **No. 1 heavy melting steel 3 feet x 18 inches.**
Wrought iron and/or steel scrap 1/4 inch and over in thickness. Individual pieces not over 36 x 18 inches (charging box size) prepared in a manner to insure compact charging.

202 **No. 1 heavy melting steel 5 feet x 18 inches.**
Wrought iron and/or steel scrap 1/4 inch and over in thickness. Individual pieces not over 60 x 18 inches (charging box size) prepared in a manner to insure compact charging.

203 **No. 2 heavy melting steel.***
Wrought iron and steel scrap, black and galvanized, 1/8 inch and over in thickness, charging box size to include material not suitable as No. 1 heavy melting steel. Prepared in a manner to insure compact charging.

204 **No. 2 heavy melting steel.***
Wrought iron and steel scrap, black and galvanized, maximum size 36 x 18 inches. May include all automobile scrap properly prepared.

205 **No. 2 heavy melting steel 3 feet x 18 inches.**
Wrought iron and steel scrap, black and galvanized, maximum size 36 x 18 inches. May include automobile scrap, properly prepared; however, to be free of sheet iron or thin gauged material.

206 **No. 2 heavy melting steel 5 feet x 18 inches.**
Wrought iron and steel scrap, black and galvanized, maximum size 60 x 18 inches. May include automobile scrap, properly prepared; however, to be free of sheet iron or thin gauged material.

207 **No. 1 busheling.**
Clean steel scrap, maximum size 2 feet by 5 feet, including new factory busheling (for example, sheet clippings, stampings, etc.). May not include old auto body and fender stock. Free of metal coated, limed, vitreous enameled, and electrical sheet containing over 0.5 percent silicon.

207A **New black sheet clippings.**
For direct charging, maximum size 8 feet by 18 inches, free of old automobile body and fender stock, metal coated, lined, vitreous enameled and electrical sheet containing over 0.5 percent silicon. Must lay reasonably flat in car.

208 **No. 1 bundles.**
New black steel sheet scrap, clippings or skeleton scrap, compressed or hand bundled, to charging box size, and weighing not less than 75 pounds per cubic foot. (Hand bundles are tightly secured for handling with a magnet.) May include Stanley balls or mandrel wound bundles or skeleton reels, tightly secured. May include chemically detinned material. May not include old auto body or fender stock. Free of metal coated, limed, vitreous enameled, and electrical sheet containing over 0.5 percent silicon.

209 **No. 2 bundles.**
Old black and galvanized steel sheet scrap, hydraulically compressed to charging box size and weighing not less than 75 pounds per cubic foot. May not include tin or lead-coated material or vitreous enameled material.

210 **Shredded scrap.**
Homogeneous iron and steel scrap, magnetically separated, originating from automobiles, unprepared No. 1 and No. 2 steel, miscellaneous baling and sheet scrap. Average density 50 pounds per cubic foot.

211 **Shredded scrap.**
Homogeneous iron and steel scrap magnetically separated, originating from automobiles, unprepared No. 1 and No. 2 steel, miscellaneous baling and sheet scrap. Average density 70 pounds per cubic foot.

CODE ITEM

212 Shredded clippings.
Shredded 1000 series carbon steel clippings or sheets. Material should have an average density of 60 pounds per cubic foot.

213 Steel can bundles.
Steel can scrap compressed to charging box size and weighing not less than 75 pounds per cubic foot. Cans may be baled without removal of paper labels, but free of other non-metallics. May include up to 5 gallon tin coated containers.

214 No. 3 bundles.
Old sheet steel, compressed to charging box size and weighing not less than 75 pounds per cubic foot. May include all coated ferrous scrap not suitable for inclusion in No. 2 bundles.

215 Incinerator bundles.
Tin can scrap, compressed to charging box size and weighing not less than 75 pounds per cubic foot. Processed through a recognized garbage incinerator.

216 Terne plate bundles.
New terne plate sheet scrap, clippings or skeleton scrap, compressed or hand bundled, to charging box size, and weighing not less than 75 pounds per cubic foot. (Hand bundles are tightly secured for handling with a magnet.) May include Stanley balls or mandrel wound bundles or skeleton reels, tightly secured.

217 Bundled No. 1 steel.
Wrought iron and/or steel scrap 1/8 inch or over in thickness, compressed to charging box size and weighing not less than 75 pounds per cubic foot. Free of all metal-coated material.

218 Bundled No. 2 steel.
Wrought iron or steel scrap, black or galvanized, 1/8 inch and over in thickness, compressed to charging box size and weighing not less than 75 pounds per cubic foot. Auto body and fender stock, burnt or hand stripped, may constitute a maximum of 60 percent by weight. (This percent based on makeup of auto body, chassis, driveshafts, and bumpers.) Free of all coated material, except as found on automobiles.

219 Machine shop turnings.
Clean steel or wrought iron turnings, free of iron borings, nonferrous metals in a free state, scale, or excessive oil. May not include badly rusted or corroded stock.

220 Machine shop turnings and iron borings.
Same as machine shop turnings but including iron borings.

221 Shoveling turnings.
Clean short steel or wrought iron turnings, drillings, or screw cuttings. May include any such material whether resulting from crushing, raking, or other processes. Free of springy, bushy, tangled or matted material, lumps, iron borings, nonferrous metals in a free state, grindings, or excessive oil.

CODE ITEM

222 Shoveling turnings and iron borings.
Same as shoveling turnings, but including iron borings.

223 Iron borings.
Clean cast iron or malleable iron borings and drillings, free of steel turnings, scale, lumps or excessive oil.

224 Auto slabs.
Clean automobile slabs, cut 3 feet x 18 inches and under.

225 Auto slabs.
Clean automobile slabs, cut 2 feet x 18 inches and under.

226 Briquetted iron borings.
Analysis and density to consumer's specifications.

227 Briquetted steel turnings.
Analysis and density to consumer's specifications.

228 Mill scale.
Dark colored, ranging from blue to black, ferromagnetic iron oxide forming on the surface of steel articles during heating and working.

**The identical designations given for these two classifications are in accordance with established industry practices in specifying the materials desired.*

Electric Furnace Casting and Foundry Grades

229 Billet, bloom and forge crops.
Billet, bloom, axle, slab, heavy plate and heavy forge crops, containing not over 0.05 percent phosphorus or sulphur and not over 0.5 percent silicon, free from alloys. Dimensions not less than 2 inches in thickness, not over 18 inches in width, and not over 36 inches in length.

230 Bar crops and plate scrap.
Bar crops, plate scrap, forgings, bits, jars, and tool joints, containing not over 0.05 percent phosphorus or sulphur, not over 0.5 percent silicon, free from alloys. Dimensions not less than 1/2 inch in thickness, not over 18 inches in width, and not over 36 inches in length.

231 Plate and structural steel, 5 feet and under.
Cut structural and plate scrap, 5 feet and under. Clean open hearth steel plates, structural shapes, crop ends, shearings, or broken steel tires. Dimensions not less than 1/4 inch thickness, not over 5 feet in length and 18 inches in width. Phosphorus or sulphur not over 0.05 percent.

232 Plate and structural steel, 5 feet and under.
Cut structural and plate scrap, 5 feet and under. Clean open hearth steel plates, structural shapes, crop ends, shearings, or broken steel tires. Dimensions not less than 1/4 inch thickness, not over 5 feet in length and 24 inches in width. Phosphorus or sulphur not over 0.05 percent.

233 Cast steel.
Steel castings not over 48 inches long or 18 inches wide, and 1/4 inch and over in thickness, containing

CODE	ITEM
	not over 0.05 percent phosphorus or sulphur, free from alloys and attachments. May include heads, gates, and risers.
234	**Punchings and plate scrap.** Punchings or stampings, plate scrap, and bar crops containing not over 0.05 percent phosphorous or sulphur and not over 0.5 percent silicon, free from alloys. All materials cut 12 inches and under, and with the exception of punchings or stampings, at least 1/8 inch in thickness. Punchings or stampings under 6 inches in diameter may be any gauge.
235	**Electric furnace bundles.** New black steel sheet scrap hydraulically compressed into bundles of size and weight as specified by consumer.
236	**Cut structural and plate scrap, 3 feet and under.** Clean open hearth steel plates, structural shapes, crop ends, shearings, or broken steel tires. Dimensions not less than 1/4 inch in thickness, not over 3 feet in length and 18 inches in width. Phosphorus or sulphur not over 0.05 percent.
237	**Cut structural and plate scrap, 2 feet and under.** Same as cut structural and plate scrap, 3 feet and under, except for length.
238	**Cut structural and plate scrap, 1 foot and under.** Same as cut structural and plate scrap, 3 feet and under, except for length.
239	**Silicon busheling.** Clean silicon bearing steel scrap, not exceeding 12 inches in any dimension, including new factory busheling (for example, sheet clippings, stampings, etc.), having a silicon content of 0.05 percent to 5.0 percent.
240	**Silicon Clippings.** Clean steel scrap, including new factory busheling (for example, sheet clippings, stampings, etc.), may not include old auto body and fender stock. Free of metal coated, limed, vitreous enameled, and electrical sheet containing minimum 1 percent silicon.
241	**Chargeable ingots and ingot butts.** Chargeable ingots and ingot butts for material to be suitable and acceptable to the consumer containing not over 0.05 percent phosphorus or sulphur and not over 0.05 percent silicon free of alloys.
242	**Foundry steel, 2 feet and under.** Steel scrap 1/8 inch and over in thickness, not over 2 feet in length or 18 inches in width. Individual pieces free from attachments. May not include nonferrous metals, cast or malleable iron, cable, vitreous enameled, or metal coated material.
243	**Foundry steel, 1 foot and under.** Same specifications as 2-foot material, except for length.

CODE	ITEM
243A	**Low residual, black foundry busheling.** 1000 series black carbon steel scrap, 1/8 inch and over in thickness, not more than 12 inch x 24 inch, manganese content not more than 0.50 percent. Other parameters subject to agreement between supplier and consumer.
243B	**Low residual, ductile quality shredded clips.** Shredded black 1000 series carbon steel scrap, 1/8 inch and over in thickness, minimum average density of 75 PCF, manganese content not more than 0.50 percent. Other parameters subject to agreement between supplier and consumer.
244	**Springs and crankshafts.** Clean automotive springs and crankshafts, either new or used.
245	**Alloy free turnings.** Clean shoveling steel turnings free from lumps, tangled or matted material, iron borings, or excessive oil containing not more than 0.05 percent phosphorus or sulphur, and free of alloys.
246	**Alloy free short shoveling steel turnings.** Clean shoveling steel turnings, free of lumps, tangled or matted material, iron borings, or excessive oil, containing not more than 0.05 percent phosphorus or sulphur, and free of alloys.
247	**Alloy free machine shop turnings.** Clean steel turnings, free of iron borings or excessive oil, containing not more than 0.05 percent phosphorus or sulphur, and free of alloys. May not include badly rusted or corroded stock.
248	**Hard steel cut 30 inches and under.** Automotive steel consisting of rear ends, crankshafts, driveshafts, front axles, springs, and gears prepared 30 inches and under. May not include miscellaneous small shoveling steel or any pieces too bulky for gray iron foundry use.
249	**Chargeable slab crops.** Chargeable slab crops for material to be suitable and acceptable to the consumer containing not over 0.05 percent phosphorus and 0.05 percent sulphur and not over 0.05 percent silicon and free of alloys.
250	**Silicon bundles.** Silicon sheet scrap, clippings or skeleton scrap, compressed or hand bundled, to charging box size, and weighing not less than 75 pounds per cubic foot, having a silicon content of 0.50 percent to 5.0 percent.
251	**Heavy turnings.** Short, heavy steel turnings, containing not over 0.05 percent phosphorus or sulphur and free of alloys. May include rail chips. May not include machine shop or other light turnings and must weigh not less than 75 pounds per cubic foot in the original state of production.

CODE ITEM

Specially Processed Grades to Meet Consumer Requirements

Grades of scrap prepared especially to meet with steel mill or foundry requirements, individual specifications to be agreed on between consumer and supplier.

Cast Iron Grades

252 Cupola cast.
Clean cast iron scrap such as columns, pipes, plates, and castings of a miscellaneous nature, including automobile blocks and cast iron parts of agricultural and other machinery. Free from stove plate, burnt iron, brake shoes or foreign material. Cupola size, not over 24 inches x 30 inches, and no piece over 150 pounds in weight.

253 Charging box cast.
Clean cast iron scrap in sizes not over 60 inches in length or 30 inches in width, suitable for charging into an open hearth furnace without further preparation. Free from burnt iron, brake shoes, or stove plate.

254 Heavy breakable cast.
Cast iron scrap over charging box size or weighing more than 500 pounds. May include cylinders and driving wheel centers. May include steel which does not exceed 10 percent of the casting by weight.

255 Hammer block or bases.
Cast iron hammer blocks or bases.

256 Burnt iron.
Burnt cast iron scrap, such as stove parts, grate bars, and miscellaneous burnt iron. May include sash weights or window weights.

257 Mixed cast.
May include all grades of cast iron except burnt iron. Dimensions not over 24 inches x 30 inches and no piece over 150 pounds in weight.

258 Stove plate, clean cast iron stove.
Free from malleable and steel parts, window weights, plow points, or burnt cast iron.

259 Clean auto cast.
Clean auto blocks; free of all steel parts except camshafts, valves, valve springs, and studs. Free of nonferrous and non-metallic parts.

260 Unstripped motor blocks.
Automobile or truck motors from which steel and nonferrous fittings may or may not have been removed. Free from driveshafts and all parts of frames.

261 Drop broken machinery cast.
Clean heavy cast iron machinery scrap that has been broken under a drop. All pieces must be of cupola size, not over 24 inches x 30 inches, and no piece over 150 pounds in weight.

262 Clean auto cast, broken, not degreased.
Clean auto blocks, free of all steel parts except camshafts, valves, valve springs and studs. Free of nonferrous and non-metallic parts, and must be broken to cupola size, 150 pounds or less.

263 Clean auto cast, degreased.
Free of all steel parts except camshafts, valves, valve springs, and studs. Free of nonferrous and non-metallic parts, and must be broken into cupola size, 150 pounds or less.

264 Malleable.
Malleable parts of automobiles, railroad cars, locomotives, or miscellaneous malleable iron castings. Free from cast iron and steel parts and other foreign material.

265 Broken ingot molds and stools.
Broken ingot molds and stools, cast iron, maximum size 2 feet x 3 feet x 5 feet.

266 Unbroken ingot molds and stools.
Unbroken ingot molds and stools, cast iron.

Special Boring Grades

267 No. 1 chemical borings.
New clean cast or malleable iron borings and drillings containing not more than 1 percent oil, free from steel turnings, or chips, lumps, scale, corroded or rusty material.

268 Briquetted cast iron borings, hot process.
Cast iron borings, heated, briquetted, to a density of approximately 85 percent, oil and water content under 1 percent.

269 Briquetted cast iron borings, cold process.
Cast iron boring briquettes, free of steel and nonferrous material, hydraulically compressed into a cohesive solid, reasonably free of oil, and having a density of not less than 60 percent.

270 Malleable borings.
Clean malleable iron borings and drillings, free of steel turnings, scale, lumps and excessive oil.

271 No. 2 chemical borings.
New clean cast or malleable iron borings and drillings, containing not more than 1.5 percent oil, free from steel turnings, or chips, lumps, scale, corroded or rusty material.

Steel From Scrap Tires

General Guidelines

Items not covered in the specifications, and any variations in the specification, are subject to special arrangement between buyer and seller. Percentages listed below are by weight.

Preparation

Consumer and supplier to agree upon preparation for transport, such as the following:

Loose—Whole.
Loose—Chopped. If wire is chopped or shredded, parties may wish to specify the means of processing and/or characteristics of the final product (density, length of pieces, etc.).

CODE ITEM

Baled. Bales of wire should maintain their form during loading, shipment, unloading, storage, and handling typical of that done at a consuming facility, unless otherwise specified.

Baled—High Density. Hydraulically compressed, no dimension larger than 24", density of at least 75 pounds per square foot.

Baled—HRB/Low Density. Density of less than 75 pounds per square foot. Each bale secured with sufficient number of bale ties drawn tight to insure a satisfactory delivery.

Other Means of Preparation. Individual specifications to be agreed upon between consumer and supplier.

272 **Pulled bead wire (Truck)—Grade 1.**
Not chopped; made up of loops of wire. Less than five percent (<5%) rubber/fiber.

273 **Pulled bead wire (Truck)—Grade 2.**
Not chopped; made up of loops of wire. Five to ten percent (5-10%) rubber/fiber.

274 **Pulled bead wire (Truck)—Grade 3.**
Not chopped; made up of loops of wire. Greater than ten percent (>10%) rubber/fiber.

275 **Pulled bead wire (Passenger)—Grade 1.**
Not chopped; made up of loops of wire. Less than five percent (<5%) rubber/fiber.

276 **Pulled bead wire (Passenger)—Grade 2.**
Not chopped; made up of loops of wire. Five to ten percent (5-10%) rubber/fiber.

277 **Pulled bead wire (Passenger)—Grade 3.**
Not chopped; made up of loops of wire. Greater than ten percent (>10%) rubber/fiber.

278 **Processed tire wire (Ferrous)—Grade 1.**
Chopped. Less than two percent (<2%) rubber/fiber.

279 **Processed tire wire (Ferrous)—Grade 2.**
Chopped. Less than five percent (<5%) rubber/fiber.

280 **Processed tire wire (Ferrous)—Grade 3.**
Chopped. Five to ten percent (5-10%) rubber/fiber.

281 **Processed tire wire (Ferrous)—Grade 4.**
Chopped. Ten to twenty percent (10-20%) rubber/fiber.

282 **Processed tire wire (Ferrous)—Grade 5.**
Chopped. Greater than twenty percent (>20%) rubber/fiber.

Railroad Ferrous Scrap*

Specifications of Association of American Railroads promulgated by its Purchases and Materials Management Division (Revised 1973)

(2) **Axles, Steel.**
Solid car and/or locomotive friction bearing, 8 inch diameter and under (free of axles with key-way between wheel seats, no axles of shorter lengths than distance between wheel seats to be included).

CODE ITEM

(2A) **Axles, Steel.**
Solid car and/or locomotive friction bearing over 8 inch diameter (free of axles with key-way between wheel seats, no axles of shorter length than distance between wheel seats to be included).

(3) **Axles, Steel.**
Roller bearing 8 inch diameter and under (no axles of shorter lengths than distance between wheel seats to be included).

(3A) **Axles, Steel.**
Roller bearing over 8 inch diameter (no axles of shorter length than distance between wheel seats to be included).

(4) **Spikes, Track Bolts and Nuts, and Lock Washers, may include Rail Anchors.**

(5) **Tie Plates.**
Steel.

(6) **Rail Joints, Angle and/or Splice Bars.**
Steel.

(9) **Bolsters and/or Truck Sides, Frames: Uncut.**
Cast steel.

(11) **Cast Steel, No. 2.**
Steel castings, over 18 inches wide and/or over 5 feet long.

(11A) **Cast Steel, No. 1.**
Steel castings, 18 inches and under, not over 5 feet long, including cut truck side frames and bolsters.

(12) **Cast Iron, No. 1.**
Cast iron scrap, such as columns, pipes, plates, and/or castings of miscellaneous nature, but free from stove plates, brake shoes, and burnt scrap. Must be cupola size, not over 24 x 30 inches in dimension and no piece to weigh over 150 pounds. Must be free from foreign material.

(13) **Cast Iron, No. 2.**
Pieces weighing over 150 pounds, but not more than 500 pounds. Free from burnt cast.

