



Standard Terminology Relating to Non-ferrous Metals and Alloys¹

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1. Scope*

1.1 To promote precise understanding and interpretation of standards, reports, and other technical writings promulgated by Committee B02.

1.2 To standardize the terminology used in these documents.

1.3 To explain the meanings of technical terms used within these documents for those not conversant with them.

2. Referenced Documents

2.1 *ASTM Standards:*²

B6 Specification for Zinc

B29 Specification for Refined Lead

B32 Specification for Solder Metal

B39 Specification for Nickel

B69 Specification for Rolled Zinc

B86 Specification for Zinc and Zinc-Aluminum (ZA) Alloy Foundry and Die Castings

B160 Specification for Nickel Rod and Bar

B161 Specification for Nickel Seamless Pipe and Tube

B163 Specification for Seamless Nickel and Nickel Alloy Condenser and Heat-Exchanger Tubes

B164 Specification for Nickel-Copper Alloy Rod, Bar, and Wire

B165 Specification for Nickel-Copper Alloy (UNS N04400) Seamless Pipe and Tube

B166 Specification for Nickel-Chromium-Iron Alloys (UNS N06600, N06601, N06603, N06690, N06693, N06025, N06045, and N06696), Nickel-Chromium-Cobalt-Molybdenum Alloy (UNS N06617), and Nickel-Iron-Chromium-Tungsten Alloy (UNS N06674) Rod, Bar, and Wire

B167 Specification for Nickel-Chromium-Iron Alloys (UNS N06600, N06601, N06603, N06690, N06693, N06025,

N06045, and N06696), Nickel-Chromium-Cobalt-Molybdenum Alloy (UNS N06617), and Nickel-Iron-Chromium-Tungsten Alloy (UNS N06674) Seamless Pipe and Tube

B240 Specification for Zinc and Zinc-Aluminum (ZA) Alloys in Ingot Form for Foundry and Die Castings

B327 Specification for Master Alloys Used in Making Zinc Die Casting Alloys

B333 Specification for Nickel-Molybdenum Alloy Plate, Sheet, and Strip

B339 Specification for Pig Tin

B407 Specification for Nickel-Iron-Chromium Alloy Seamless Pipe and Tube

B408 Specification for Nickel-Iron-Chromium Alloy Rod and Bar

B418 Specification for Cast and Wrought Galvanic Zinc Anodes

B423 Specification for Nickel-Iron-Chromium-Molybdenum-Copper Alloy (UNS N08825, N08221, and N06845) Seamless Pipe and Tube

B425 Specification for Ni-Fe-Cr-Mo-Cu Alloy (UNS N08825, UNS N08221, and UNS N06845) Rod and Bar

B434 Specification for Nickel-Molybdenum-Chromium-Iron Alloys (UNS N10003, UNS N10242) Plate, Sheet, and Strip

B435 Specification for UNS N06002, UNS N06230, UNS N12160, and UNS R30556 Plate, Sheet, and Strip

B444 Specification for Nickel-Chromium-Molybdenum-Columbium Alloys (UNS N06625 and UNS N06852) and Nickel-Chromium-Molybdenum-Silicon Alloy (UNS N06219) Pipe and Tube

B445 Specification for Nickel-Chromium-Iron-Columbium-Molybdenum-Tungsten Alloy (UNS N06102)* Seamless Pipe and Tube (Withdrawn 1995)³

B446 Specification for Nickel-Chromium-Molybdenum-Columbium Alloy (UNS N06625), Nickel-Chromium-Molybdenum-Silicon Alloy (UNS N06219), and Nickel-Chromium-Molybdenum-Tungsten Alloy (UNS N06650) Rod and Bar

B463 Specification for UNS N08020 Alloy Plate, Sheet, and Strip

¹ This terminology is under the jurisdiction of ASTM Committee B02 on Nonferrous Metals and Alloys and is the direct responsibility of Subcommittee B02.91 on Editorial and Terminology.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ The last approved version of this historical standard is referenced on www.astm.org.

