CHASE BRASS
AND COPPER COMPANY, LLC

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Incoming Raw Material Specification

Effective Date: 1/5/17

The attached specifications outline our chemistry limits, allowable forms/types, containerization, labeling and documentation necessary for acceptance of incoming scrap metal and raw materials at Chase Brass and Copper LLC.

All incoming scrap metal and raw materials are inspected prior to acceptance. Failure to meet any of our chemical limits, labeling, allowable forms/types, and documentation or packaging requirements as listed in this specification letter may result in rejection of the material. In certain cases, deductions (at Chase discretion) may be applied. These will also include all costs associated with any special handling requirements necessitated by deviation from these specifications, including, but not limited to costs incurred by third party external processing. Please note that some forms of scrap require advance approval from Sales or Metal Procurement.

***IMPORTANT NOTE RELATED TO INCOMING SCRAP*. Copper alloys contaminated with any elements exceeding the specifications included with the Purchase Order, or this document shall be subject to rejection. Additionally, this specification does not apply to an averaged or aggregate concentration for the entire load; the presence of individual pieces exceeding the applicable specification can subject the entire load to rejection.**

In the event any non-compliant scrap material is not detected during the normal course of incoming quality inspections, Chase Brass & Copper reserves the right to hold the vendor/supplier (defined specifically as the Entity named on the applicable Purchase Order) wholly responsible for any and all costs and expenses (including, but not limited to, material costs, equipment cleaning/replacement, regulatory activities and legal fees), resulting from, or associated with, the contaminated materials entering our process and product.

APPROVED BY:

M. F. McInerney Metal Procurement/ Traffic Manager	Larry Muller Director, Metallurgy & Technical Services	Jack Horner Quality Manager

1/5/17 Revisions (in bold below): Added section 4 items 8b, 8c and 8d

SECTION #1: Incoming Scrap Raw Material Chemistry Limits (% unless noted [1])

	Bare Bright [2]	#1 Copper [2, 3]	#2 Copper [2, 3]	70/30 Scrap [2]	85/15 Scrap [2]	Other Brass Alloys [2]	Leaded Brass Alloys [2, 3]	Eco Brass Alloy [2, 4]
Al*	0.010	0.020	0.030	0.010	0.010	0.030	0.030	0.030
As*	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
Be*	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
Bi*	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020
Cd*	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
Cu	99.9 min	99.5 min	99.0 min	68 - 72	83 – 87	Per P.O.	58 – 65	73 – 77
Fe	0.05	0.10	0.20	0.10	0.10	0.25	0.35	0.10
Mg*	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
Mn*	0.010	0.020	0.030	0.010	0.010	0.030	0.030	0.030
Ni*	0.05	0.10	0.15	0.10	0.10	0.10	0.10	0.10
P*	0.025	0.075	0.050	0.025	0.025	0.025	0.025 [5]	0.15
Pb	**0.025**	0.050	0.250	0.090	0.090	0.500	3.00	0.09
Sb*	0.010	0.010	0.025	0.025	0.025	0.025	0.025	0.025
Se*	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
Si* [2]	0.010	0.010	0.020	0.010	0.010	0.010	0.03	2.7 - 3.4 [2]
Sn*	0.10	0.20	0.30	0.20	0.20	0.25	0.25	0.20
Te*	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
Zr*	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
Zn	0.100	0.500	1.000	Remainder	Remainder	Remainder	Remainder	Remainder
TOE [2]	0.10	0.30	0.50	0.25	0.25	0.50	0.50	0.50

FOOTNOTE 1 – All scrap must be free of radiation, disclosed and undisclosed hazardous materials, and other contaminants.

FOOTNOTE 2 - Reasonable care in segregation and processing of scrap will prevent rejections. TOE = Total Other Elements, maximum sum of elements not otherwise specified within the alloy specification. All elements noted in table with an asterisk (*) except for Si content in Eco Brass (C69300) may not be exceeded individually, nor may they, when added, exceed the TOE.

FOOTNOTE 3 - FREE IMPURITIES IN LEADED BRASS / COPPER TURNINGS: Free iron and steel may not exceed 0.50% as determined by a magnetic separation test and contamination weight. Free aluminum and aluminum alloys may not exceed 0.02% as determined by weight of identified contamination.