(14) **Cast Iron, No. 3.**
Pieces weighing over 500 pounds; includes cylinders, driving wheel centers and/or all other castings. (Free from hammer blocks or bases.)

(15) **Cast Iron, No. 4.**
Burnt cast iron scrap, such as grate bars, stove parts and/or miscellaneous burnt scrap.

(16) **Cast Iron Brake Shoes.**
Brakes shoes of all types except composition-filled shoes.

(17) **Couplers and/or Knuckles.**
Railroad car and/or locomotive steel couplers, knuckles and/or locks stripped clean of all other attachments.

(18) **Frogs and/or Switches, uncut.**
Steel frogs and switches that have not been cut apart, exclusive of manganese.

CODE	ITEM
(18A)	**Railbound Manganese Frogs and Switch Points with manganese inserts that have not been cut apart.**
(23)	**Malleable.** Malleable parts of automobiles, railroad cars, locomotive and/or miscellaneous malleable castings.
(24)	**Melting Steel, Railroad No. 1.** Clean wrought iron or steel scrap, 1/4 inch and over in thickness, not over 18 inches in width, and not over 5 feet in length. May include pipe ends and material 1/8 inch to 1/4 inch in thickness, not over 15 inches x 15 inches. Individual pieces cut so as to lie reasonably flat in charging box.
(27)	**Rail, Steel No. 1.** Standard section tee rails, original weight 50 pounds per yard or heavier, 10 feet long and over. Suitable for rerolling into bars and shapes. Free from bent and twisted rails, frog, switch, and guard rails, or rails with split heads and broken flanges. Continuous welded rail may be included provided no weld is over 9 inches from the end of the piece of rail.
(28A)	**Rail, Steel No. 2 Cropped Rail Ends.** Standard section, original weight of 50 pounds per yard and over, 18 inches long and under.
(28B)	**Rail, Steel No. 2 Cropped Rail Ends.** Standard section, original weight of 50 pounds per yard and over, 2 feet long and under.
(28C)	**Rail, Steel No. 2 Cropped Rail Ends.** Standard section, original weight 50 pounds per yard and over, 3 feet long and under.
(29)	**Rail, Steel No. 3.** Standard section tee, girder, and/or guard rails, to be free from frog and switch rails not cut apart, and contain no manganese, cast, welds, or attachments of any kind except angle bars. Free from concrete, dirt, and foreign material of any kind.
(30)	**Sheet Scrap, No. 1.** Under 3/16 inch thick, may include hoops, band iron and/or steel, scoops and/or shovels (free of wood). Must be free from burnt or metal coated material, cushion, or other similar springs.
(31)	**Sheet Scrap, No. 2.** Galvanized or tinned material and/or gas retorts, and/or any other iron or steel material not otherwise classified.
(32)	**Steel, Tool.** (Specify kind in offering.)
(33)	**Steel, Manganese.** All kinds of manganese, rail, guard rails, frogs and/or switch points, cut or uncut.
(34)	**Steel, Spring.** Coil and/or elliptical, minimum thickness 1/4 inch, may be assembled or cut apart.
(34A)	**Steel, Spring.** Coil only.

CODE	ITEM
(35)	**Structural, Wrought Iron and/or Steel Uncut.** All steel or steel mixed with iron from bridges, structures and/or equipment that has not been cut apart, may include uncut bolsters, brakebeams, steel trucks, underframes, channel bars, steel bridge plates, frog and/or crossing plates and/or other steel of similar character.
(36)	**Tires.** All locomotive, not cut to specified lengths.
(38)	**Turnings. No. 1.** Heavy turnings from wrought iron and/or steel railroad axles or heavy forgings and/or rail chips, to weigh not less than 75 pounds per cubic foot. Free from dirt or other foreign material of any kind. Alloy steel scrap may be excluded from these specifications by mutual agreement between buyer and seller.
(38A)	**Turnings, Drillings and/or Borings. No. 2.** Cast, wrought, steel and/or malleable iron borings, turnings and/or drillings mixed with other metals.
(40)	**Wheels, No. 1.** Cast iron car wheels.
(42)	**Wheels, No. 3.** Solid cast steel, forged, pressed and/or rolled steel car and/or locomotive wheels, not over 42 inches diameter. (Specify kind in offering.)
(45)	**Destroyed Steel Cars.** Bodies of steel cars cut apart sufficiently to load. (Specify kind.)
(45A)	**Destroyed Steel Car Sides and Box Car Roofs.** Cut to a maximum length of... and a maximum width of... suitable for use in super presses and shears without additional preparation.

**Specifications in force as of publication date.*

Guidelines for Glass Cullet: GC-2016

Container Glass Cullet Specifications

Preamble

These standards and practices apply to container glass cullet for purchase or sale in the United States and Canada. Transactions covering shipments to or from other countries may also be in accordance with these standards and practices and may be modified by mutual agreement between buyer and seller. These specifications are guidelines for buying and selling container glass cullet and always subject to the buyer and seller's agreement.

Scrap Glass Definitions

Container Glass Cullet: crushed or whole scrap soda-lime-silica container glass.

Unprocessed Container Glass Cullet: broken or whole scrap glass containers that comply with the proper ISRI glass specifications.

Processed (Furnace Ready) Container Glass Cullet: crushed and whole contaminate-free scrap container glass that complies with the proper ISRI glass specifications.

Organic Matter: consists of organic materials that are non-container glass items; for example, paper labels should not exceed 0.2%.

Ferrous Materials: are magnetic metals, i.e. steel, iron, etc., and therefore must be removed during scrap glass processing.

Non-ferrous Materials: are non-magnetic metals, i.e. aluminum, lead, copper, etc., and therefore must be removed during glass processing.

The Purchase Agreement

Each transaction covering the purchase or sale of container glass cullet should be confirmed in writing and include agreement on the following items:

1. Product
Where possible, each container glass cullet grade shall be specified in accordance with the grade as defined.

2. Quantity
Where possible, the quantity shall always be specified in terms of a definite number of tons of 2,000 pounds each.

A. If the quantity is specified in tons, the order shall be considered completed when aggregate shipments are 5% under or over the quantity ordered.

B. If the quantity is specified in carloads or truckloads, a "load" shall be defined as a truck, trailer, or railroad car loaded to full visible capacity not to exceed established legal weight limits.

3. Packaging
It should be stated whether shipped units are to be in boxes, or in bulk by railroad car, truck, or trailer. Where possible, approximate weights should be specified.

4. Price Units
The price agreed upon shall be clearly stated in US dollars and cents per 2,000 pounds or in US dollars and cents per hundred weight.

5. Terms
Terms shall be "net cash 30 days after date of shipment" unless otherwise agreed upon.

Arbitration

In the event of a total disagreement between buyer and seller, the dispute should be submitted to ISRI arbitration.

In all cases, the cost of arbitration shall be borne by the party found to be at fault, or split in the event of compromise, as determined by the arbitrators.

UNPROCESSED FLINT CONTAINER GLASS CULLET SPECIFICATIONS

Composition: Soda-lime-silica beverage or food container glass.

Cullet Colors Segregation: Flint Cullet

Flint	95-100%
Amber	0-5%
Green	0-5%
Other Colors	0-5%

Size: Cullet may be broken but not pulverized.

Moisture: Cullet should be free of excess moisture.

Contaminant Listings:
Outthrow Materials: Normal container labels; ring and metal closures where processing capabilities permit.

Prohibitive Materials: Non-acceptable items include non-container glass (vision ware, light bulbs, crystal, windows, mirrors, drinking glasses, ceramic, milk glass, etc.) metals, ores, minerals, bricks, clay, grinding and refractory materials, rocks, clay and ceramic closures.

General: The quality of the unprocessed flint container glass cullet must be such that after beneficiation with a conventional container glass cullet processor it will be suitable for the production of glass containers.

UNPROCESSED AMBER CONTAINER GLASS CULLET SPECIFICATIONS

Composition: Soda-lime-silica beverage or food container glass.

Cullet Colors Segregation: Amber Cullet

Amber	90-100%
Flint	0-5%
Green	0-5%
Other Colors	0-5%

Size: Cullet may be broken but not pulverized.

Moisture: Cullet should be free of excess moisture.

Contaminant Listings:

Outthrow Materials: Normal container labels; ring and metal closures where processing capabilities permit.

Prohibitive Materials: Non-acceptable items include non-container glass (vision ware, light bulbs, crystal, windows, mirrors, drinking glasses, ceramic, milk glass, etc.) metals, ores, minerals, bricks, clay, grinding and refractory materials, rocks, clay and ceramic closures.

General: The quality of the unprocessed amber container glass cullet must be such that after beneficiation with a conventional container glass cullet processor it will be suitable for the production of glass containers.

UNPROCESSED GREEN CONTAINER GLASS CULLET SPECIFICATIONS

Composition: soda-lime-silica beverage or food container glass.

Cullet Colors Segregation: Green Cullet

Green	90-100%
Flint	0-10%
Amber	0-10%
Other Colors	0-5%

Size: Cullet may be broken but not pulverized.

Moisture: Cullet should be free of excess moisture.

Contaminant Listings:
Outthrow Materials: Normal container labels; ring and metal closures where processing capabilities permit.

Prohibitive Materials: Non-acceptable items include non-container glass (vision ware, light bulbs, crystal, windows, mirrors, drinking glasses, ceramic, milk glass, etc:) metals, ores, minerals, bricks, clay, grinding and refractory materials, rocks, clay and ceramic closures.

General: The quality of the unprocessed green container glass cullet must be such that after beneficiation with a conventional container glass cullet processor it will be suitable for the production of glass containers.

PROCESSED (FURNACE READY) FLINT CONTAINER GLASS CULLET SPECIFICATIONS

Composition: Soda-lime-silica container glass.

Container Glass Cullet Colors Segregation: Flint Cullet

Flint	95-100%
Amber	0-5%
Green	0-1%
Other Colors	0-.5%
Total NON-Flint Cullet	= <5%

Size: Various sizes from whole glass containers to -100 Mesh. However, the ideal material size is 3/8" to 3/4" with a 10% minimum of fine particles. Material size is based upon buyer and seller's agreement.

Contaminant Listings:
Outthrow Materials: Organic Matter, allowable percentage based upon buyer and seller's agreement.

Prohibitive Materials:

Ferrous Metals

Nonferrous Metals

Ceramics (such as cups, saucers, dinnerware, pottery, etc.)

Other Glass (for example, plate window glass, heat-resistant glass—such as Pyrex—and lead-based glass—such as crystal ware, television tubes, vision ware, etc.)

Other Materials (such as bricks, rocks, etc.)

PROCESSED (FURNACE READY) AMBER CONTAINER GLASS CULLET SPECIFICATIONS

Composition: Soda-lime-silica container glass

Container Glass Cullet Colors Segregation: Amber Cullet

Amber	90-100%
Flint	0-10%
Green	0-10%
Other Colors	0-5%
Total NON-Amber Cullet= <10%	

Size: Various sizes from whole glass containers to -100 Mesh. However, the ideal material size is 3/8" to 3/4" with a 10% minimum of fine particles. Material size is based upon buyer and seller's agreement.

Contaminant Listings:
Outthrow Materials: Organic Matter, allowable percentage based upon buyer and seller's agreement.

Prohibitive Materials:

Ferrous Metals

Nonferrous Metals

Ceramics (such as cups, saucers, dinnerware, pottery, etc.)

Other Glass (for example, plate window glass, heat-resistant glass—such as Pyrex—and lead-based glass—such as crystal ware, television tubes, vision ware, etc.)

Other Materials (such as bricks, rocks, etc.)

PROCESSED (FURNACE READY) GREEN CONTAINER GLASS CULLET SPECIFICATIONS

Composition: Soda-lime-silica container glass

Container Glass Cullet Colors Segregation: Green Cullet

Green	70-100%
Flint	0-15%
Amber	0-15%
Other Colors	0-10%
Total NON-Green Cullet= <30%	

The color green typically consists of a variety of shades, for example: emerald green or lime green.

Size: Various sizes from whole glass containers to -100 Mesh. However, the ideal material size is 3/8" to 3/4" with a 10% minimum of fine particles. Material size is based upon buyer and seller's agreement.

Contaminant Listings:
Outthrow Materials: Organic Matter, allowable percentage based upon buyer and seller's agreement.

Prohibitive Materials:

Ferrous Metals

Nonferrous Metals

Ceramics (such as cups, saucers, dinnerware, pottery, etc.)

Other Glass (for example, plate window glass, heat-resistant glass—such as Pyrex—and lead based glass—such as crystal ware, television tubes, vision ware, etc.)

Other Materials (such as bricks, rocks, etc.)

Guidelines for Paper Stock: PS-2016—Domestic Transactions

Paper Stock: Domestic Transactions

Preamble

These standards and practices apply to paper stock for repulping only and are for use in the United States, Canada, and Mexico. Transactions may be modified by mutual agreement between Buyer and Seller.

Basic to the Success of any Buyer-Seller Relationship is an Atmosphere of "Good Faith."
In keeping with this, the following principles have been established:

1. Seller must use due diligence to ascertain that shipments consist of properly packed paper stock and that shipments are made during the period specified.
2. Arbitrary deductions, cancellations and/or rejections by the Buyer are counter to acceptable good trade practices.
3. Seller shall provide the quality of paper stock agreed upon but shall not be responsible for the use of the paper stock or of the manufactured product.

I. The Purchase Agreement

Each transaction covering the purchase or sale of paper stock shall be confirmed in writing and include agreement on the following items:

1. **Quantity**
   Where possible, the quantity shall always be specified in terms of a definite number of short tons of 2,000 lbs. each or metric tonnes of 2,204.6 pounds each.
   a. When the quantity is specified in tons or tonnes, the order shall be considered completed when aggregate shipments are 5% under or over the quantity ordered.
   b. When the quantity is specified in carloads or truckloads, a "load" shall be defined as a truck, trailer, or railcar loaded in accordance with the ISRI/AF&PA Shipping Guide.
   c. The Buyer and Seller may establish minimum carload and/or truckload weights.
2. **Grades**
   Where possible, each grade purchased shall be specified in accordance with the grade as defined in SECTION VI herein.
3. **Packing**
   Unit type, i.e.: bales, skids, rolls, pallets, boxes, securely tied bundles or loose should be specified.
4. **Pricing and Terms**
   The agreed price and payment terms shall be clearly stated.
5. **Shipping Terms**
   Shipping terms shall be indicated with the use of phrases such as "f.o.b. shipping point" or "f.o.b. delivered."
6. **Shipping Instructions**
   Shipping instructions should clearly specify shipping schedule, route, carrier and destination.
7. **Shipping Period**
   The shipping period shall be understood to be within the same calendar month of the date of the order unless otherwise specified.

II. Fulfillment by the Seller

The practice of the Seller shall be in accordance with the following:

1. **Acceptance**
   All orders shall be confirmed in writing.
2. **Grading**
   Paper stock sold under the grade names appearing in SECTION VI shall conform to those grading definitions.
3. **Baling**
   Each bale must be secured with a sufficient number of bale ties drawn tight to ensure a satisfactory delivery.
4. **Tare**
   If agreed to by the Buyer, sides and headers may be used to make a satisfactory delivery of the bales but must not be excessive. The weight of skids, Gaylord boxes and other similar materials shall be deducted from the gross invoice weight.
5. **Loading**
   Paper stock shall be loaded as follows:
   a. Before they are loaded, railcars and trucks shall be free from objectionable materials and odors, and shall have sound floors and doors.
   b. All loads should consist entirely of one grade of paper stock unless otherwise agreed to. When two or more grades are included in the same load, units of each grade should be kept together in a separate part of the railcar or truck.
   c. Paper stock must be loaded in a manner that will minimize shifting and breakage. Excessive breakage due to improper loading can be cause for rejection.
   d. Paper stock shall be loaded in accordance with industry safety best practices.

   Please refer to the following guide for valuable safety information: http://www.isri.org/safeshipping
6. **Shipping Notice/Bill of Lading**
   Shipping by Truck
   A bill of lading or shipping notice shall accompany each shipment to the Buyer and should include the following:
   a. Date of shipment
   b. Release number (if applicable)

c. Number of bales/rolls
d. Grade of paper
e. Name of trucking company, trailer number and driver's signature
f. Shipper's signature

Shipping by Rail
When shipping by railcar, a bill of lading with shipping instructions shall be provided to the railroad and to the Buyer immediately upon release of the railcar and these documents should include the following:

a. Date of shipment
b. Release number (if applicable)
c. Number of bales/rolls
d. Grade of paper
e. Car number
f. Weighing instructions
g. Routing
h. Destination
i. Shipper's signature

7. Invoicing
Invoices, if required, should conform to instructions on the order and include the following data:

a. Date of shipment
b. Railcar or truck number
c. Customer's order number
d. Release Number (if applicable)
e. Shipper's invoice number
f. FOB point
g. Number of units (bales, rolls, skids etc.)
h. Weight and grade
i. Price and extension
j. Payment terms

8. Rejection
When notified of a rejection, the Seller must, within two business days, advise the Buyer as to which of the following procedures the Seller has decided upon:

a. Agree with the Buyer to a compromise acceptance and settlement.

b. Inspect the quality of the rejected material. The inspection and final disposition by the Seller shall take place within three business days of the notification. By mutual agreement, this time limit may be exceeded.

c. Order reshipment of the material.

d. Request that the Buyer agree to submit the rejected shipment to arbitration.

III. Fulfillment by the Buyer

The practice of the Buyer shall be in accordance with the following:

Upon receipt of the shipment, the Buyer is to make all possible effort to inspect the contents while it is still loaded.

a. Acceptable Loads (i.e. quality of paper stock, weight, bale integrity, moisture, order quantity, etc.)

ä if the shipment appears to be in accordance with the order, the shipping notice and other parameters as established between the Buyer and the Seller, the Buyer shall proceed with the unloading and shall provide the Seller with the receiving weights within **three** business days of unloading.

b. Unacceptable Loads (i.e. quality of paper stock, weight, bale integrity, moisture, order quantity, etc.)

ä if the shipment does not appear to be in accordance with the order, the shipping notice or any other parameters as established between the Buyer and the Seller, the Buyer shall **immediately** notify the Seller.

ä the Buyer shall set aside any portion of the shipment that is controversial and take reasonable care to protect that paper stock from any external deterioration or contamination until the final disposition of that shipment is determined.

Buyer has 21 days to downgrade or reject

ä if the Buyer, at any time with **21** calendar days after receipt of a shipment, finds objectionable materials heretofore not visible, the Buyer shall have the right to downgrade or reject the paper stock and shall immediately notify the Seller. The Seller will then determine the final disposition of the shipment.

ä in the event of a rejection, the Buyer shall be responsible for any paper stock used by the Buyer, and the attendant freight, other than such quantity as may be considered reasonable for laboratory sampling or testing purposes.

IV. Miscellaneous Practices

1. Ownership

a. When the shipment is purchased "f.o.b. shipping point" and is in accordance with the agreement covering the transaction, it becomes the property of the Buyer when loaded.

b. When the shipment is purchased on a "delivered" basis and is in accordance with the agreement covering the transaction, it remains the property of the Seller until it is delivered to the Buyer.

c. If the shipment is purchased on an "f.o.b. shipping point-specified freight allowed" basis and is in accordance with the agreement covering the transaction, it becomes the property of the Buyer when loaded on the transportation vehicle.

2. Carrier Selection

a. F.O.B. Shipping Point. Selection of the carrier is at the discretion of the Buyer unless otherwise agreed.

b. F.O.B. Delivered. Selection of the carrier is at the discretion of the Seller unless otherwise agreed.

c. Any excess freight charges accruing on a shipment due to the failure to the Seller to adhere to the purchase agreement is the liability of the Seller.

d. Any excess freight charges accruing on a shipment due to the failure of the Buyer to adhere to the purchase agreement is the liability of the Buyer.

3. **Weight Discrepancies**
No adjustments shall be made on any shipment of paper stock when the weight variation is 1% or less.

If the variation exceeds 1% the Seller may initiate a Weight Review by submitting a certified scale weight (showing the gross, tare and net of the load) and/or a loading tally showing individual bale weights. The Buyer shall then review the data and either:

a. adjust the received weight, or

b. decline the appeal, in which case the Buyer's weight shall prevail.

4. **Moisture content**
All paper must be packed air dry.

Where excess moisture is present in the shipment, the Buyer has the right to request an adjustment and if a settlement cannot be reached, the Buyer has the right to reject the shipment.

V. Arbitration

In the event of a dispute where agreement cannot be reached between Buyer and Seller, the dispute may be submitted to ISRI arbitration as long as one of the parties is a member of the association. Refer to ISRI Arbitration Services section of this document for further information.

VI. Grade Definitions

The definitions which follow describe grades as they should be sorted and packed. CONSIDERATION SHOULD BE GIVEN TO THE FACT THAT PAPER STOCK AS SUCH IS A SECONDARY MATERIAL PRODUCED MANUALLY AND MAY NOT BE TECHNICALLY PERFECT. Definitions may not specifically address all types of processes used in the manufacture or recycling of paper products. Specific requirements should be discussed between Buyer and Seller during negotiations.

Outthrows

The term "Outthrows" as used throughout this section is defined as "all papers that are so manufactured or treated or are in such a form as to be unsuitable for consumption as the grade specified."

Prohibitive Materials

The term "Prohibitive Materials" as used throughout this section is defined as:

a. Any materials which by their presence in a packing of paper stock, in excess of the amount allowed, will make the pack unusable as the grade specified.

b. Any materials that may be damaging to equipment.

c. All sorted recovered paper stock must be free of food debris, medical or hazardous wastes and poisonous or other harmful substances or liquids.

d. Wax is a Prohibitive unless accepted and pre-approved by the Buyer.

A material can be classified as an "Outthrow" in one grade and as a "Prohibitive Material" in another grade. Carbon paper, for instance, is "UNSUITABLE" in Mixed Paper and is, therefore, classified as an "Outthrow;" whereas it is "UNUSABLE" in White Ledger and in this case is classified as a "Prohibitive Material."

Other Acceptable Papers

The term "Other Acceptable Papers" as used throughout this section is defined as "all other papers that are deemed acceptable by the buyer and allowed in that buyer's pack up to the percentage allowed."

Glossary of Terms

A supplemental glossary of paper stock terms is located at the end of the Domestic Transactions section. The purpose of this limited list of terms is to help the user better understand specific grade definitions contained within this Circular.

(1) Residential Mixed Paper
Consists of a mixture of various qualities of paper not limited as to type of fiber content, normally generated from residential, multi-material collection programs.

Prohibitive Materials may not exceed	2%
Outthrows plus prohibitives may not exceed	5%

(2) Soft Mixed Paper
Consists of a clean, sorted mixture of various qualities of paper not limited as to type of fiber content.

Prohibitive Materials may not exceed	1%
Outthrows plus prohibitives may not exceed	5%

(3) Hard Mixed Paper (HMP)
Consists of a clean, sorted mixture of various qualities of paper containing less than 10% groundwood content.

Prohibitive Materials may not exceed	1/2 of 1%
Outthrows plus prohibitives may not exceed	3%

(4) Boxboard Cuttings
Consists of new cuttings of paperboard used in the manufacture of folding cartons, set-up boxes and similar boxboard products.

Prohibitive Materials may not exceed	1/2 of 1%
Outthrows plus prohibitives may not exceed	2%

(5) Mill Wrappers
Consists of paper used as outside wrap for rolls, bundles, or skids of finished paper.

Prohibitive Materials may not exceed	1/2 of 1%
Outthrows plus prohibitives may not exceed	3%

(6) Old Newspaper
Consists of sorted newspapers and other acceptable papers as typically generated by voluntary collection and curbside collection programs.

Prohibitive Materials may not exceed	2%
Outthrows plus prohibitives may not exceed	4%
Other acceptable papers may not exceed	30%

(7) Regular News, De-ink Quality (#7 ONP)
Consists of sorted, fresh newspapers, not sunburned, and other acceptable papers. This grade may contain magazines.

Prohibitive Materials may not exceed	1%
Outthrows plus prohibitives may not exceed	3%
Other acceptable papers may not exceed	20%

(8) Special News, De-ink Quality (#8 ONP)
Consists of sorted, fresh newspapers, not sunburned, and other acceptable papers. This grade is to be relatively free from magazines and contain not more than the normal percentage of rotogravure and colored sections.

Prohibitive Materials may not exceed	1%
Outthrows plus prohibitives may not exceed	2%
Other acceptable papers may not exceed	10%

(9) Over-Issue News (OI or OIN)
Consists of unused, overrun newspapers printed on newsprint, containing not more than the normal percentage of rotogravure and colored sections.

Prohibitive Materials	None permitted
Outthrows plus prohibitives	None permitted

(10) Magazines (OMG)
Consists of coated magazines, catalogues, and similar printed materials. May contain a small percentage of uncoated news-type paper.

Prohibitive Materials may not exceed	1%
Outthrows plus prohibitives may not exceed	3%

(11) Old Corrugated Containers (OCC)
Consists of corrugated containers having liners of either test liner or kraft.

Prohibitive Materials may not exceed	1%
Outthrows plus prohibitives may not exceed	5%

(12) Double-Sorted Old Corrugated (DS OCC)
Consists of double-sorted corrugated containers, generated from supermarkets and/or industrial or commercial facilities, having liners of test liner or kraft. Material has been specially sorted to be free of boxboard, off-shore corrugated, plastic, and wax.

Prohibitive Materials may not exceed	½ of 1%
Outthrows plus prohibitives may not exceed	2%

(13) New Double-Lined Kraft Corrugated Cuttings (DLK)
Consists of new corrugated cuttings having liners of either test liner or kraft. Treated medium or liners, insoluble adhesives, butt rolls, slabbed or hogged medium, are not acceptable in this grade.

Prohibitive Materials	None permitted
Outthrows plus prohibitives may not exceed	2%

(14) Fiber Cores
Consists of paper cores made from either recycled paperboard and/or linerboard, single or multiple plies. Metal or plastic end caps, wood plugs, and textile residues are not acceptable in this grade.

Prohibitive Materials may not exceed	1%
Outthrows plus prohibitives may not exceed	5%

(15) Used Brown Kraft
Consists of brown kraft bags free of objectionable liners and original contents.

Prohibitive Materials	None permitted
Outthrows plus prohibitives may not exceed	½ of 1%

(16) Mixed Kraft Cuttings
Consists of new brown kraft cuttings, sheets and bag scrap free of stitched paper.

Prohibitive Materials	None permitted
Outthrows plus prohibitives may not exceed	.1%

(17) Carrier Stock
Consists of printed or unprinted, unbleached new beverage carrier sheets and cuttings. May contain wet strength additives.

Prohibitive Materials	None permitted
Outthrows plus prohibitives may not exceed	1%

(18) New Colored Kraft
Consists of new colored kraft cuttings, sheets and bag scrap, free of stitched papers.

Prohibitive Materials	None permitted
Outthrows plus prohibitives may not exceed	1%

(19) Kraft Grocery Bag (KGB)
Consists of new brown kraft bag cuttings, sheets and misprint bags.

Prohibitive Materials	None permitted
Outthrows plus prohibitives may not exceed	1%

(20) New Kraft Multi-Wall Bag
Consists of new brown kraft multi-wall bag cuttings, sheets, and misprint bags, free of stitched papers.

Prohibitive Materials	None permitted
Outthrows plus prohibitives may not exceed	1%

(21) New Brown Kraft Envelope Cuttings
Consists of new unprinted brown kraft envelopes, cuttings or sheets.

Prohibitive Materials	None permitted
Outthrows plus prohibitives may not exceed	1%

(22) Mixed Flyleaf Shavings
Consists of trim of magazines, catalogs, inserts and similar printed matter, not limited with respect to groundwood, uncoated or coated stock, and may contain the bleed of cover and insert stock as well as beater-dyed paper and solid color printing.

Prohibitive Materials	None permitted
Outthrows plus prohibitives may not exceed	2%

(23) Telephone Directories
Consists of clean telephone directories printed for or by telephone directory publishers.

Prohibitive Materials	None permitted
Outthrows plus prohibitives may not exceed	½ of 1%

(24) White Blank News (WBN)
Consists of unprinted cuttings and sheets of white newsprint or other uncoated white groundwood paper of similar quality.

Prohibitive Materials	None permitted
Outthrows plus prohibitives may not exceed	1%

(25) Groundwood Computer Printout (GW CPO)
Consists of groundwood papers which are used in forms manufactured for use in data processing machines. This grade may contain colored stripes and impact or nonimpact (e.g., laser) computer printing.

Prohibitive Materials	None permitted
Outthrows plus prohibitives may not exceed	2%

(26) Publication Blanks (CPB)
Consists of unprinted cuttings or sheets of white coated or filled groundwood content paper.
Prohibitive Materials None permitted
Outthrows plus prohibitives may not exceed 1%

(27) Coated Flyleaf Shavings
Consists of lightly printed trim from magazines, catalogs and similar printed matter, not limited with respect to groundwood, uncoated or coated stock. The bleed of cover, insert card stock, and beater-dyed paper may not exceed 2%.
Prohibitive Materials None permitted
Outthrows plus prohibitives may not exceed 1%

(28) Coated Soft White Shavings (SWS)
Consists of unprinted, coated, and uncoated shavings and sheets of white groundwood-free printing paper. May contain a small percentage of groundwood.
Prohibitive Materials None permitted
Outthrows plus prohibitives may not exceed 1%

(29) (Grade not currently in use)

(30) Hard White Shavings (HWS)
Consists of shavings or sheets of unprinted, untreated white groundwood-free paper.
Prohibitive Materials None permitted
Outthrows plus prohibitives may not exceed ½ of 1%

(31) Hard White Envelope Cuttings (HWEC)
Consists of groundwood-free cuttings, shavings, or sheets of unprinted, untreated, and uncoated white envelope paper.
Prohibitive Materials None permitted
Outthrows plus prohibitives may not exceed ½ of 1%

(32) (Grade not currently in use)

(33) New Colored Envelope Cuttings
Consists of groundwood-free cuttings, shavings, or sheets of untreated, uncoated bleachable colored envelope paper.
Prohibitive Materials None permitted
Outthrows plus prohibitives may not exceed 2%

(34) (Grade not currently in use)

(35) Semi Bleached Cuttings
Consists of sheets and cuttings of unprinted, untreated, groundwood-free paper such as file folder stock, untreated milk carton stock, or manila tag.
Prohibitive Materials None permitted
Outthrows plus prohibitives may not exceed 2%

(36) Unsorted Office Paper (UOP)

Consists of printed or unprinted paper typically generated in an office environment that may include a document destruction process. This grade may contain white, colored, coated and uncoated papers, manila and pastel colored file folders.
Prohibitive Materials may not exceed 2%
Outthrows plus prohibitives may not exceed 10%

(37) Sorted Office Paper (SOP)

Consists of paper, as typically generated by offices, containing primarily white and colored groundwood-free paper, free of unbleached fiber. May include a small percentage of groundwood computer printout and facsimile paper.
Prohibitive Materials may not exceed 1%
Outthrows plus prohibitives may not exceed 5%

(38) (Grade not currently in use)

(39) Manifold Colored Ledger (MCL)
Consists of sheets, shavings, and cuttings of industrially-generated printed or unprinted colored or white groundwood-free paper. All stock must be uncoated and free of nonimpact printing. A percentage of carbonless paper is allowable.
Prohibitive Materials may not exceed ½ of 1%
Outthrows plus prohibitives may not exceed 2%

(40) Sorted White Ledger (SWL)
Consists of uncoated, printed or unprinted sheets, shavings, guillotined books, and cuttings of white groundwood-free ledger, bond, writing, and other paper which has similar fiber and filler content.
Prohibitive Materials may not exceed ½ of 1%
Outthrows plus prohibitives may not exceed 2%

(41) Manifold White Ledger (MWL)
Consists of sheets, shavings, and cuttings of industrially-generated printed or unprinted white groundwood-free paper. All stock must be uncoated.
Prohibitive Materials may not exceed ½ of 1%
Outthrows plus prohibitives may not exceed 2%

(42) (Grade no longer in use)

(43) Coated Book Stock (CBS)
Consists of coated groundwood-free paper, printed or unprinted in sheets, shavings, guillotined books and cuttings. A reasonable percentage of paper containing fine groundwood may be included.
Prohibitive Materials None permitted
Outthrows plus prohibitives may not exceed 2%

(44) Coated Groundwood Sections (CGS)
Consists of printed, coated groundwood paper in sheets, sections, shavings or guillotined books. This grade may not include news quality groundwood paper.
Prohibitive Materials None permitted
Outthrows plus prohibitives may not exceed 2%

(45) Lightly Printed Bleached Board Cuttings
Consists of groundwood-free printed bleached board cuttings, free from misprint sheets, cartons, wax, greaseproof lamination, metallic, and inks, adhesives or coatings that are insoluble.
Prohibitive Materials may not exceed ½ of 1%
Outthrows plus prohibitives may not exceed 2%

(46) Printed Bleached Board
Consists of groundwood-free misprint sheets, cartons and cuttings of bleached board, free from wax, greaseproof lamination, metallic, and inks, adhesives or coatings that are insoluble.
Prohibitive Materials may not exceed 1%
Outthrows plus prohibitives may not exceed 2%

(47) Unprinted Bleached Board
Consists of groundwood-free unprinted, untreated bleached board cuttings, sheets or rolls, free from wax, greaseproof lamination and adhesives or coatings that are insoluble.
Prohibitive Materials None permitted
Outthrows plus prohibitives may not exceed 1%

(48) #1 Bleached Cup Stock (#1 Cup)
Consists of untreated cuttings or sheets of coated or uncoated cup base stock. Cuttings with slight bleed may be included. Must be free of wax, poly, and other coatings that are insoluble.

Prohibitive Materials	None permitted
Outthrows plus prohibitives may not exceed	½ of 1%

(49) #2 Printed Bleached Cup Stock (#2 Cup)
Consists of printed, untreated formed cups, cup die cuts, and misprint sheets of coated or uncoated cup base stock. Glues must be water soluble. Must be free of wax, poly, and other coatings that are insoluble.

Prohibitive Materials	None permitted
Outthrows plus prohibitives may not exceed	1%

(50) Unprinted Bleached Plate Stock
Consists of groundwood-free bleached coated or uncoated, untreated and unprinted plate cuttings and sheets.

Prohibitive Materials	None permitted
Outthrows plus prohibitives may not exceed	½ of 1%

(51) Printed Bleached Plate Stock
Consists of groundwood-free bleached coated or uncoated, untreated printed plates and sheets. Must be free of coatings or inks that are insoluble.

Prohibitive Materials	None permitted
Outthrows plus prohibitives may not exceed	1%

(52) Aseptic Packaging and Gable-Top Cartons
Consists of liquid packaging board containers including empty, used, polyethylene (PE)-coated, printed one-side aseptic and gable-top cartons containing no less than 70% bleached chemical fiber and may contain up to 6% aluminum foil and 24% PE film.

Prohibitive Materials may not exceed	2%
Outthrows plus prohibitives may not exceed	5%

Specialty Grades

The grades listed below are produced and traded in carload and truckload quantities throughout the United States, and because of certain characteristics (i.e., the presence of wet strength, polycoatings, plastic, foil, carbon paper, hot melt glue), are not included in the regular grades of paper stock. However, it is recognized that many mills have special equipment and are able to utilize large quantities of these grades. Since many paper mills around the world do use these specialty grades, they are being listed with appropriate grade numbers for easy reference.

The Paper Stock Industries Chapter of ISRI is not establishing specific specifications, which would refer to such factors as the type of wet strength agent used, the percentage of wax, the amount of polycoating, whether it is on top of or under the printing, etc. The specification for each grade should be determined between Buyer and Seller, and it is recommended that purchase be made based on sample.

These specialty grades are as follows:

1–S	White Waxed Cup Cuttings
2–S	Printed Waxed Cup Cuttings
3–S	Poly Coated Cup Stock
4–S	Polycoated Bleached Kraft–Unprinted
5–S	Polycoated Bleached Kraft–Printed
6–S	Polycoated Milk Carton Stock
7–S	Polycoated Diaper Stock
8–S	Polycoated Boxboard Cuttings
9–S	(This Grade No Longer in Use)
10–S	Printed and/or Unprinted Bleached Sulphate Containing Foil
11–S	Waxed Corrugated Cuttings
12–S	Wet Strength Corrugated Cuttings
13–S	(This Number Not Currently in Use)
14–S	Beer Carton Scrap
15–S	Contaminated Bag Scrap
16–S	Insoluble Glued Free Sheet Paper and/or Board (IGS)
17–S	White Wet Strength Scrap
18–S	Brown Wet Strength Scrap
19–S	Printed and/or Colored Wet Strength Scrap
20–S	File Stock
21–S	(This Number Not Currently in Use)
22–S	Ruled White
23–S	Flyleaf Shavings Containing Hot Melt Glue
24–S	(This Number Not Currently in Use)
25–S	Books with Covers
26–S	(This Number Not Currently in Use)
27–S	(This Number Not Currently in Use)
28–S	(This Number Not Currently in Use)
29–S	(This Number Not Currently in Use)
30–S	Plastic Windowed Envelopes
31–S	Textile Boxes
32–S	Printed TMP
33–S	Unprinted TMP
34–S	Manila Tabulating Cards
35–S	Sorted Colored Ledger
36–S	Computer Printout (CPO)

Glossary of Paper Stock Terms for Both Domestic and Export Transactions

The following is a glossary of paper stock terms used within section VI, Grade Definitions, of the Guidelines for Paper Stock for both Domestic and Export Transactions. These terms are not intended as a dictionary, but as a guide to help the Circular user better understand specific grade definitions as used in the recovered paper industry.

ADHESIVES: Bonding substances that are non-water soluble are considered contaminants in pulp subs, groundwood and deinking grades.

BEATER-DYED: Paper dyed or colored during the paper manufacturing process.

BLEACHED: Paper that has been whitened by chemicals.

BOARDS: Paperboard 0.006 inch or thicker.

BOGUS: Paper of inferior quality to a standard grade.

BOXBOARD: Paperboard made from a variety of recovered fibers having sufficient folding properties and thickness to be used to manufacture folding or set-up boxes.

CHEMICAL WOOD-FIBER PULP: Generic for cellulose fiber isolated and purified by a chemical digestive process.

CHIPBOARD: Uncoated, non-folding paperboard made from a variety of recovered papers, having sufficient strength and structural properties to be used to manufacture game boards, book covers, notebook backing and similar products.

COATINGS: A layer of adhesives, clays, varnish or any barrier applied to paper.

CONTAINERBOARD: Linerboard and corrugated medium used to manufacture shipping containers.

CORES: Paper tubes on which rolls of paper may be wound for shipment.

CORRUGATED CONTAINERS: Shipping containers made with kraft paper linerboard and corrugated medium.