FOOTNOTE 4 - FREE IMPURITIES IN ECO BRASS TURNINGS: Free iron and steel in ECO BRASS scrap may not exceed 0.20% as determined by a magnetic separation test and contamination weight. Free aluminum and aluminum alloys may not exceed 0.02% as determined by weight of identified contamination.

FOOTNOTE 5 – Phosphorus content maximum of 0.15% with C27450 or C36300 included in leaded brass scrap.

SECTION #2: Incoming Scrap Metal / Raw Material Specifications: Scheduling Deliveries, Documentation and Labeling

1. All incoming raw material deliveries are by appointment only. Please contact the appropriate Chase Brass Department listed below to schedule a delivery date and time:

	Phone Contacts	***E-Mail Contacts***
Free-Market/Dealer Loads	419-485-8915 (Procurement) 419-485-8966 (Procurement) 419-485-8923 (Traffic)	scrapschedule@chasebrass.com

2. Each Delivery shall include:
    a. Bill of Lading
        i. BOL number, Supplier name, shipper name, carrier name, Chase purchase order number
        ii. Gross, tare and net weight of material on load
        iii. Description of material on load including alloy designation
    b. Packing List
        i. Supplier name and Chase purchase order number
        ii. Itemized list of each container on load (each container must be individually numbered with its own ICN, see point 3 below) including material or alloy designation, gross, tare, and net weight of each container
3. All containers of incoming scrap/raw material **must be labeled** with the following information on a detachable label, see **Appendix #1.**
   NOTE: Settlement deductions will apply to miss/un-labeled materials)

    a. Shipper / Supplier Name
    b. Individual container number (ICN), see Appendix 1
    c. SFC (purchase order number)
    d. Alloy designation of scrap/incoming raw material in container
    e. Gross, Tare, and Net Weight of each container
    f. Date of shipping
    g. Bar code (unless exemption agreed)

SECTION 3: Incoming Scrap Turnings (Chips) / Raw Material:

1. Turnings (chips) shall be delivered loose on a covered trailer
    a. Turnings can be returned in boxes (containers) if pre-approved by Metal Procurement Department - additional charges may apply)
2. Turnings must be free of mixed solids. Solids are to be returned in containers placed at the rear (tailgate) of the trailer (see below for additional requirements for delivering solids scrap)
3. Trailer cannot exceed 53 feet when delivering loose turnings
    a. Refrigeration trailers or trailers with extensions cannot be unloaded
    b. Dump type trailers or trucks cannot be unloaded
4. Wiry/stringy/needle-like turnings/chips must be in boxes
5. We do **not** accept (including but not limited to):
    a. Excessively fine chips or millings
    b. Screen material
    c. Unspun/unwrung chips/turnings with an oil and moisture content greater than 6%.

SECTION 4: Incoming Solid Scrap / Raw Material Types – Packaging & Labeling Requirements:

1. All solid scrap must be delivered on a covered trailer, be palletized, stacked single height (unless otherwise approved in writing), secured for safe handling (unbroken containers, wrap, banding, etc.) and safe to unload from the rear of the vehicle (Chase Brass reserves the right to refuse material that cannot be unloaded in a safe or timely manner).
    a. Solids in containers must be easily accessible for inspection with open tops to allow for dumping (containers shall not be sealed or closed in top).
2. All solids shall be reasonably dry (no free liquids, including water, oil, grease and other contaminants).
3. All barrels containing solids must be thoroughly drained prior to shipment, and have drainage holes at the bottom to insure solids are reasonably free of excessive lubricants or other liquids.
4. Cardboard and plastic barrels must be banded together and banded to skids.
5. Rod (scrap rod/scrap bundles) shall be:
    a. Bundled with straps to secure rods in bundle form
    b. Free of material on top of the bundle (not buried underneath turnings) and placed at the rear if possible or on top of the turnings
    c. Blocked underneath to allow for straps to be placed underneath for lifting with an overhead crane or forklift with a boom extension
6. Spent Shell Cases must be a minimum of 20 mm and must be fired, popped, and cleaned.
7. Copper pipe, tubing and brass tubing (e.g. C230, C260) must have one end open (both ends cannot be crimped; one end must be sawed open).
    a. **Note: Chase does not accept brass pipe** in any form (e.g. loose in boxes or in bales). This includes but is not limited to: 70/30, yellow brass, 85/15, or other brass pipe.