CUTTINGS: Paper stock by-product of paper converting operations.

FILLER/FILLED: Denotes papers that have minerals (clays or other pigments) added for improving quality or color.

FLYLEAF/SHAVINGS: Trim scrap from printing operations.

FREESHEET: Paper that contains less than 10% groundwood fiber (synonym: groundwood-free).

GROUNDWOOD: Paper made with fibers produced without chemical pulping.

GILT: Metallic (gold or silver) inks used in printing.

HOGGED: Paper that has been mechanically torn or ripped to reduce its original size.

HOT-MELT: A type of glue or adhesive applied while hot/warm. Considered a contaminant in some grades.

IMPACT (PRINTING): A paper printing process that physically applies ink to the paper surface.

INSOLUABLE GLUES: Glues that won't dissolve (break down) in water.

JUTE: Strong, long-fibered pulp made from hemp.

KRAFT: Paper made from sulfate pulp (synonyms: brown and strong).

LAMINATED: Paper manufactured by fusing one or more layers of paper together.

LINERBOARD: Outside layers of a combination board used to manufacture corrugated shipping containers.

MANIFOLD: May denote continuous forms or business forms with several parts (may be interleaved with carbon paper or be carbonless papers).

MEDIUM: The inner corrugated fluted material used to manufacture corrugated shipping containers.

NON-IMPACT: Papers having printing images formed without impact.

OFF-SHORE/ASIAN: Denotes corrugated shipping containers manufactured overseas and containing bogus liners or medium. (Color is somewhat lighter/more yellow than North American produced materials).

PAPERBOARD: Denotes paper products used for packaging (corrugated boxes, folding cartons, set-up boxes, etc.).

ROTOGRAVURE: A paper printing (intaglio) process typically used to create the highest quality of smoothness on coated and uncoated papers. Excess quantities are considered an outthrow in grades #7, #8, and #9.

SECTIONS: Unbound, unused printed material with full ink coverage.

SHAVINGS: Trim from converting and bindery operations.

SIGNATURES: A section of book obtained by folding a single sheet of printing paper.

SLABBED: Type of paper stock normally generated by cutting rolls.

SULFITE: Papers and boards made from pulps made from an acid process.

SULPHATE: Papers and boards made from alkaline processed pulps.

TEST LINER: Liners, which are the outer ply of any kind of paperboard, containing 100% recycled material.

TMP: Thermomechanical pulp.

TREATED: Paper manufactured with additives.

TRIM: Cuttings of paper stock generated at converting or bindery operations which normally have little or no printing.

ULTRA-VIOLET (UV) INKS/COATINGS: Papers having inks or coatings dried by utilizing an ultraviolet radiation method. Considered a contaminant in deinking grades.

WET STRENGTH: Papers that have been treated with a moisture-resistant chemical that inhibits pulping.

Guidelines for Paper Stock: PS-2016—Export Transactions

Paper Stock: Export Transactions

Preamble

These standards and practices apply to paper stock for repulping only and are for use in export transactions from the United States, Canada and Mexico. Transactions may be modified by mutual agreement between Buyer and Seller.

Basic to the success of any Buyer-Seller relationship is an atmosphere of "good faith."

In keeping with this, the following principles have been established:

1. Seller must use due diligence to ascertain that shipments consist of properly packed paper stock and that shipments are made during the period specified.
2. Arbitrary deductions, cancellations and rejections by the Buyer are counter to acceptable good trade practice.
3. Seller shall deliver the quality of paper stock agreed upon but shall not be responsible for the use of the paper or for the manufactured product.

I. The Purchase Agreement

Each transaction covering the purchase or sale of paper stock should be confirmed in writing and include agreement on the following items:

1. **Quantity**
   Where possible, the quantity shall always be specified in terms of a definite number of metric tons of 2,204.6 pounds each, or short tons of 2,000 pounds each.
   a. When the quantity is specified in tons or tonnes, the order shall be considered completed when aggregate shipments are 5% under or over the quantity ordered.
   b. The Buyer and Seller shall establish minimum container-load weights.
2. **Grades**
   Where possible, each grade purchased shall be specified in accordance with the grade as defined in the latest Paper Stock Industries Chapter Standards and Practices Circular. Any deviation from the grades listed in the simplified Circular should be specified and agreed to by both parties.
3. **Packing**
   Unit type, i.e. bales, skids, rolls, pallets, boxes, or bundles should be specified.
4. **Pricing and Terms**
   The agreed price and payment terms shall be clearly stated.
5. **Shipping Terms**
   Shipping terms shall be indicated with the use of acronyms such as: "F.A.S.," "C&F," "C.I.F." or "CY."
6. **Shipping Instructions**
   Shipping instructions should be provided by the Buyer at the time of the order. Information should include: consignee, notify party, documentation, and inspection requirements. Insurance and freight payment information should be mutually agreed upon.
7. **Shipping Period**
   The shipping period shall be mutually agreed upon by the Buyer and the Seller.
8. **Method of Invoicing**
   Invoicing instructions shall be clearly stated.

II. Fulfillment by the Seller

Practices of the Seller shall be in accordance with the following:

1. **Acceptance**
   All orders shall be confirmed in writing.
2. **Grading**
   Paper stock which is sold under the grade names appearing in the PSI Standards and Practices Circular shall conform to those grading definitions.
3. **Packing**
   Each unit must be sufficiently secured to ensure a satisfactory delivery.
4. **Tare**
   If agreed to by the Buyer, sides and headers may be used to make a satisfactory delivery of the bales but must not be excessive. The weight of the skids and other similar materials shall be deducted from a gross invoice weight.
5. **Loading**
   Paper stock shall be loaded as follows:
   a. All loads shall consist entirely of one grade of paper stock unless otherwise agreed to. When two or more grades are included in the same shipment, units of each grade shall be kept together in a separate part of the container.
   b. Paper stock must be loaded in a manner that will minimize shifting and breakage. Excessive breakage prior to unloading may be cause for a claim.
6. **Shipping Notice**
   A packing list, shipping advice and/or an invoice shall be sent to the Buyer within 72 hours of the vessel sailing.
7. **Invoicing**
   Invoicing should conform to the instructions on the order and include the following data:
   a. Date of Shipment
   b. Container Number
   c. Steamship Line, Vessel, Voyage Number

d. Bill of Lading Number
e. Customer's Order Number
f. Shipper's Invoice Number
g. Number of Units etc.
h. Weight and Grade
i. Price and Extension
j. Payment Terms

8. Claims
When notified of a claim, the Seller must, within five business days, advise the Buyer as to which of the following procedures the Seller has decided upon:

a. Agree with the Buyer to a compromise acceptance and settlement.

b. Require the opportunity to inspect the quality of the material in question.

c. Request that the Buyer agree to submit the claim to arbitration.

III. Fulfillment by the Buyer

The practice of the Buyer shall be in accordance with the following:

1. Unloading
After arrival of the shipment, the Buyer is to inspect the contents so far as possible while it is still loaded.

If the shipment appears to be in accordance with the order and shipping notice, the Buyer shall proceed with the unloading.

If the shipment does not appear to be in accordance with the order and shipping notices, or if the quality of the stock is not in accordance with specifications agreed to, the Buyer shall immediately notify the Seller before unloading.

If during the process of unloading, any portion of the shipment not visible in the original inspection is not in accordance with specifications, shipping notice and order, that portion shall be set aside and the Seller immediately notified.

If at any time within 21 days after receipt of shipment, the Buyer, upon opening the bales finds objectionable materials heretofore not visible, he shall immediately notify the Seller

In the event of any claim, the Buyer shall use due diligence to protect all controversial paper stock from external deterioration or contamination.

2. Claims Other Than Quality
The Buyer shall within 10 days of unloading notify the Seller of any necessary changes and shall furnish detailed information with regard to these changes.

3. Rejection
In the event of a rejection, the Buyer shall be responsible for any paper stock used by the Buyer and the freight thereon, other than such quantity as may be considered reasonable for laboratory sampling or testing purposes.

The Buyer must protect the shipment from weather or any other elements until the claim is settled.

IV. Miscellaneous Practices

1. Ownership
If the shipment is purchased on a "delivered destination" basis, and is in accordance with the agreement covering the transaction, it remains the property of the Seller until it is delivered to the Buyer by carrier.

2. Demurrage Charges
a. Any demurrage accrued on a shipment due to the failure of the Seller to ship in accordance with the order, except with respect to quality, is the liability of the Seller.

b. In the event that a rejection for quality stands, any demurrage accruing on the shipment prior to notification to the Seller shall be the Buyer's liability.

c. In the event that negotiation of substantiated rejection for quality results in agreement by the Buyer to accept the shipment, then only the demurrage, following notification of the rejection—and including 24 hours after the agreement—becomes the liability of the Seller. Demurrage accruing prior to and including the day of notification becomes the liability of the Buyer.

3. Switching and Freight charges
Any extra switching or excess freight charges accruing on a shipment due to the failure of the Seller to protect the agreed upon minimum rate or to ship in accordance with the agreement is the liability of the Seller.

4. Weight Discrepancies
No debits, credits or adjustments shall be issued on any shipment of paper stock when the weight variation is 2% or less.

In the event that a discrepancy exceeds those mentioned above as "allowable;" the Buyer and Seller shall exchange copies of certified weight in containers. In the event that both parties have such records, and errors cannot be determined, it is recommended that the weight closest to the public carrier's scale weight shall be assumed to be correct, Buyer and Seller should agree on the location of the public carrier's scale prior to shipment. In the absence of such records on the part of one of the parties, the records of the other party shall govern.

5. Moisture Content
All paper stock must be packed air dry. A moisture content of 12% is deemed to be air dry.

Where excess moisture is present in the shipment, the Buyer has the right to request an adjustment. Whenever possible, such adjustment shall be made on an average air dry basis.

6. Replacement of Shipment
In the event that any shipment is rejected due to quality:

Whether or not the shipment is to be replaced is to be decided by mutual agreement between Buyer and Seller.

7. **Promptness of Shipment**
   a. In the event that Buyer causes shipment to be postponed:

      On instructions of the Buyer, the Seller shall have the option of extending the time limit of the order by the same number of days of the postponement, or of canceling that portion of the order on which shipment was postponed. Seller shall promptly notify Buyer of option selected.

   b. In the event that Buyer causes shipment to be postponed:

      On instructions of the Seller, the Buyer shall have the option of extending the time limit of the order by the same number of days of the postponement, or of canceling that portion of the order on which shipment was postponed. Buyer shall promptly notify Seller of option selected.

8. **Outthrows**
   Outthrows shall be understood to be all papers that are so manufactured or treated or are in such form as to be unsuitable for consumption as the grade specified.

9. **Prohibitive Materials**
   a. Any materials which, by their presence in a packing of paper stock, in excess of the amount allowed, make the packing unusable as the grade specified.

   b. Any materials which, by their presence in a package of paper stock, pose a risk of damage to the equipment.

      Note: In connection with Items 8 and 9, a material can be classified as an "Outthrow" in one grade and as a "Prohibitive Material" in another grade. Carbon paper, for instance, is "UNSUITABLE" in Mixed Paper and is, therefore, classified as an "Outthrow"; whereas it is "UNUSABLE" in White Ledger and in this case classified as a "Prohibitive Material."

V. Arbitration

In the event of a total disagreement between Buyer and Seller, the dispute should be submitted to ISRI arbitration.

In all cases, the cost of arbitration shall be borne by the party found to be at fault, or split in the event of compromise, as determined by the arbitrators.

VI. Grade Definitions

The definitions which follow describe grades as they should be sorted and packed. CONSIDERATION SHOULD BE GIVEN TO THE FACT THAT PAPER STOCK AS SUCH IS A SECONDARY MATERIAL PRODUCED MANUALLY AND MAY NOT BE TECHNICALLY PERFECT. Definitions may not specifically address all types of processes used in the manufacture or recycling of paper products. Specific requirements should be discussed between Buyer and Seller during negotiations.

Outthrows

The term "Outthrows" as used throughout this section is defined as "all papers that are so manufactured or treated or are in such a form as to be unsuitable for consumption as the grade specified."

Prohibitive Materials

The term "Prohibitive Materials" as used throughout this section is defined as:

a. Any materials which by their presence in a packing of paper stock, in excess of the amount allowed, will make the packaging unusable as the grade specified.

b. Any materials that may be damaging to equipment.

   A material can be classified as an "Outthrow" in one grade and as a "Prohibitive Material" in another grade. Carbon paper, for instance, is "UNSUITABLE" in Mixed Paper and is, therefore, classified as an "Outthrow"; whereas it is "UNUSABLE" in White Ledger and in this case is classified as a "Prohibitive Material."

Other Acceptable Papers

The term "Other Acceptable Papers" as used throughout this section is defined as "all other papers that are deemed acceptable by the buyer and allowed in that buyer's pack up to the percentage allowed."

Glossary of Terms

A supplemental glossary of paper stock terms is located at the end of the Domestic Transactions section. The purpose of this limited list of terms is to help the user better understand specific grade definitions contained within this Circular.

(1) Residential Mixed Paper
Consists of a mixture of various qualities of paper not limited as to type of fiber content, normally generated from residential, multi-material collection programs.

Prohibitive Materials may not exceed	2%
Outthrows plus prohibitives may not exceed	5%

(2) Soft Mixed Paper
Consists of a clean, sorted mixture of various qualities of paper not limited as to type of fiber content.

Prohibitive Materials may not exceed	1%
Outthrows plus prohibitives may not exceed	5%

(3) Hard Mixed Paper (HMP)
Consists of a clean, sorted mixture of various qualities of paper containing less than 10% groundwood content.

Prohibitive Materials may not exceed	½ of 1%
Outthrows plus prohibitives may not exceed	3%

(4) Boxboard Cuttings
Consists of new cuttings of paperboard used in the manufacture of folding cartons, set-up boxes, and similar boxboard products.

Prohibitive Materials may not exceed	½ of 1%
Outthrows plus prohibitives may not exceed	2%

(5) Mill Wrappers
Consists of paper used as outside wrap for rolls, bundles, or skids of finished paper.

Prohibitive Materials may not exceed	½ of 1%
Outthrows plus prohibitives may not exceed	3%

(6) Old Newspaper
Consists of sorted newspapers and other acceptable papers as typically generated by voluntary collection and curbside collection programs.

Prohibitive Materials may not exceed	2%
Outthrows plus prohibitives may not exceed	4%
Other acceptable papers may not exceed	30%

(7) Regular News, De-ink Quality (#7 ONP)
Consists of sorted, fresh newspapers, not sunburned, and other acceptable papers. This grade may contain magazines.

Prohibitive Materials may not exceed	1%
Outthrows plus prohibitives may not exceed	3%
Other acceptable papers may not exceed	20%

(8) Special News, De-ink Quality (#8 ONP)
Consists of sorted, fresh newspapers, not sunburned, and other acceptable papers. This grade is to be relatively free from magazines and contain not more than the normal percentage of rotogravure and colored sections.

Prohibitive Materials may not exceed	1%
Outthrows plus prohibitives may not exceed	2%
Other acceptable papers may not exceed	10%

(9) Over-Issue News (OI or OIN)
Consists of unused, overrun newspapers printed on newsprint, or securely tied in bundles, containing not more than the normal percentage of rotogravure and colored sections.

Prohibitive Materials	None permitted
Outthrows plus prohibitives	None permitted

(10) Magazines (OMG)
Consists of coated magazines, catalogues, and similar printed materials. May contain a small percentage of uncoated news-type paper.

Prohibitive Materials may not exceed	1%
Outthrows plus prohibitives may not exceed	3%

(11) Old Corrugated Containers (OCC)
Consists of corrugated containers having liners of either test liner or kraft.

Prohibitive Materials may not exceed	1%
Outthrows plus prohibitives may not exceed	5%

(12) Double-Sorted Old Corrugated (DS OCC)
Consists of double-sorted corrugated containers, generated from supermarkets and/or industrial or commercial facilities, having liners of test liner or kraft. Material has been specially sorted to be free of boxboard, off-shore corrugated, plastic, and wax.

Prohibitive Materials may not exceed	1/2 of 1%
Outthrows plus prohibitives may not exceed	2%

(13) New Double-Lined Kraft Corrugated Cuttings (DLK)
Consists of new corrugated cuttings having liners of either test liner or kraft. Treated medium or liners, insoluble adhesives, butt rolls, slabbed or hogged medium, are not acceptable in this grade.

Prohibitive Materials	None permitted
Outthrows plus prohibitives may not exceed	2%

(14) Fiber Cores
Consists of paper cores made from either recycled paperboard and/or linerboard, single or multiple plies. Metal or plastic end caps, wood plugs, and textile residues are not acceptable in this grade.

Prohibitive Materials may not exceed	1%
Outthrows plus prohibitives may not exceed	5%

(15) Used Brown Kraft
Consists of used brown kraft bags free of objectionable liners and original contents.

Prohibitive Materials	None permitted
Outthrows plus prohibitives may not exceed	1/2 of 1%

(16) Mixed Kraft Cuttings
Consists of new brown kraft cuttings, sheets and bag scrap free of stitched paper.

Prohibitive Materials	None permitted
Outthrows plus prohibitives may not exceed	1%

(17) Carrier Stock
Consists of printed or unprinted, unbleached new beverage carrier sheets and cuttings. May contain wet strength additives.

Prohibitive Materials	None permitted
Outthrows plus prohibitives may not exceed	1%

(18) New Colored Kraft
Consists of new colored kraft cuttings, sheets and bag scrap, free of stitched papers.

Prohibitive Materials	None permitted
Outthrows plus prohibitives may not exceed	1%

(19) Kraft Grocery Bag (KGB)
Consists of new brown kraft bag cuttings, sheets and misprint bags.

Prohibitive Materials	None permitted
Outthrows plus prohibitives may not exceed	1%

(20) New Kraft Multi-Wall Bag
Consists of new brown kraft multi-wall bag cuttings, sheets, and misprint bags, free of stitched papers.

Prohibitive Materials	None permitted
Outthrows plus prohibitives may not exceed	1%

(21) New Brown Kraft Envelope Cuttings
Consists of new unprinted brown kraft envelopes, cuttings or sheets.

Prohibitive Materials	None permitted
Outthrows plus prohibitives may not exceed	1%

(22) Mixed Flyleaf Shavings
Consists of trim of magazines, catalogs, inserts and similar printed matter, not limited with respect to groundwood, uncoated or coated stock, and may contain the bleed of cover and insert stock as well as beater-dyed paper and solid color printing.

Prohibitive Materials	None permitted
Outthrows plus prohibitives may not exceed	2%

(23) Telephone Directories
Consists of clean telephone directories printed for or by telephone directory publishers.

Prohibitive Materials	None permitted
Outthrows plus prohibitives may not exceed	1/2 of 1%

(24) White Blank News (WBN)
Consists of unprinted cuttings and sheets of white newsprint or other uncoated white groundwood paper of similar quality.
Prohibitive Materials None permitted
Outthrows plus prohibitives may not exceed 1%

(25) Groundwood Computer Printout (GW CPO)
Consists of groundwood papers which are used in forms manufactured for use in data processing machines. This grade may contain colored stripes and impact or nonimpact (e.g., laser) computer printing.
Prohibitive Materials None permitted
Outthrows plus prohibitives may not exceed 2%

(26) Publication Blanks (CPB)
Consists of unprinted cuttings or sheets of white coated or filled groundwood content paper.
Prohibitive Materials None permitted
Outthrows plus prohibitives may not exceed 1%

(27) Coated Flyleaf Shavings
Consists of lightly printed trim from magazines, catalogs and similar printed matter, not limited with respect to groundwood, uncoated or coated stock. The bleed of cover, insert card stock, and beater-dyed paper may not exceed 2%.
Prohibitive Materials None permitted
Outthrows plus prohibitives may not exceed 1%

(28) Coated Soft White Shavings (SWS)
Consists of unprinted, coated, and uncoated, shavings and sheets of white groundwood-free printing paper. May contain a small percentage of groundwood.
Prohibitive Materials None permitted
Outthrows plus prohibitives may not exceed 1%

(29) (Grade not currently in use)

(30) Hard White Shavings (HWS)
Consists of shavings or sheets of unprinted, untreated white groundwood-free paper.
Prohibitive Materials None permitted
Outthrows plus prohibitives may not exceed ½ of 1%

(31) Hard White Envelope Cuttings (HWEC)
Consists of groundwood-free cuttings, shavings or sheets of unprinted, untreated and uncoated white envelope paper.
Prohibitive Materials None permitted
Outthrows plus prohibitives may not exceed ½ of 1%

(32) (Grade not currently in use)

(33) New Colored Envelope Cuttings
Consists of groundwood-free cuttings, shavings, or sheets of untreated, uncoated bleachable colored envelope paper.
Prohibitive Materials None permitted
Outthrows plus prohibitives may not exceed 2%

(34) (Grade not currently in use)

(35) Semi Bleached Cuttings
Consists of sheets and cuttings of unprinted, untreated, groundwood-free paper such as file folder stock, untreated milk carton stock, or manila tag.
Prohibitive Materials None permitted
Outthrows plus prohibitives may not exceed 2%

(36) Unsorted Office Paper (UOP)

Consists of printed or unprinted paper typically generated in an office environment that may include a document destruction process. This grade may contain white, colored, coated and uncoated papers, manila and pastel colored file folders.
Prohibitive Materials may not exceed 2%
Outthrows plus prohibitives may not exceed 10%

(37) Sorted Office Paper (SOP)
Consists of paper, as typically generated by offices, containing primarily white and colored groundwood-free paper, free of unbleached fiber. May include a small percentage of groundwood computer printout and facsimile paper.
Prohibitive Materials may not exceed 1%
Outthrows plus prohibitives may not exceed 5%

(38) (Grade not currently in use)

(39) Manifold Colored Ledger (MCL)
Consists of sheets, shavings, and cuttings of industrially-generated printed or unprinted colored or white groundwood-free paper. All stock must be uncoated and free of nonimpact printing. A percentage of carbonless paper is allowable.
Prohibitive Materials may not exceed ½ of 1%
Outthrows plus prohibitives may not exceed 2%

(40) Sorted White Ledger (SWL)
Consists of uncoated, printed or unprinted sheets, shavings, guillotined books, and cuttings of white groundwood-free ledger, bond, writing, and other paper which has similar fiber and filler content.
Prohibitive Materials may not exceed ½ of 1%
Outthrows plus prohibitives may not exceed 2%

(41) Manifold White Ledger (MWL)
Consists of sheets, shavings, and cuttings of industrially-generated printed or unprinted white groundwood-free paper. All stock must be uncoated.
Prohibitive Materials may not exceed ½ of 1%
Outthrows plus prohibitives may not exceed 2%

(42) (Grade no longer in use)

(43) Coated Book Stock (CBS)
Consists of coated groundwood-free paper, printed or unprinted in sheets, shavings, guillotined books and cuttings. A reasonable percentage of paper containing fine groundwood may be included.
Prohibitive Materials None permitted
Outthrows plus prohibitives may not exceed 2%

(44) Coated Groundwood Sections (CGS)
Consists of printed, coated groundwood paper in sheets, sections, shavings or guillotined books. This grade may not include news quality groundwood paper.
Prohibitive Materials None permitted
Outthrows plus prohibitives may not exceed 2%

(45) Lightly Printed Bleached Board Cuttings
Consists of groundwood-free printed bleached board cuttings, free from misprint sheets, cartons, wax, greaseproof lamination, metallic, and inks, adhesives or coatings that are insoluble.
Prohibitive Materials may not exceed ½ of 1%
Outthrows plus prohibitives may not exceed 2%

(46) Printed Bleached Board
Consists of groundwood-free misprint sheets, cartons and cuttings of bleached board, free from wax, greaseproof lamination, metallic, and inks, adhesives or coatings that are insoluble.

Prohibitive Materials may not exceed	1%
Outthrows plus prohibitives may not exceed	2%

(47) Unprinted Bleached Board
Consists of groundwood-free unprinted, untreated bleached board cuttings, sheets or rolls, free from wax, greaseproof lamination and adhesives or coatings that are insoluble.

Prohibitive Materials	None permitted
Outthrows plus prohibitives may not exceed	1%

(48) #1 Bleached Cup Stock (#1 Cup)
Consists of untreated cuttings or sheets of coated or uncoated cup base stock. Cuttings with slight bleed may be included. Must be free of wax, poly, and other coatings that are insoluble.

Prohibitive Materials	None permitted
Outthrows plus prohibitives may not exceed	½ of 1%

(49) #2 Printed Bleached Cup Stock (#2 Cup)
Consists of printed, untreated formed cups, cup die cuts, and misprint sheets of coated or uncoated cup base stock. Glues must be water soluble. Must be free of wax, poly, and other coatings that are insoluble.

Prohibitive Materials	None permitted
Outthrows plus prohibitives may not exceed	1%

(50) Unprinted Bleached Plate Stock
Consists of groundwood-free bleached coated or uncoated, untreated and unprinted plate cuttings and sheets.

Prohibitive Materials	None permitted
Outthrows plus prohibitives may not exceed	½ of 1%

(51) Printed Bleached Plate Stock
Consists of groundwood-free bleached coated or uncoated, untreated printed plates and sheets. Must be free of coatings or inks that are insoluble.

Prohibitive Materials	None permitted
Outthrows plus prohibitives may not exceed	1%

(52) Aseptic Packaging and Gable-Top Cartons
Consists of liquid packaging board containers including empty, used, polyethylene (PE)-coated, printed one-side aseptic and gable-top cartons containing no less than 70% bleached chemical fiber and may contain up to 6% aluminum foil and 24% PE film.

Prohibitive Materials may not exceed	2%
Outthrows plus prohibitives may not exceed	5%

Specialty Grades

The grades listed below are produced and traded in carload and truckload quantities throughout the United States, and because of certain characteristics (i.e., the presence of wet strength, polycoatings, plastic, foil, carbon paper, hot melt glue), are not included in the regular grades of paper stock. However, it is recognized that many mills have special equipment and are able to utilize large quantities of these grades. Since many paper mills around the world do use these specialty grades, they are being listed with appropriate grade numbers for easy reference.

The Paper Stock Industries Chapter of ISRI is not establishing specific specifications, which would refer to such factors as the type of wet strength agent used, the percentage of wax, the amount of polycoating, whether it is on top of or under the printing, etc. The specification for each grade should be determined between Buyer and Seller, and it is recommended that purchase be made based on sample.

These specialty grades are as follows:

1–S	White Waxed Cup Cuttings
2–S	Printed Waxed Cup Cuttings
3–S	Poly Coated Cup Stock
4–S	Polycoated Bleached Kraft–Unprinted
5–S	Polycoated Bleached Kraft–Printed
6–S	Polycoated Milk Carton Stock
7–S	Polycoated Diaper Stock
8–S	Polycoated Boxboard Cuttings
9–S	(This Grade No Longer in Use)
10–S	Printed and/or Unprinted Bleached Sulphate Containing Foil
11–S	Waxed Corrugated Cuttings
12–S	Wet Strength Corrugated Cuttings
13–S	(This Number Not Currently in Use)
14–S	Beer Carton Scrap
15–S	Contaminated Bag Scrap
16–S	Insoluble Glued Free Sheet Paper and/or Board (IGS)
17–S	White Wet Strength Scrap
18–S	Brown Wet Strength Scrap
19–S	Printed and/or Colored Wet Strength Scrap
20–S	File Stock
21–S	(This Number Not Currently in Use)
22–S	Ruled White
23–S	Flyleaf Shavings Containing Hot Melt Glue
24–S	(This Number Not Currently in Use)
25–S	Books with Covers
26–S	(This Number Not Currently in Use)
27–S	(This Number Not Currently in Use)
28–S	(This Number Not Currently in Use)
29–S	(Not currently in use)
30–S	Plastic Windowed Envelopes
31–S	Textile Boxes
32–S	Printed TMP
33–S	Unprinted TMP
34–S	Manila Tabulating Cards
35–S	Sorted Colored Ledger
36–S	Computer Printout (CPO)

Guidelines for Plastic Scrap: P-2016

Baled Recycled Plastic Scrap Commercial Guidelines

General Information

Commercial Guidelines for Baled Recycled Plastic Scrap were developed to provide industry-wide quality standards. These standards will facilitate commodity trading of these materials. They will also focus suppliers of such material on the quality requirements of their customers.

Product
These guidelines are designed with the potential for dealing with all recycled plastic in bale form. Initial specifications refer only to bottles. The code framework allows for generation of guidelines for all types of plastic packaging materials (including rigids and flexibles) with room for expansion to other plastic products and resins including those which are used to produce durable goods. Guidelines for those products may be added at a later date.

Bale Density
Bales shall be compressed to a minimum density of 10 pounds per cubic foot and a maximum density to be determined by individual contract between Buyer and Seller. Increased density may improve transportation efficiency, but over-compression may adversely affect the ability of a Buyer to separate, sort, and reprocess the material.

Bale Tying Material
Bale wires, ties, or straps shall be made of non-rusting or corroding material.

Bale Integrity
Bale integrity must be maintained through loading, shipping, handling, and storage. Distorted or broken bales are difficult to handle. They are unacceptable and may result in downgrading, rejection, or charge back.

Allowable Contamination
Unspecified materials must not exceed 2% of total bale weight. Bales which contain over 2% will be subjected to reduction in the contracted price of the material as well as charges for disposal of the contaminants. The reduced percentage will vary depending upon the amount and type of contamination. Quality of the baled plastic is the primary factor which determines the value.

Prohibited Material
Certain materials are understood to be specified as "prohibited." Such materials will render the bale "non-specification" and may cause some customers to reject the entire shipment. These may include plastic materials which have a deleterious effect on each other when reprocessed, and materials such as agricultural chemicals, hazardous materials, flammable liquids and/or their containers, and medical waste.

Liquids
Plastic containers/materials should be empty and dry when baled. The bale should be free of any free flowing liquid of any type.

General
Shipments should be essentially free of dirt, mud, stones, grease, glass, and paper. The plastic must not have been damaged by ultraviolet exposure. Every effort should be made to store the material above ground and under cover. A good faith effort on the part of the supplier will be made to include only rinsed bottles which have closures removed.

Definitions for Plastic Materials

Baled
Loose material that is compressed and bound together.

Densified
Material that is compressed through mechanical means. Typically applies to foam (purged) and film (turned into "popcorn"). Densified material is typically sent on for additional processing.

Durable Goods
Electrical and electronic equipment, appliances, automobiles (called "transportation equipment" in ISO 15270), construction products (included in ISO 15270) and industrial equipment (included in ISO 15270)

Flake
A generic term that refers to size and shape. Typically consists of plastic bottles or plastic film typically ground into a chip.

Mixed Load Plastic
Shredded plastic that contains various types of resins and requires mechanical sorting to reach final specification. Typically baled and not granulated. Types and grades included in the bale to be agreed to by buyer and seller.

Plastic Bottle
A rigid container which is designed with a neck that is smaller than the body. Normally used to hold liquids and emptied by pouring.

Plastic Film
A thin flexible sheet which does not hold a particular shape when unsupported.

Postconsumer
Products generated by a business or consumer that have served their intended end use and have been separated or diverted from the solid waste stream for the purpose of recycling.

Purge
Plastic that has been melted and has hardened. This material has no set shape or form.

Recovered Plastic
Plastic materials which have been recovered or diverted from the solid waste stream. Does not include materials generated from and commonly reused within an original manufacturing process.

Recycled Plastic
Plastics composed of either post-consumer or recovered material or both.

Regrind
A generic term that refers to hard rigid plastic typically ground into a chip. Typically consists of material that is the same grade, color and type. It can be used in extrusion or molding processes.

Rigid Plastic Container
A package (formed or molded container) which maintains its shape when empty and unsupported.

Shred
Size reduced material. The typical upper size can be between 3" to 12", although in some cases the upper size can be as small as about 1". Size range, characteristics should be agreed to between buyer and seller.

Shredded Plastic
Generic term. Material that contains a high plastic content. Typically contains 90% plastic content.

Shredder Residue
The remaining mixture after the majority of metals have been recovered from durable goods "shred." The mixture can contain plastics, rubber, wood, glass, rocks, dirt, paper, film, textiles, wires and other metals missed during the metal recovery process. The predominant single material is often plastic, which can vary from about 15% to about 90% depending on the type of durable goods and the steps taken in the metal separation process. Size range, characteristics should be agreed to between buyer and seller.

Common issues for this category:

The following list applies to all materials listed in this category.

- Caps, enclosures, and labels are acceptable.
- Product need not be washed, but preferred.

PET Mixed Bottles
Consists of mixed, postconsumer PET food and beverage bottles and jars from curbside collection programs. May include up to 30% green tinted bottles. Thermoform container content subject to agreement between buyer and seller.

Product: Bottles only
Source: Postconsumer material
Contamination: Total allowed—2% listed below
—Non-specified plastic or non-plastic material
—Injection grade (examples include buckets, drums, or crates)
General: Refer to the General Information section for more information.

HDPE Mixed Color Bottles
Consists of mixed colored, postconsumer #2 HDPE containers from household products typically collected in residential recycling programs. Examples include detergent, orange juice, and shampoo bottles. Should be free of wide-mouth containers such as margarine or whipped cream tubs. Motor oil and herbicide/insecticide bottles are not allowed.

Product: Bottles only
Source: Postconsumer material
Contamination: Total allowed—2% listed below
—Non-specified plastic or non-plastic material
—Injection grade (examples include butter tubs, buckets, drums, or crates)
General: Refer to the General Information section for more information.

HDPE Natural Bottles
Consists of uncolored, postconsumer #2 HDPE containers from household products typically collected in residential recycling programs. Examples include milk, vinegar, or ammonia bottles. Should be free of colored containers (including white) as well as any wide-mouth containers. Herbicide/insecticide bottles are not allowed.

Product: Bottles only
Source: Postconsumer material
Contamination: Total allowed—2% listed below
—Non-specified plastic or non-plastic material
—Injection grade (examples include Tupperware)
—Colored material
General: Refer to the General Information section for more information.

Mixed Unsorted 1-7 Bottles and Containers
This grade primarily consists of PET bottles and HDPE bottles from residential recycling programs in which no positive sorting of any bottles has occurred and only the Mixed Bulky Rigid Plastics have been removed. Acceptable materials include soda bottles, milk jugs, shampoo bottles, yogurt cups, and other food and beverage containers. Non-bottle containers may consist of items such as cups, trays, clamshells, and tubs. Glass bottles and tin or aluminum cans are not allowed in this grade.

Product: Mixed household items
Source: Postconsumer material
Contamination: Total allowed—2% listed below
—Bulky rigid plastics such as crates, buckets, pails, toys, furniture, etc.l
—Non-specified plastic or non-plastic material
General: Refer to the General Information section for more information.

Mixed Sorted 3-7 Bottles and Containers
This grade primarily consists of mixed bottles and containers from residential recycling programs in which most of the PET bottles, HDPE bottles, and Mixed Bulky Rigid Plastics have been positively sorted out. This grade may include some PET and HDPE but primarily consists of all leftover plastics materials remaining after they have been picked out. Non-bottle containers may consist of items such as cups, trays, clamshells, and tubs. Glass bottles and tin or aluminum cans are not allowed.

Product: Mixed household items
Source: Postconsumer material
Contamination: Total allowed—2% listed below
—Bulky rigid plastic such as crates, buckets, pails, toys, furniture, etc.
—Non-specified plastic or non-plastic material
General: Refer to the General Information section for more information.

Mixed Bulky Rigid Plastics

This grade primarily consists of non-bottle PE and PP bulky rigid plastic items such as plastic drums, crates, buckets, baskets, toys, refuse totes, and lawn furniture typically collected ina residential recycling MRF. This grade should not contain any mixed 1-7 bottles and containers.

Product: Mixed household items
Source: Postconsumer material
Contamination: Total allowed–2% listed below
–Non-specified plastic or non-plastic material
General: Refer to the General Information section for more information.

Mixed Color HDPE Buckets

Shall consist of HDPE buckets and "pail-grade" 5-8 melt-injection-grade HDPE recovered from any residential, construction, or commercial application. Original product such as paint or food must be emptied from unit, but dry surface residue is allowed. Metal handles are acceptable. Standard bale will include white or other colored 5-gallon buckets.

Product: Buckets recovered from a sorting facility
Source: Residential and commercial materials
Contamination: Total allowed–5% listed below
–Other types of HDPE containers or bottles
–Large rigid plastics such as crates, drums, toys, lawn furniture, etc.
–Nonspecified plastic or nonplastic material such as metal, paper, or glass.
General: Refer to the General Information section for more information.

Mixed Color HMW HDPE Drums

Shall consist of high-molecular-weight HDPE drums or barrels recovered from any commercial application. Original product such as solvents or chemicals must be emptied from the unit, and the unit must be rinsed in accordance with federal and state regulations prior to baling. Plastic lids and spouts are acceptable. Standard bale will include blue, white, or other colored 55-gallon drums.

Source: Commercial materials
Contamination: Total allowed–2% listed below
–Other types of HDPE containers or bottles
–Large rigid plastics such as crates, buckets, pails, toys, lawn furniture, etc.
–Nonspecified plastic or nonplastic material such as metal, paper, or glass.
–Metal lids and spouts
General: Refer to the General Information section for more information.

Bulky Rigids

Description: Any large rigid #2 HDPE and/or #5 PP plastic bulky item, created through a positive-sort from curbside, drop-off, or other public or private recycling collection program. Examples include crates, buckets, baskets, totes, and lawn furniture. Buckets/pails with metal handles can be included. This bale should not contain mixed #1-7 bottles or containers, toys with metal, drums, jugs (either HMW or 55 gallons), or PVC/vinyl.
Product: Bulky rigid plastic.
Source: Postconsumer material created from a positive sort from a curbside, drop-off, or other public or private recycling collection program.
Contamination: Total allowed–10% by weight.
–Any plastic items or packaging including #1 PET, #3 PVC, #6 PS, #7 Other (4% maximum acceptable);
–Metal (2% maximum acceptable);
–Paper (2% maximum acceptable);
–Liquid/other residues (2% maximum acceptable).
The following items are not allowed: HMW drums or 55 gallon drums; metal on toys; pallets with metal; film and bags; wood; glass; or electronic scrap.
Refer to the "Prohibited Material" section for more information.
General: Refer to the General Information section for more information.

Tubs and Lids Without Bulky

Description: Any whole container with a #2 HDPE, #5 PP, and/or #4 LDPE resin code generated from a positive-sort curbside, drop- off, or other public or private recycling collection program. Tubs are containers that have a neck or mouth similar in size to its base. Lids are caps for tubs that have a fastening feature other than threads. Examples include yogurt cups, margarine tubs, ice cream tubs, and cold drink cups (transparent, cold serve). Nursery pots are not acceptable.
Bulky rigid plastics <u>are not</u> allowed.
Product: Tubs and lids.
Source: Postconsumer material generated from a curbside, drop- off, or other public or private recycling collection program.
Contamination: Total allowed–10% by weight.
–#1 PET bottles;
–#1 PET or #3 PVC thermoform packaging;
–#2 HDPE pails and buckets;
–#3 PVC (polyvinyl chloride);
–#6 PS (polystyrene);
–#7 Other;
–Paper;
–Liquids.
The following items are <u>not</u> allowed (0% allowed): Film and bags; metal handles; wood; glass; or electronic scrap.
Refer to the "Prohibited Material" section for more information.
General: Refer to the "General Information" section for more information.