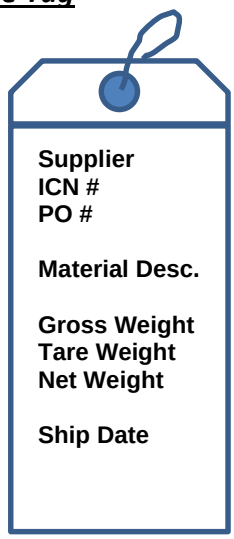
SECTION 4: Incoming Solid Scrap / Raw Material Types – Packaging & Labeling Requirements: (Continued)

8. Bales and Bundles:
    a. Maximum dimensions:
        i. 60 inches (Length) x 48 inches (Width) x 30 inches (Height)
    b. **Bales must be on pallets**
    c. **If using Supersacks, they must have a solid liner between pallet and sack**
    d. **We prefer four way pallets but if 2 way pallets are used, they must be accessible from the rear of the truck**
9. Copper Chop:
    a. We accept copper chop material considered heavy or medium grade. Please contact the mill for approval prior to shipping chop material.
10. Plated material must be pre-approved by the Chase Brass Metal Procurement Department prior to shipping to Chase Brass (e.g. tin-plated / silver-plated buss bar, etc.
11. Scrap must be free of:
    a. Oxidation, dirt, plastic coatings, plastic from liners on trailer floor, O-rings, gaskets, nonmetal pieces, paint, etc.
    b. Coatings, including enamel, lacquer, insulation, etc.
12. We do not accept (including but not limited to):
    a. EDM wire or stringy material.
    b. Loose or briquetted foil
    c. Screen material

Appendix #1: Labeling/Tagging Information Requirements:

See below, an example of the kind of Tag and labelling required.

The Tag



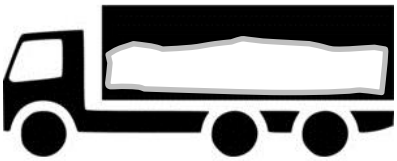
E.g. 6 1/4 x 3 1/8 “

Multi-layer
Carbonless
Prewired

Chase need to be able to easily remove 1 layer from the label, showing all of the required information (left). The order of the information shown is preferred but not prescriptive.

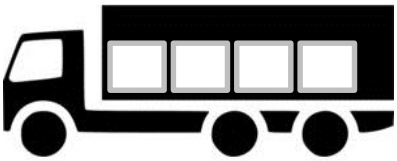
Consignment Labelling

Single consignment delivery, e.g. a load of loose chips.



BOL + Packing slip acceptable

Multi consignment delivery

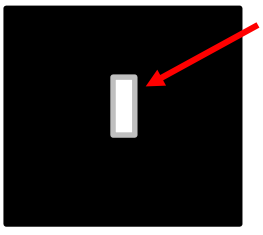


BOL + Packing slip + Individual Container Labels
The Packing slip must reference each containers ICN.

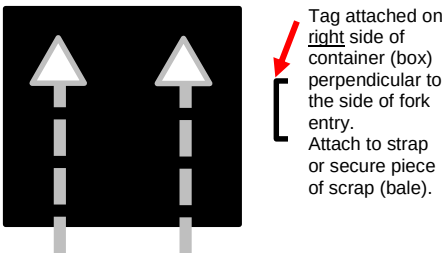
Individual Container Labelling (containers viewed from top, looking down)

Labels are to be located as shown to minimize risk of loss or damage during unloading, stacking and movement as well as to maximize visibility when looking into storage bins to pull scrap for use (side view identified by Scrap Team as best location as shown).

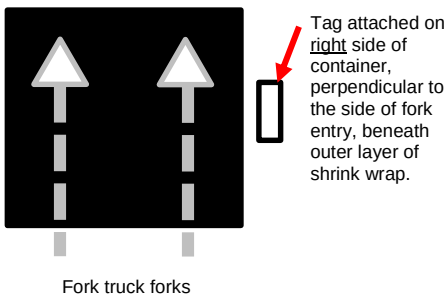
Palletized Box (chops)



Palletized Box/Bale (loose scrap)



Palletized shrink wrapped Bricks



Current Revision: 1/5/17
Replaces Previous Revision Dated 12/5/16