Tubs and Lids With Bulky

Description: Any whole container, with a #2 HDPE, #5 PP, and/or #4 LDPE resin code generated from a positive-sort curbside, drop- off, or other public or private recycling collection program. Tubs are containers that have a neck or mouth similar in size to its base. Lids are caps for tubs that have a fastening feature other than threads. Examples include yogurt cups, margarine tubs, ice cream tubs, and cold drink cups (transparent, cold serve). Nursery pots are not acceptable.
Bulky rigid plastics <u>are</u> allowed.
Product: Tubs and lids.
Source: Postconsumer material generated from a curbside, drop-off, or other public or private recycling collection program.
Contamination: Total allowed–10% by weight.
–#1 PET bottles;
–#1 PET or #3 PVC thermoform packaging;
–#2 HDPE pails and buckets;
–#3 PVC (polyvinyl chloride);
–#6 PS (polystyrene);
–#7 Other;
–Paper;
–Liquids.
The following items are <u>not</u> allowed: Film and bags; metal handles; wood; glass; or electronic scrap.
Refer to the "Prohibited Material" section for more information.
General: Refer to the "General Information" section for more information.

Premium Film
This grade consists of 100% clean, clear, dry, post-industrial film consisting of LLDPE film or LDPE film.
Product: Film
Source: Post-industrial
Contamination: 0% contamination allowed.
Prohibited Items: NO metal, food, trash, bottles, cans, glass, wood, oil, rocks, labels or loose paper. NO rigid plastics such as PET, PP, PVC, coated or laminated film.
General: Refer to the General Information section for more information.

A+ Grade Film
This grade consists of 99% clean, clear, dry, post commercial and/or post-industrial film consisting of LLDPE pallet stretch film. May contain small amount of LDPE film.
Product: Film
Source: Post-commercial or Post-Industrial
Contamination: 1-2% color LDPE or LLDPE film, less than 1% of stickers and labels allowed
Prohibited Items: NO metal, food trash, bottles, cans, glass, wood, oil, rocks, and loose paper. NO rigid plastics such as PET, PP, PVC, coating or laminated film.
General: Refer to the General Information section for more information.

A Grade Film
This grade consists of 95% clean, dry , clear, natural LDPE or LLDPE film. Any mix of post commercial or post-industrial film. Minimal amount of HDPE allowed.
Product: Film
Source: Post-commercial or Post-Industrial
Contamination: Total contaminants should not exceed approximately 5% of color, print, labels. Less than 2% clean HDPE bags allowed. Less than 1% strapping allowed.
Prohibited Items: NO metal, food trash, bottles, cans, glass, wood, oil, rocks, and loose paper. NO rigid plastics such as PET, PP, PVC, coating or laminated film.
General: Refer to the General Information section for more information.

B Grade Film
This grade consists of 80% clear, up to 20% color, clean, natural LDPE and/or LLDPE films. Any mix of post-commercial or post-industrial film is allowed. Minimal amounts HDPE or strapping allowed.
Product: Film
Source: Post-commercial and/or post-industrial
Contamination: Total contaminants not to exceed approximately 10% consisting of strapping, PP film, injection grade tubs, or loose paper.
Prohibited Items: NO food, trash, cans, glass, wood, oil, or rocks
General: Refer to the General Information section for more information.

C Grade Film
This grade consists of 50% clear, 50% color, dry, LDPE or LLDPE films. Can be any mix of post-commercial or post-industrial film. HDPE or PP films are allowed.
Product: Film
Source: Post-commercial and/or post-industrial.
Contamination: Total contaminants not to exceed approximately 15%
Prohibited Items: NO food, trash, cans, glass, wood, oil, or rocks.
General: Refer to the General Information section for more information.

MRF Film
Film collected and sorted at a MRF, typically generated from curbside collections consisting of HDPE grocery/retail bags, LDPE, or LLDPE films.
Product: Film
Contamination: Contaminants not to exceed 10% of loose paper, rigid plastics, non-ethylene film
Prohibited Items: NO food, trash, cans, glass, wood, oil, rocks, liquids, PET plastics, or PVC plastics.
General: Refer to the General Information section for more information.

Grocery Film
Any mix of clean, dry, grocery, retail, packaging film or dry cleaner bags collected from store return programs. Bales may contain HDPE, LLDPE, or LDPE films combined.
Product: Film
Contamination: Contaminants not to exceed 10% of loose paper, rigid plastics, non-ethylene film
Prohibited Items: NO food, trash, cans, glass, wood, oil, rocks, liquids, PET plastics, or PVC plastics.
General: Refer to the General Information section for more information.

Agricultural Greenhouse Film
Films not used on the ground for agriculture or farming. Examples of which may be bale wrap, greenhouse films, dairy bags and bunker silo films which are polyethylene based.
Product: Film
Contamination: Contaminants not to exceed 20% of non-PE film, dirt, rocks, or moisture.
Prohibited Items: NO food, trash, cans, glass, wood, or oil
General: Refer to the General Information section for more information.

Agricultural Ground Cover Film
Any film collected after in field use. Examples of which may be mulch film and irrigation (drip) tubing which is polyethylene based.
Product: Film
Contamination: Contaminants not to exceed 50% of non-PE Film, dirt, rocks, or moisture.
Prohibited Items: NO food, trash, cans, glass, wood or oil.
General: Refer to the General Information section for more information.

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Guidelines for Electronics Scrap: ES-2016

Electronics Scrap

Commercial Guidelines for Electronics Scrap were developed to provide industry-wide quality standards. These standards will facilitate commodity transactions domestically and internationally. Transactions covering shipments to or from other countries may be in accordance with these standards and may be modified by mutual agreement between Buyer and Seller.

Electronic Scrap Definitions

The following E-Recycling definitions will facilitate a more consistent language for both domestic as well as international transactions.

"END-OF-LIFE ELECTRONIC PRODUCTS"

EOL Electronic Products are either obsolete for their intended purpose or no longer useful by the current user and lack any significant market value as an operational unit. These products are represented by any of the following categories of electronic products:

IT and telecommunications electronic equipment including:

- Centralized data processing:
- Mainframes
- Minicomputers
- Printer units
- Personal computing:
- Personal computers (CPU. mouse, screen and keyboard included)
- Laptop computers (CPU, mouse, screen and keyboard included)
- Notebook computers
- Notepad computers
- Printers
- Copying equipment
- Electrical and electronic typewriters
- Pocket and desk calculators
- Other products and equipment for the collection, storage, processing, presentation or communication of information by electronic means
- User terminals and systems
- Facsimile
- Telex
- Telephones
- Pay telephones
- Cordless telephones
- Cellular telephones
- Answering systems
- Other products or equipment for transmitting sound, images or other information by telecommunications

Consumer electronic equipment including:

- Radio sets
- Television sets
- Video cameras
- Video recorders
- Eli-h recorders
- Audio amplifiers
- Musical instruments and other products or equipment for the purpose of recording or reproducing sound or images, including signals or other technologies for the distribution of sound and image by telecommunications

Toys, leisure and sports electronic equipment including:

- Electric trains or car racing sets
- Hand-held video game consoles
- Video games
- Computers for biking, diving, running, rowing, etc.
- Sports equipment with electric or electronic components
- Coin slot machines

Medical devices (except all implanted and infected products and radioactive components) including:

- Radiotherapy equipment
- Cardiology
- Dialysis
- Pulmonary ventilators
- Nuclear medicine
- Laboratory equipment or in-vitro diagnostics
- Analyzers
- Freezers
- Fertilization tests
- Other appliances for detecting, preventing, monitoring, treating, or alleviating illness, injury or disability

Monitoring and control instruments including:

- Smoke detectors
- Heating regulators
- Thermostats
- Measuring, weighing or adjusting appliances for household or as laboratory equipment
- Other monitoring and control instruments used in industrial installations (e.g. Ira control panels)

"E-Recycling"

E-Recycling is any process by which End-of-Life (EOL) electronic products which would otherwise become solid waste are collected, separated, reused or processed and returned to use in the form of raw materials or products.

"E-Demanufacturing"

Demanufacturing is the process of separating EOL electronic products (electronic materials) into metallic and non-metallic parts that can be reused or recycled.

"E-Dismantler"

Dismantler is a person who engages in the manual demanufacturing of EOL electronic products (electronic materials) to reuse or recycle components and commodities contained within.

"E-Dismantling"
Dismantling is the manual demanufacturing of EOL electronic products (electronic materials) to reuse or recycle components and commodities contained within.

"E-Processor"
Processor is a person who engages in the mechanical demanufacturing of EOL electronic products (electronic materials) to reuse or recycle various commodities contained within.

"E-Processing"
Processing is the mechanical demanufacturing of EOL electronic products (electronic materials) to recover various commodities contained within.

"E-Broker"
Broker is a person who engages in the buying, selling, and trading of electronic products (electronic materials) without demanufacturing.

"E-Brokering"
Brokering is the buying, selling, and trading of electronic products (electronic materials) without demanufacturing.

ELECTRONICS SCRAP METALS—EM

Preface: The following metals specifications are directed to processing plants generating value-added commodities for consumers producing metal products. All the specifications below are subject to final terms and conditions as agreed between buyer and seller.

EM1—Eddy-Current (EC) Aluminum
Shall consist of the shredded aluminum fraction generated by EC separation of electronic products being predominately aluminum. Bulk density to be a minimum of 30 pounds per cubic foot (subject to terms between buyer and seller). Material may contain agreed-upon amounts of zinc and copper but shall not contain more than a total 5% maximum of nonmetallics, of which no more than 1% shall be rubber and plastics. To be free of excessively oxidized material and any sealed or pressurized items. Any variation to be sold by special arrangement between buyer and seller. Note: Refer to ISRI nonferrous specifications for Tweak or Twitch.

EM2—Eddy-Current (EC) Scrap
Shall consist of a combination of nonferrous metals that should be predominately aluminum but may contain statistically significant percentages of zinc or other nonferrous metals. Bulk density to be a minimum of 30 pounds per cubic foot and subject to terms between buyer and seller. Material to be bought/sold under this guideline shall be identified as EM2 with a number to follow indicating the estimated percentage of nonferrous metal (e.g., EM2-90 means the material contains approximately 90% nonferrous metal content). May also be screened to permit description by specific size ranges. Note: Refer to ISRI nonferrous specification for Zorba.

Note: Specifications for clean aluminum scrap produced by demanufacturing or pretreating EOL scrap prior to shredding can be found under ISRI Guidelines for Nonferrous Scrap. For aluminum streams that contain less than 85% aluminum, consult the general aluminum scrap specifications.

EM3—Circuitboards and Shredded Circuitboards From the Processing of End-of-Life Electronics
Shall consist of whole or shredded copper/precious metal-bearing populated or unpopulated circuitboards from the manual dismantling of electronic products. May also consist of shredded circuitboards from end-of-life electronic product processing systems with a maximum piece size of 2 inches. Maximum acceptable metal contamination: aluminum, 5%; ferrous, 2%; zinc, 2%; magnesium, 1%; and beryllium, 200 ppm. Other elements subject to agreement between buyer and seller. Maximum plastic content: 40%. Typically sold on an assay basis and classified into different categories denominated by the gold levels contained in the material. Major classifications are:

1) <50 grams per mt
2) <200 g/mt
3) >200 g/mt

EM4—Light Iron
Shall consist of whole No. 1 and whole No. 2 wrought iron and/or steel scrap and No.1 busheling from the manual dismantling of electronic products. Refer also to 200, 204, and 207 Guidelines for Ferrous Scrap.

EM5—Iron Frag
Shall consist of shredded No. 1 and No. 2 whole wrought iron and/or steel scrap and No. 1 busheling from end-of-life electronic product processing systems. Refer also to 210 and 211 Guidelines for Ferrous Scrap.

Electronics Scrap Glass and CRT Cullet Specifications

Shipping/Packaging/Labeling—All shipments shall be packaged, labeled, and transported in accordance with all applicable transportation laws and packed in a manner that prevents releases to the environment and protects the health and safety of workers handling the material at generating or receiving facilities.

Whole Monitors/TVs with or with cords. The equipment is intact with housing. Minimal to no disassembly has occurred.

Whole Intact Tubes with gun and vacuum intact or released and with or without the band.

Whole Tubes without gun and with or without the band.

Processed Tubes to include both funnel and panel glass. Particle size will be determined by contract between shipper and smelter or treatment facility. Material should be free of all loose metals, bands, and shadow masks. May or may not be cleaned prior to shipping.

Leaded Funnel Glass and Frit for smelting or other recovery/treatment. This material may include up to 10% panel glass. May or may not be cleaned prior to shipment. Particle

size will be determined by contract between shipper and smelter or treatment facility.

Panel Glass (minimal or lead free) for multiple uses including construction, sand blasting, art glass, etc. May or may not be cleaned prior to shipment. Particle size will be determined by contract between shipper and receiving facility.

Clean Panel Glass with metal oxide concentrations of less than 5 ppm, free of coatings.

Electronics Scrap Plastics—ESP

Loose Plastics—Postconsumer Sources

	ESP—1 Loose Mixed Plastics	ESP—2 Loose TV Plastics	ESP—3 Loose Computer Plastics	ESP—4 Loose Single-Resin Plastics
Material	Plastic parts from electrical and electronic products	Plastic parts from electrical and electronic products	Plastic parts from electrical and electronic products	Plastic parts from electrical and electronic products
Source	Residential or commercial	Residential or commercial	Residential or commercial	Residential or commercial
Material origin	All	> 90% by weight from disassembled TV sets	> 90% by weight from disassembled PC monitors, CPUs, printers, & keyboards	> 90% by weight single target resin type
Plastic resin type	All	All	All	ABS, PC, PC/ABS, HIPS, PPE, PVC
Bulk density	Varies	Varies	Varies	Varies
Size	N/a	N/a	N/a	N/a
Shipping	Gaylords/ or larger bulk	Gaylords/ or larger bulk	Gaylords/ or larger bulk	Gaylords/ or larger bulk
Quality				
Color	All	All	Light or mixed	Light or mixed
Haz mat	No haz mat or med waste	No haz mat or med waste	No haz mat or med waste	No haz mat or med waste
Moisture	No free-flowing liquid	No free-flowing liquid	No free-flowing liquid	No free-flowing liquid
Flame retardant	Fr or non-fr	Fr or non-fr	Fr or non-fr	Fr or non-fr
Contamination:				
Painted/coated	< 2% of mat'ls by weight	< 2% of mat'ls by weight	< 2% of mat'ls by weight	< 2% of mat'ls by weight
Laminated	< 2% of mat'ls by weight	< 2% of mat'ls by weight	< 2% of mat'ls by weight	< 2% of mat'ls by weight
Metals	< 10% of mat'ls by weight	< 10% of mat'ls by weight	< 10% of mat'ls by weight	< 10% of mat'ls by weight
Dirt	< 2% of mat'ls by weight	< 2% of mat'ls by weight	< 2% of mat'ls by weight	< 2% of mat'ls by weight
Total non-plastics	< 10% cumulative by weight	< 10% cumulative by weight	< 10% cumulative by weight	< 10% cumulative by weight

Loose Plastics—Postindustrial Sources

	ESP—5 Loose Mixed Plastics	ESP—6 Loose TV Plastics	ESP—7 Loose Computer Plastics	ESP—8 Loose Single-Resin Plastics
Material	Plastic parts from electrical and electronic products	Plastic parts from electrical and electronic products	Plastic parts from electrical and electronic products	Plastic parts from electrical and electronic products
Source and/or molders	Manufacturers, suppliers and/or molders serving	Manufacturers, suppliers and/or molders serving PC & TV manufacturers	Manufacturers, suppliers and/or molders peripherals manufacturers	Manufacturers, suppliers
Material origin	Rejected parts, excess inventory, or other plastic scrap	Rejected parts, excess inventory, or other plastic scrap	Rejected parts, excess inventory, or other plastic scrap	Rejected parts, excess inventory, or other plastic scrap
Plastic resin type	All	All	All	Minimum 95% by weight one of the following target resins: ABS, PC, PC/ABS, HIPS, PPE, or PVC
Bulk density	Varies	Varies	Varies	Varies
Size	N/a	N/a	N/a	N/a
Shipping	Gaylords/ or larger bulk	Gaylords/ or larger bulk	Gaylords/ or larger bulk	Gaylords/ or larger bulk
Quality				
Color	All	All	Light or mixed	Light or mixed
Haz mat	No haz mat or med waste	No haz mat or med waste	No haz mat or med waste	No haz mat or med waste
Moisture	No free-flowing liquid	No free-flowing liquid	No free-flowing liquid	No free-flowing liquid
Flame retardant	Fr or non-fr	Fr or non-fr	Fr or non-fr	Fr or non-fr
Contamination:				
Painted/coated	0% of mat'ls by weight	0% of mat'ls by weight	0% of mat'ls by weight	0% of mat'ls by weight
Laminated	0% of mat'ls by weight	0% of mat'ls by weight	0% of mat'ls by weight	0% of mat'ls by weight
Metals	< 2% of mat'ls by weight	< 2% of mat'ls by weight	< 2% of mat'ls by weight	< 2% of mat'ls by weight
Dirt	< 2% of mat'ls by weight	< 2% of mat'ls by weight	< 2% of mat'ls by weight	< 2% of mat'ls by weight
Total non-plastics	< 2% cumulative by weight	< 2% cumulative by weight	< 2% cumulative by weight	< 2% cumulative by weight

Baled Plastics—Postconsumer Sources

	ESP—9 Baled Mixed Plastics	ESP—10 Baled TV Plastics	ESP—11 Baled Computer Plastics	ESP—12 Baled Single-Resin Plastics
Material and electronic products	Plastic parts from electrical and electronic products	Plastic parts from electrical and electronic products	Plastic parts from electrical and electronic products	Plastic parts from electrical
Source	Residential or commercial	Residential or commercial	Residential or commercial	Residential or commercial
Material origin	All	> 90% by weight from dissembled TV sets	> 90% by weight from dissembled PC monitors, CPUs, printers, & keyboards	> 90% by weight single target resin type
Plastic resin type	All	All	All	ABS, PC, PC/ABS, HIPS, PPE, PVC
Bulk density	Minimum 20 lbs/cu ft	Minimum 20 lbs/cu ft	Minimum 20 lbs/cu ft	Minimum 20 lbs/cu ft
Size	Maximum dimension 72"	Maximum dimension 72"	Maximum dimension 72"	Maximum dimension 72"
Shipping	Strapped	Strapped	Strapped	Strapped
Quality				
Color	Light or mixed	Light or mixed	Light or mixed	Light or mixed
Haz mat	No haz mat or med waste	No haz mat or med waste	No haz mat or med waste	No haz mat or med waste
Moisture	No free-flowing liquid	No free-flowing liquid	No free-flowing liquid	No free-flowing liquid
Flame retardant	Fr or non-fr	Fr or non-fr	Fr or non-fr	Fr or non-fr
Contamination:				
Painted/coated	< 2% of mat'ls by weight	< 2% of mat'ls by weight	< 2% of mat'ls by weight	< 2% of mat'ls by weight
Laminated	< 2% of mat'ls by weight	< 2% of mat'ls by weight	< 2% of mat'ls by weight	< 2% of mat'ls by weight
Metals	< 10% of mat'ls by weight	< 10% of mat'ls by weight	< 10% of mat'ls by weight	< 10% of mat'ls by weight
Dirt	< 2% of mat'ls by weight	< 2% of mat'ls by weight	< 2% of mat'ls by weight	< 2% of mat'ls by weight
Total non-plastics	< 10% cumulative by weight	< 10% cumulative by weight	< 10% cumulative by weight	< 10% cumulative by weight

Baled Plastics—Postindustrial Sources

	ESP—13 Baled Mixed Plastics	ESP—14 Baled TV Plastics	ESP—15 Baled Computer Plastics	ESP—16 Baled Single-Resin Plastics
Material	Plastic parts from electrical and electronic products	Plastic parts from electrical and electronic products	Plastic parts from electrical and electronic products	Plastic parts from electrical and electronic products
Source and/or molders	Manufacturers, suppliers and/or molders serving TV	Manufacturers, suppliers and/or molders serving PC & manufacturers	Manufacturers, suppliers and/or molders peripherals manufacturers	Manufacturers, suppliers
Material origin	Rejected parts, excess inventory or other plastic scrap	Rejected parts, excess inventory or other plastic scrap	Rejected parts, excess inventory or other plastic scrap	Rejected parts, excess inventory, or other plastic scrap
Plastic resin type	All	All the following target resins: ABS,	All	Minimum 95% by weight one of PC, PC/ABS, HIPS, PPE, or PVC
Bulk density	Minimum 8 lbs/cu ft	Minimum 8 lbs/cu ft	Minimum 8 lbs/cu ft	Minimum 8 lbs/cu ft
Size	Maximum dimension 72"	Maximum dimension 72"	Maximum dimension 72"	Maximum dimension 72"
Shipping	Strapped	Strapped	Strapped	Strapped
Quality				
Color	Light or mixed	Light or mixed	Light or mixed	Light or mixed
Haz mat	No haz mat or med waste	No haz mat or med waste	No haz mat or med waste	No haz mat or med waste
Moisture	No free-flowing liquid	No free-flowing liquid	No free-flowing liquid	No free-flowing liquid
Flame retardant	Fr or non-fr	Fr or non-fr	Fr or non-fr	Fr or non-fr
Contamination:				
Painted/coated	0% of mat'ls by weight	0% of mat'ls by weight	0% of mat'ls by weight	0% of mat'ls by weight
Laminated	0% of mat'ls by weight	0% of mat'ls by weight	0% of mat'ls by weight	0% of mat'ls by weight
Metals	< 2% of mat'ls by weight	< 2% of mat'ls by weight	< 2% of mat'ls by weight	< 2% of mat'ls by weight
Dirt	< 2% of mat'ls by weight	< 2% of mat'ls by weight	< 2% of mat'ls by weight	< 2% of mat'ls by weight
Total non-plastics	< 2% cumulative by weight	< 2% cumulative by weight	< 2% cumulative by weight	< 2% cumulative by weight

Shredded Plastics—Postconsumer Sources

	ESP—17 Shredded Mixed Plastics	ESP—18 Shredded TV Plastics	ESP—19 Shredded Computer Plastics	ESP—20 Shredded Sorted Plastics
Material	Plastic parts from electrical and electronic products	Plastic parts from electrical and electronic products	Plastic parts from electrical and electronic products	Plastic parts from electrical and electronic products
Source	Residential or commercial	Residential or commercial	Residential or commercial	Residential or commercial
Material origin	All	> 90% by weight from dissembled TV sets	> 90% by weight from dissembled PC monitors, CPUs, printers, & keyboards	> 90% by weight single target resin type
Plastic resin type	All	All the following target resins: ABS,	All	Minimum 95% by weight one of PC, PC/ABS, HIPS, PPE, or PVC
Bulk density	Minimum 15 lbs/cu ft	Minimum 15 lbs/cu ft	Minimum 15 lbs/cu ft	Minimum 15 lbs/cu ft
Size	4" minus	4" minus	4" minus	4" minus
Shipping	Gaylords or bulk	Gaylords or bulk	Gaylords or bulk	Gaylords or bulk
Quality				
Color	Light or mixed	Light or mixed	Light or mixed	Light or mixed
Haz mat	No haz mat or med waste	No haz mat or med waste	No haz mat or med waste	No haz mat or med waste
Moisture	No free-flowing liquid	No free-flowing liquid	No free-flowing liquid	No free-flowing liquid
Flame retardant	Fr or non-fr	Fr or non-fr	Fr or non-fr	Fr or non-fr
Contamination:				
Painted/coated	< 2% of mat'ls by weight	< 2% of mat'ls by weight	< 2% of mat'ls by weight	< 2% of mat'ls by weight
Laminated	< 2% of mat'ls by weight	< 2% of mat'ls by weight	< 2% of mat'ls by weight	< 2% of mat'ls by weight
Metals	< 2% of mat'ls by weight	< 2% of mat'ls by weight	< 2% of mat'ls by weight	< 2% of mat'ls by weight
Dirt	< 2% of mat'ls by weight	< 2% of mat'ls by weight	< 2% of mat'ls by weight	< 2% of mat'ls by weight
Total Non-plastics	< 10% cumulative by weight	< 10% cumulative by weight	< 10% cumulative by weight	< 10% cumulative by weight

Shredded Plastics—Postindustrial Sources

	ESP—21 Shredded Mixed Plastics	ESP—22 Shredded TV Plastics	ESP—23 Shredded Computer Plastics	ESP—24 Shredded Sorted Plastics
Material	Plastic parts from electrical and electronic products	Plastic parts from electrical and electronic products	Plastic parts from electrical and electronic products	Plastic parts from electrical and electronic products
Source	Manufacturers, suppliers and/or moulders	Manufacturers, suppliers and/or moulders serving	Manufacturers, suppliers and/or moulders serving PC TV manufacturers	Manufacturers, suppliers and/or moulders & peripherals manufacturers
Material origin	Rejected parts, excess inventory, or other plastic scrap	Rejected parts, excess inventory, or other plastic scrap	Rejected parts, excess inventory, or other plastic scrap	Rejected parts, excess inventory, or other plastic scrap
Plastic resin type	All	All the following target resins: ABS,	All	Minimum 95% by weight one of PC, PC/ABS, HIPS, PPE, or PVC
Bulk density	Minimum 10 lbs/cu ft	Minimum 10 lbs/cu ft	Minimum 10 lbs/cu ft	Minimum 10 lbs/cu ft
Size	4" minus	4" minus	4" minus	4" minus
Shipping	Gaylords or bulk	Gaylords or bulk	Gaylords or bulk	Gaylords or bulk
Quality				
Color	Light or mixed	Light or mixed	Light or mixed	Light or mixed
Haz mat	No haz mat or med waste	No haz mat or med waste	No haz mat or med waste	No haz mat or med waste
Moisture	No free-flowing liquid	No free-flowing liquid	No free-flowing liquid	No free-flowing liquid
Flame retardant	Fr or non-fr	Fr or non-fr	Fr or non-fr	Fr or non-fr
Contamination:				
Painted/coated	0% of mat'ls by weight	0% of mat'ls by weight	0% of mat'ls by weight	0% of mat'ls by weight
Laminated	0% of mat'ls by weight	0% of mat'ls by weight	0% of mat'ls by weight	0% of mat'ls by weight
Metals	< 2% of mat'ls by weight	< 2% of mat'ls by weight	< 2% of mat'ls by weight	< 2% of mat'ls by weight
Dirt	< 2% of mat'ls by weight	< 2% of mat'ls by weight	< 2% of mat'ls by weight	< 2% of mat'ls by weight
Total non-plastics	< 2% cumulative by weight	< 2% cumulative by weight	< 2% cumulative by weight	< 2% cumulative by weight

Granulated Plastics—Postconsumer Sources

	ESP—25 Granulated Mixed Plastics	ESP—26 Granulated TV Plastic	ESP—27 Granulated Computer Plastic	ESP—28 Granulated Sorted Plastic
Material	Plastic parts from electrical and electronic products	Plastic parts from electrical and electronic products	Plastic parts from electrical and electronic products	Plastic parts from electrical and electronic products
Source	Residential or commercial	Residential or commercial	Residential or commercial	Residential or commercial
Material origin	All	> 90 % by wt from disassembled TV sets	> 90 % by wt from disassembled PC monitors, CPUs, printers,& keyboards	> 90% by weight single target resin type
Plastic resin type	All	All	All	ABS, PC, PC/ABS, HIPS, PPE, PVC
Bulk density	Minimum 25 lbs/cu ft	Minimum 25 lbs/cu ft	Minimum 25 lbs/cu ft	Minimum 25 lbs/cu ft
Size	3/8" minus	3/8" minus	3/8" minus	3/8" minus
Shipping	Gaylords or bulk	Gaylords or bulk	Gaylords or bulk	Gaylords or bulk
Quality				
Color	Light or mixed	Light or mixed	Light or mixed	Light or mixed
Haz mat	No haz mat or med waste	No haz mat or med waste	No haz mat or med waste	No haz mat or med waste
Moisture	No free-flowing liquid	No free-flowing liquid	No free-flowing liquid	No free-flowing liquid
Flame retardant	Fr or non-fr	Fr or non-fr	Fr or non-fr	Fr or non-fr
Contamination:				
Painted/coated	< 2% of mat'ls by weight	< 2% of mat'ls by weight	< 2% of mat'ls by weight	< 2% of mat'ls by weight
Laminated	< 2% of mat'ls by weight	< 2% of mat'ls by weight	< 2% of mat'ls by weight	< 2% of mat'ls by weight
Metals	< 0.5% of mat'ls by weight	< 0.5% of mat'ls by weight	< 0.5% of mat'ls by weight	< 0.5% of mat'ls by weight
Dirt	< 0.5% of mat'ls by weight	< 0.5% of mat'ls by weight	< 0.5% of mat'ls by weight	< 0.5% of mat'ls by weight
Total non-plastics	< 1% cumulative by weight	< 1% cumulative by weight	< 1% cumulative by weight	< 1% cumulative by weight

Granulated Plastics—Postindustrial Sources

	ESP—29 Granulated Mixed Plastics	ESP—30 Granulated TV Plastic	ESP—31 Granulated Computer Plastic	ESP—32 Granulated Sorted Plastic
Material	Plastic parts from electrical and electronic products	Plastic parts from electrical and electronic products	Plastic parts from electrical and electronic products	Plastic parts from electrical and electronic products
Source	Manufacturers, suppliers and/or molders	Manufacturers, suppliers and/or molders serving TV manufacturers	Manufacturers, suppliers and/or molders serving PC & peripherals manufacturers	Manufacturers, suppliers and/or molders
Material origin	Rejected parts, excess inventory or other plastic scrap	Rejected parts, excess inventory or other plastic scrap	Rejected parts, excess inventory or other plastic scrap	Rejected parts, excess inventory or other plastic scrap
Plastic resin type	All	All the following target resins: ABS,	All	Minimum 95% by weight one of PC, PC/ABS, HIPS, PPE, or PVC
Bulk density	Minimum 12 lbs/cu ft	Minimum 12 lbs/cu ft	Minimum 12 lbs/cu ft	Minimum 12 lbs/cu ft
Size	3/8″ minus	3/8″ minus	3/8″ minus	3/8″ minus
Shipping	Gaylords or bulk	Gaylords or bulk	Gaylords or bulk	Gaylords or bulk
Quality				
Color	Light or mixed	Light or mixed	Light or mixed	Light or mixed
Haz mat	No haz mat or med waste	No haz mat or med waste	No haz mat or med waste	No haz mat or med waste
Moisture	No free-flowing liquid	No free-flowing liquid	No free-flowing liquid	No free-flowing liquid
Flame retardant	Fr or non-fr	Fr or non-fr	Fr or non-fr	Fr or non-fr
Contamination:				
Painted/coated	< 0% of mat'ls by weight	< 0% of mat'ls by weight	< 0% of mat'ls by weight	< 0% of mat'ls by weight
Laminated	< 0% of mat'ls by weight	< 0% of mat'ls by weight	< 0% of mat'ls by weight	< 0% of mat'ls by weight
Metals	< 0.5% of mat'ls by weight	< 0.5% of mat'ls by weight	< 0.5% of mat'ls by weight	< 0.5% of mat'ls by weight
Dirt	< 0.5% of mat'ls by weight	< 0.5% of mat'ls by weight	< 0.5% of mat'ls by weight	< 0.5% of mat'ls by weight
Total non-plastics	< 1% cumulative by weight	< 1% cumulative by weight	< 1% cumulative by weight	< 1% cumulative by weight

Cleaned Granulated Plastics with Density Separation—Postconsumer Sources

	ESP—33 Cleaned Granulate w/Density Separation
Material	Plastic parts from electrical and electronic products
Source	Residential or commercial Sources
Material origin	> 99% by weight single target resin type
Plastic resin type	ABS, PC, PC/ABS, HIPS, PPE, or PVC
Bulk density	Minimum 25 lbs/cu ft
Size	3/8″ minus
Shipping	Gaylords or bulk
Quality	
Color	Light or mixed
Haz mat	No haz mat or med waste
Moisture	No free-flowing liquid
Flame retardant	Fr or non-fr
Contamination:	
Painted/coated	0% of mat'ls by weight
Laminated	0% of mat'ls by weight
Metals	< 0.1% of mat'ls by weight
Dirt	< 0.1% of mat'ls by weight
Total non-plastics	< 0.1% cumulative by weight

Cleaned Granulated Plastics with Density Separation—Postindustrial Sources

	ESP—34 Cleaned Granulate w/Density Separation
Material	Plastic parts from electrical and electronic products
Source	Manufacturers, suppliers and/or molders
Material origin	Rejected parts, excess inventory, or other plastic scrap
Plastic resin type	Minimum 99% by weight one of the following target resins: ABS, PC, PC/ABS, HIPS, PPE, or PVC
Bulk density	Minimum 12 lbs/cu ft
Size	3/8″ minus
Shipping	Gaylords or bulk
Quality	
Color	Light or mixed
Haz mat	No haz mat or med waste
Moisture	No free-flowing liquid
Flame retardant	Fr or non-fr
Contamination:	
Painted/coated	0% of mat'ls by weight
Laminated	0% of mat'ls by weight
Metals	< 0.1% of mat'ls by weight
Dirt	< 0.1% of mat'ls by weight
Total non-plastics	< 0.1% cumulative by weight

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Guidelines for Tire Scrap: TS-2016

Rubber From Scrap Tires

General Guidelines

Items not covered in the specifications, and any variations in the specification are subject to special arrangement between Buyer and Seller. Percentages listed below are by weight.

Definitions

Fines consist of materials that pass a 4.75 mm sieve. These materials may include rubber, fiber, inorganic and organic matter, dirt, and other non-tire materials.

Sizes will be determined by sieving. Suitable sieve sizes will be selected. Nest the sieves in order of decreasing size of opening from top to bottom and place the sample on the top sieve. Agitate the sieves by hand or by mechanical apparatus for a sufficient period so that additional sieving does not result in substantial additional material passing through the sieves.

TDM refers to tire-derived material.

Rubber Primarily Used for Civil Engineering

TDM 2-A

- All material must be smaller than 4";
- at least 90% must be smaller than 2½";
- at least 50% must be larger than 1½";
- at least 90% must be larger than ½";
- maximum of ½" protrusion of steel; and
- maximum of 1% fines.

TDM 2-B

- All material must be smaller than 4";
- at least 90% must be smaller than 2½";
- at least 50% must be larger than 1½";
- at least 90% must be larger than ½";
- at least 90% must not exceed 1" protrusion of steel; and
- maximum of 5% fines.

TDM 2-C

- All material must be smaller than 4";
- at least 90% must be smaller than 2½";
- at least 50% must be larger than 1½";
- at least 90% must be larger than ½"; and
- maximum of 5% fines.

TDM 3-A

- At least 90% must be smaller than 4";
- at least 75% must be larger than 1½";
- at least 90% must be larger than ½";
- maximum of ✣" protrusion of steel; and
- maximum of 1% fines.

TDM 3-B

- At least 90% must be smaller than 4";
- at least 75% must be larger than 1½";
- at least 90% must be larger than ½";
- at least 90% must not exceed 1" protrusion of steel; and maximum of 5% fines.

TDM 3-C

- At least 90% must be smaller than 4";
- at least 75% must be larger than 1½";
- at least 90% must be larger than ½"; and
- maximum of 5% fines.

TDM 5-A

- All material must be smaller than 8";
- at least 90% must be smaller than 6";
- at least 50% must be larger than 3";
- at least 90% must be larger than 1/2";
- maximum of 1" protrusion of steel; and
- maximum of 1% fines.

TDM 5-B

- All material must be smaller than 8";
- at least 90% must be smaller than 6";
- at least 50% must be larger than 3";
- at least 90% must be larger than ½";
- at least 90% must not exceed 2" protrusion of steel; and maximum of 5% fines.

TDM 5-C

- All material must be smaller than 8";
- at least 90% must be smaller than 6";
- at least 50% must be larger than 3";
- at least 90% must be larger than ½"; and
- maximum of 5% fines.

TDM 8-A

- At least 90% must be smaller than 12";
- at least 75% must be smaller than 8";
- at least 50% must be larger than 3";
- at least 75% must be larger than 1½";
- maximum of 2" protrusion of steel; and
- maximum of 1% fines.

TDM 8-B

- At least 90% must be smaller than 12";
- at least 75% must be smaller than 8";
- at least 50% must be larger than 3";
- at least 75% must be larger than 1½";
- at least 90% must not exceed 2" protrusion of steel; and maximum of 5% fines.

TDM 8-C

- At least 90% must be smaller than 12";
- at least 75% must be smaller than 8";
- at least 50% must be larger than 3";
- at least 75% must be larger than 1½"; and
- maximum of 5% fines.

TDM 12-A

- At least 90% must be smaller than 18";
- at least 50% must be larger than 6";
- at least 75% must be larger than 1½";
- maximum of 2" protrusion of steel; and
- maximum of 1% fines.

TDM 12-B

- At least 90% must be smaller than 18";
- at least 50% must be larger than 6";
- at least 75% must be larger than 1½";
- at least 90% must not exceed 2" protrusion of steel; and maximum of 5% fines.

TDM 12-C

- At least 90% must be smaller than 18";
- at least 50% must be larger than 6";
- at least 75% must be larger than 1½"; and
- maximum of 5% fines.

Scrap Specifications Circular 2016

Guidelines for Metals Transactions

These Guidelines are intended as a reference to assist members in carrying out their business obligations in a manner consistent with accepted industry practices. While the Guidelines are not obligatory, it is suggested that potential problems and misunderstandings may often be avoided by following these recommended procedures, in conjunction with ISRI's scrap descriptions.

At times, the respective parties to a transaction may be unaware of the differences in trading practices of the other party. This diversity of interpretation often leads to misunderstandings, disputes, and in some instances expensive lawsuits. It is with the objective of providing members the means of avoiding such friction that ISRI has published these Guidelines, which are based on those practices most common and current in the industry.

On those points where it is impractical to provide recommendations, it is advised that the points be mutually agreed upon by the parties involved.

Part I: Guidelines for Contracts

A contract is an agreement between two or more parties to perform a legally enforceable act.

Therefore, all contracts should be in writing and set forth in **specific** terms. Before signing a contract, one should carefully read and understand all terms of it. No discrepancies or ambiguities should exist at the time the contract is executed. If you receive a contract with terms that are objectionable, you should immediately notify the other party in writing of your objections. An attorney should be consulted when legal advice is needed.

It should be kept in mind that if a dispute arises under a contract, and a court is called in to interpret its terms, certain general rules will be applied. First, contracts will be construed as a "whole," and specific clauses will be subordinated to the contract's general intent. Second, the courts will construe words according to their "ordinary" meaning unless it is clearly shown that they were meant to be used in a technical sense. Also, where provisions appear to be inconsistent, the courts will determine whether some of the provisions are printed (indicating a form contract), as compared to others which are written or typed. The latter kinds of provisions will prevail.

It should be remembered that where you and a Buyer (or Seller) have reached verbal agreement on a transaction, your failure to sign and return a contract which is sent to you in confirmation of that verbal agreement may not relieve you of the obligations of the terms and conditions enumerated in that contract.

These Guidelines were developed to cover routine transactions. It is essential that any unusual arrangements must be completely spelled out in a contract. With these factors in mind, the following list of items is enumerated as a **Checklist** for you to follow, either in the construction of a contract, or for the review of another party's contract proposal. We cannot overemphasize the need for accuracy and specificity.

Checklist Items

(BE SPECIFIC AT ALL TIMES)

I. Parties to Agreement:
Indicate full name and address of Buyer and Seller. Include name of individual person or persons involved. Buyer's and Seller's signatures are fundamental.

II. Date of Contract:
(a) Give date the initial agreement was reached

(b) Give Contract Number.

III. Description of Material:
Use NF code names or clearly describe what is being traded. Any allowable quality variation to be so stated. Ex: "X percent moisture allowed" or "Minimum CU content to be X percent" or "X percent painted material allowed."

IV. Quantity:
State exact quantity expected and indicate allowable tolerances or minimum/maximum limitations. Ex. "40,000 lbs. (5% More/Less allowed)" or "38,000 to 42,000 lbs."

V. Packing:
State type of packing allowable and restrictions if such are required. Ex: "Bales not to exceed 60 inches"; "Bales not to exceed 3,500 lbs."

VI. Delivery:
Show complete address of shipping or delivery point, including where applicable, specific rail siding or junction, forwarding warehouse, and party to be notified. Ex: "FOB (Actual Point of Shipment) Chicago, Ill."; "FOB (Actual Point of Delivery) St. Louis. Mo."; "FAS Baltimore Container Yard"; "C&F Tokyo. Japan." If these details cannot be furnished at the time of writing of contract, it should state "shipping/delivery instructions to follow." State means of conveyance to be employed. State size and type of truck, rail car, container or number of shipments expected or permitted.

VII. Shipment:
Time allowed for shipment or delivery should be clearly stated. Ex: "Shipment by Jan. 15, 2008 LATEST"; or "Delivery by Jan. 15, 2008." Indicate at whose option, Buyer's or Seller's, shipment shall be made in time period stated.

VIII. Price:
State price per unit. Ex: "$20.00/CWT"; "20.00 Cents/Pound"; "$400.00/Net Ton"; "$440.92/Metric Ton." and indicate where appropriate "Clean and Dry"; "Full Copper Content." If applicable, state exact processing, smelting, refining charge, or unit deductions for impurities. (Avoid the use of the word "penalties.")

IX. Payment:
Terms of payment should be explicit. Ex: "Net 30 days after shipment"; "Net 15 days after mill receipt." Avoid phrases such as "usual;" "Net 30;" "Net Cash." Documents required to effect paymet to be clearly stated. Ex: "Bill of Lading";" Invoice"; "Weight Certificate." State how payment shall be made. If there is discussion of compensation for delayed payments, it should be included in the contract. If Letter of Credit is called for as a means of payment, it is advisable that the terms to be included in the Letter of Credit also be stated in the contract. When applicable, contract should state whether Buyer or Seller is responsible for payment of taxes, duties, or any other levies to which a shipment could be subjected. Contract should state whether the Seller's or Buyer's weights shall govern the basis of settlement.

X. Assignment:
The contract may state whether the Buyer and/or the Seller has the right to assign the contract. If it does, it should emphasize that the obligation arising under the contract shall be equally binding on his assignee.

XI. Notice:
The Seller should specify how notice to be given under the contract should be received—i.e. by hand, by telegram, by certified or registered mail. One should also specify when notice is deemed to be received by the party to whom it is given.

XII. Disclaimer of Warranties:
Depending on the type of transaction, or the metal involved, the Seller may want to limit his liability by disclaiming any warranties of merchantability or of fitness for a particular purpose.

XIII. Default:
The contract should contain a provision setting forth the events which would result in a default of the contract. This provision might also contain a clause stipulating damages and/or setting forth available remedies (i.e. specific performance) in the event a default does, in fact, occur.

XIV. Force Majeure:
This item is related to the item of default, as indicated in paragraph XIII. Seller or Buyer may enumerate, either generally or specifically, what events (i.e. strikes, fires, accidents) constitute circumstances beyond its control and thereby absolve him/her of any liability for damages or delay.

XV. Non-Waiver:
The Seller or Buyer should state in the contract that his/her failure to insist upon strict performance in any given instance shall not be construed as a waiver or relinquishment for the future of any of the terms, covenants and conditions contained therein.

XVI. Claims:
The Seller may specify that any claims involved in a metals transaction for contaminated materials, weight shortage, or for any other cause is waived by the Buyer unless brought to the Seller's attention within a certain number of days after delivery.

XVII. Arbitration and Applicable Law:
The contract should set forth which state's or country's law will apply in the event of a legal dispute under the contract. It should also provide for arbitration procedure. (If ISRI Arbitration is desired, the contract should so stipulate.)

XVIII. Benefit:
The contract should stipulate on whom it is binding. For instance, the Seller or Buyer may want to specify that the contract inures to the benefit of the parties, their legal representatives, successors and assignees.

XIX. Entire Agreement:
This provision is especially important in the area of metals transactions, which frequently involve extensive preliminary negotiations. A clause may be inserted into the contract stating that the contract constitutes the parties' entire agreement and supersedes all prior agreements and understandings with respect to the subject matter of the contract.

XX. Modification:
A clause may be included in the contract stating that the contract's requirements can only be modified by a written instrument signed by the parties or their respective agents. This insures that the parties' informal discussions will not later be construed as affecting an alteration of the contract.

Part II: Packing, Weighing, Shipping and Receiving

It is recommended that strict adherence to contract terms will minimize many of the potential problems in this area. If there is a question about any item, one should communicate with his/her Buyer/Seller and clarify the situation prior to shipping. Listed below are some specific guidelines to be used in avoiding the most frequently reported problems.

Packing (All Shipments)

Seller's Responsibility:

a. Pack in the manner and form agreed. Example: In sound bales, briquettes, boxes, pallets, drums, loose, etc.

b. Be sure that Buyer agrees with your definition of words and phrases, i.e. Bale, Briquette, Coil, etc. as well as allowed dimensions and weights of such.

c. Material and packages should be securely tied or supported so that packages will hold in transit and normal handling.

Buyer's Responsibility:

a. Advise Seller of any specific prohibitions, i.e. type or method of packing, size or weight of pieces, units or packages, etc.

b. Be sure that Seller agrees with your definition of words and phrases, i.e. Bale, Briquette, Coil, etc., as well as allowed dimensions and weights of such.

Weighing, Shipping and Receiving (Truck Shipment)

Seller's Responsibility:

a. Each package should be individually weighed and the entire truckload should be checkweighted for comparison. Reconcile or explain any differences. If truck is

weighed during inclement weather or wind, make note of this on weight ticket.

b. Trailers should be drop-weighed (both empty and loaded).

c. All equipment should be inspected before loading, and cleaned or repaired where necessary to avoid loss or spillage.

d. Open top trucks or trailers should be tarped or covered.

e. Vans and closed trailers should be sealed and seal numbers indicated on all documents.

f. If your customer requires appointments, make one in advance. Otherwise, as a courtesy, advise the Buyer of your anticipated delivery schedules.

g. A complete manifest and packing list should accompany each shipment. This should clearly indicate the order number, items shipped, number and type of packages of each commodity, as well as the gross, tare and net weights of each package. This detailed information should be put into an envelope and attached to the inside wall of the truck or van. If this cannot be done, give a complete set of papers to the driver to deliver with the original Bill of Lading covering the shipment. At the very least, notify Buyer by telephone, telex or wire of these details on the day shipment leaves.

h. Different lots should always be properly segregated and bulkheaded to avoid comingling. Each package should be tagged or marked to aid in proper identification and segregation at the receiving point.

i. Be aware that someone at the delivery point will have to unload the shipment. Pay particular attention to door areas to assure that material is loaded safely. Proper care should be taken to insure that the material can be unloaded in a safe and expedient manner.

Buyer's Responsibility:

a. If Seller requires appointment prior to pickup, make one in advance. Otherwise, as a courtesy, advise the Seller of your anticipated pickup schedule.

b. Trailers should be drop-weighed (both empty and loaded).

c. Carefully check shipment advices and compare package count, seal numbers, weights.

d. **Prior to unloading**, if a significant* weight difference is apparent, the Seller should be notified promptly and, if requested, another weight should be taken to determine if spillage or theft might have occurred.

e. **After unloading**, promptly advise Seller of any significant* differences between advised and actual weights, segregation, classification or quality. (Note: Refer to Part IV of the circular for recommended procedures in handling quality problems.)

f. Truck or trailer should be completely unloaded including any spilled material which should be picked up, weighed and identified as spilled from original containers. Buyers should cooperate in every way to help minimize losses.

Weighing, Shipping and Receiving (Rail Shipment)

Seller's Responsibility:

a. Each package should be individually weighed and the entire rail car should be checkweighted for comparison. Reconcile or explain any differences. If rail car is weighed during inclement weather or wind, make note of this on weight ticket.

b. Railroad cars should be uncoupled and at rest (if possible) before weighing.

c. All equipment should be inspected before loading, and cleaned or repaired where necessary to avoid loss or spillage.

d. Railroad cars should be sealed and seal numbers indicated on all documents.

e. A complete manifest and packing list should accompany each shipment. This should clearly indicate the order number, items shipped, number and type of packages of each commodity, as well as the gross, tare and net weights of each package. This detailed information should be put into an envelope and attached to the inside wall of the railroad car. If this cannot be done, mail a complete set of papers to the Buyer on the day shipment leaves.

f. Different lots should always be properly segregated and bulkheaded to avoid comingling. Each package should be tagged or marked to aid in proper identification and segregation at the receiving point.

g. Be aware that someone at the delivery point will have to unload the shipment. Pay particular attention to door areas to assure that material can be unloaded in a safe and expedient manner.

Buyer's Responsibility:

a. Railroad cars should be uncoupled and at rest (if possible) before weighing.

b. Carefully check shipment advices and compare package count, seal numbers, weights.

c. **Prior to unloading**, if a significant* weight difference is apparent, the Seller should be notified promptly and, if requested, another weight should be taken to determine if spillage or theft might have occurred.

d. **After unloading**, promptly advise Seller of any significant* differences between advised and actual weights, segregation, classification or quality. (Note: Refer to Part IV of the circular for recommended procedures in handling quality problems.)

e. Rail car should be completely unloaded including any spilled material which should be picked up, weighed and identified as spilled from original containers. Buyer should cooperate in every way to help minimize losses.

Weighing, Shipping and Receiving (Export/Import Shipment)

Seller's Responsibility:

a. Each package should be individually weighed and the entire container load should be check-weighed for comparison. If container is weighed during inclement weather or wind, make note of this on weight ticket.

b. Container and chassis should be drop-weighed, if possible, both empty and loaded.

c. Prepare and send to Buyer a complete manifest and packing list indicating the order number, items shipped, number and type of packages of each commodity, as well as the gross, tare and net weights of each package and the seal numbers.

d. If shipment is against a Letter of Credit, pay strict attention to all terms.

e. Place seals on all container doors and indicate seal numbers on documentation.

f. Material and packages should be properly stowed and braced to prevent movement during shipment.

g. Be aware that someone at the delivery point will have to unload the shipment. Pay particular attention to door areas to assure that material is loaded safely. Proper care should be taken to insure that the material can be unloaded in a safe and expedient manner.

Buyer's Responsibility:

a. Container and chassis should be drop-weighed, if possible, both empty and loaded.

b. Carefully check shipment advices and compare package count, seal numbers, weights.

c. **Prior to unloading**, if a significant* weight difference is apparent, the Seller should be notified promptly and, if requested, another weight should be taken to determine if spillage or theft might have occurred. Seller should be given opportunity to appoint surveyor or representative to verify weights.

d. **After unloading**, promptly advise Seller of any significant* differences between advised and actual weights, segregation, classification or quality. (Note: Refer to Part IV of the circular for recommended procedures in handling quality problems.)

e. Container should be completely unloaded including any spilled material which should be picked up, weighed and identified as spilled from original containers. Buyer should cooperate in every way to help minimize losses.

*For purposes of this section, the meaning of the word "significant" shall be determined by agreement between Buyer and Seller, depending on the commodities and their values.

Part III: Transportation Guide

The mode and type of conveyance should be specified in the contract. If it has not been, then it is important that Buyer and Seller agree upon the mode and type to be used. These guidelines will assist in determining the appropriate means of transportation to employ.

A. Mode—Truck/Trailer

1. Type:
   a. Dump
   b. Removable sides
   c. Van—open or closed
   d. Dimensions of unit (20 ft., 40 ft., etc.)
   e. Determine if truck/trailer capacity meets minimum weight specified on contract.

B. Mode—Rail Car

1. Type:
   a. Box car or gondola
   b. Size of door opening, i.e. single or double door
   c. Special type D.F., Hi-Cube, etc.
   d. Dimensions of car (40 ft., 50 ft., 60 ft., etc.)
   e. Determine if rail car capacity meets minimum weight specified on contract.

C. Export Shipments

1. Container:
   a. Type of container, i.e. closed, open-top, flat rack, Hi-cube, etc.
   b. Size of container (20 ft., 35 ft., 40 ft., 45 ft., etc.)
   c. Determine if container capacity meets minimum weight specified on contract.
2. Breakbulk

Part IV: Rejections—Downgrades—Claims

A brief explanation of these items will help one understand and implement the procedures recommended in this section.

Rejections: Rejections can occur when a Buyer refuses to accept a shipment of material that does not conform to the description specified in the contract. Usually in such cases, the Buyer cannot utilize the material and the Seller is asked to remove the material from the Buyer's place of delivery. A rejection can occur prior to unloading, but often the cause of the problem cannot be determined until the material has been off loaded and graded. Any part, or all, of the shipment may be subject to rejection.

Downgrades: Downgrades can occur when all, or part, of the material in a shipment is not in conformity with the description specified in the contract. Often, in such cases, the Buyer can utilize the material and is willing to accept delivery of the material, subject to a price commensurate with its value.

Claims: This term is used mostly in export-import movements, and is used generically to encompass both **rejections** and **downgrades**, as well as **weight shortages**.

Strict adherence to contract terms can minimize the common causes of these difficulties. However, if a problem arises, it should be given prompt attention and settlement should be attempted as quickly as is practical. It is essential that both parties cooperate and keep communications open to minimize expenses and to preserve the relationship. Negotiations should not be conflicting but mutually beneficial and fair. Listed below are some recommended steps to be taken when a problem arises.

Domestic Shipments

Buyer's Responsibilities:

a. In the event of a rejection Buyer must notify Seller immediately by telephone or telex. If Seller fails to

respond within two business days, Buyer may return material in most prudent manner. Subject to contract provisions, Buyer should promptly advise Seller concerning replacement of rejected material.

b. In the event of a downgrade Buyer must notify Seller immediately by telephone or telex and afford Seller an opportunity to inspect the material prior to its use. If material is to be inspected by Seller or his/her representative, Buyer should agree to a mutually convenient time to do so.

c. Buyer must give Seller option of removing material if he/she does not agree to downgrade. (All costs of unloading and reloading are for Seller's account.)

Seller's Responsibilities:

a. In the event of a rejection Seller should respond promptly and advise Buyer of his/her intentions. Seller must reply within two business days. Subject to contract provisions, he/she must advise Buyer promptly concerning replacement of rejected material.

b. In the event of an unacceptable downgrade Seller must advise Buyer within two business days if he/she wishes to inspect material and agree upon a mutually convenient time to do so.

c. If Seller wishes to remove downgraded material from Buyer's delivery point, he/she must advise Buyer promptly. (All costs of unloading and reloading are for Seller's account.)

Export-Import Shipments

Buyer's Responsibility:

a. In the event of a claim, time is of the essence and notification should be given to Seller within a reasonable period of time after arrival of vessel in receiving port.

b. In the event of a claim, the material should be held intact until agreement has been reached. The acceptable portion of the material may be consumed and/or arrangements may be made to sample a portion of material, i.e., 10-25% with balance held intact pending resolution of claim.

Seller's Responsibility:

a. In the event of a claim, Seller should respond to Buyer's notification promptly by telephone, telex, wire, or cable.

b. When a claim settlement has been agreed upon, terms of settlement must be followed promptly.

ISRI Arbitration Service

I ISRI established an arbitration service as a means to enable members to use arbitration to resolve disputes.

ISRI arbitration is a voluntary procedure and must be agreed upon by both parties in the dispute. It is not required that both parties to the dispute be ISRI members.

The complete procedure for arbitration is set forth in ISRI's "Rules for Arbitration," which are available from Association headquarters in Washington, D.C. The rules contain the necessary form that must be completed to initiate arbitration. ISRI treats all filings, awards, and proceedings as confidential.

The rules are highlighted below:

1. Anyone may propose arbitration in a dispute, though at least one party must be a member of the association. Both parties must agree to the arbitration by signing a "Submission to Arbitrate" form and agreeing to abide by the applicable Arbitration Rules.

2. A panel of arbitrators has been established by the association. The arbitrators serve without compensation, except for reasonable expenses. The arbitration parties must draw their arbitrators from the panel. A maximum of three arbitrators can be issued in any proceeding; the parties are encouraged to use a single arbitrator.

3. There is a specific schedule of fees listed in the "Rules for Arbitration." Each party must deposit with the association in advance $500 plus $500 for each arbitrator. The total deposit for each party thus is either $1,000 or $2,000, depending on whether one arbitrator is to be used or three. A portion of the fee is refundable if not required to defray arbitrators' costs. The arbitrators may require the losing party to reimburse the prevailing party for its share of these costs.

4. The arbitration procedure usually includes a hearing, at which time the parties involved are required to appear, present their respective cases, and be available for questioning by the arbitrator(s). All physical evidence (contracts, correspondence, relevant comments, etc.) may be required to be submitted in advance to the arbitrators. A party in the arbitration may be accompanied by counsel but must inform the other party in advance and receive permission from the arbitrators. Witnesses may also be called to an arbitration hearing. There is also an optional procedure for conducting the arbitration without an oral hearing.

5. An award by the arbitrator(s) will be made promptly, within 20 days after hearings have been completed or final briefs submitted. The award is made in writing.

6. The rules state that the parties to the dispute shall be deemed to have consented that a judgment upon the award be entered in any court having jurisdiction over an action to enforce the award.

Members who wish to provide an automatic basis for the settlement of any disputes arising from a transaction are encouraged to provide in their contracts that the ISRI Arbitration Procedure shall prevail in the event of any ensuing controversy and that each party will take all necessary steps to initiate such arbitration. Members are urged to obtain and carefully read the "Rules for Arbitration" before proceeding.

For more information, contact Eric Harris, 202/662-8514 or ericharris@isri.org.