- B471** Specification for UNS N08020, UNS N08026, and UNS N08024 Nickel Alloy Spring Wire (Withdrawn 1999)³
- B473** Specification for UNS N08020, UNS N08024, and UNS N08026 Nickel Alloy Bar and Wire
- B475** Specification for UNS N08020, UNS N08024, and UNS N08026 Nickel Alloy Round Weaving Wire
- B511** Specification for Nickel-Iron-Chromium-Silicon Alloy Bars and Shapes
- B512** Specification for Nickel-Chromium-Silicon Alloy (UNS N08330) Billets and Bars
- B518** Specification for Nickel-Chromium-Iron-Columbium-Molybdenum-Tungsten Alloy (UNS N06102) Rod and Bar
- B522** Specification for Gold-Silver-Platinum Electrical Contact Alloy
- B535** Specification for Nickel-Iron-Chromium-Silicon Alloys (UNS N08330 and N08332) Seamless Pipe and Tube
- B536** Specification for Nickel-Iron-Chromium-Silicon Alloys (UNS N08330 and N08332) Plate, Sheet, and Strip
- B540** Specification for Palladium Electrical Contact Alloy
- B541** Specification for Gold Electrical Contact Alloy
- B575** Specification for Low-Carbon Nickel-Chromium-Molybdenum, Low-Carbon Nickel-Chromium-Molybdenum-Copper, Low-Carbon Nickel-Chromium-Molybdenum-Tantalum, Low-Carbon Nickel-Chromium-Molybdenum-Tungsten, and Low-Carbon Nickel-Molybdenum-Chromium Alloy Plate, Sheet, and Strip
- B582** Specification for Nickel-Chromium-Iron-Molybdenum-Copper Alloy Plate, Sheet, and Strip
- B599** Specification for Nickel-Iron-Chromium-Molybdenum-Columbium Stabilized Alloy (UNS N08700) Plate, Sheet, and Strip
- B620** Specification for Nickel-Iron-Chromium-Molybdenum Alloy (UNS N08320) Plate, Sheet, and Strip
- B622** Specification for Seamless Nickel and Nickel-Cobalt Alloy Pipe and Tube
- B625** Specification for UNS N08925, UNS N08031, UNS N08932, UNS N08926, UNS N08354, UNS N08830, and UNS R20033 Plate, Sheet, and Strip
- B637** Specification for Precipitation-Hardening and Cold Worked Nickel Alloy Bars, Forgings, and Forging Stock for Moderate or High Temperature Service
- B639** Specification for Precipitation Hardening Cobalt-Containing Alloys (UNS R30155 and UNS R30816) Rod, Bar, Forgings, and Forging Stock for High-Temperature Service
- B649** Specification for Ni-Fe-Cr-Mo-Cu-N Low-Carbon Alloys (UNS N08925, UNS N08031, UNS N08354, and UNS N08926), and Cr-Ni-Fe-N Low-Carbon Alloy (UNS R20033) Bar and Wire, and Ni-Cr-Fe-Mo-N Alloy (UNS N08936) Wire
- B667** Practice for Construction and Use of a Probe for Measuring Electrical Contact Resistance
- B672** Specification for Nickel-Iron-Chromium-Molybdenum-Columbium Stabilized Alloy (UNS N08700) Bar and Wire
- B677** Specification for UNS N08925, UNS N08354, and UNS N08926 Seamless Pipe and Tube
- B688** Specification for Chromium-Nickel-Molybdenum-Iron (UNS N08366 and UNS N08367) Plate, Sheet, and Strip
- B690** Specification for Iron-Nickel-Chromium-Molybdenum Alloys (UNS N08366 and UNS N08367) Seamless Pipe and Tube
- B691** Specification for Iron-Nickel-Chromium-Molybdenum Alloys (UNS N08366 and UNS N08367) Rod, Bar, and Wire
- B709** Specification for Iron-Nickel-Chromium-Molybdenum Alloy (UNS N08028) Plate, Sheet, and Strip
- B710** Specification for Nickel-Iron-Chromium-Silicon Alloy Welded Pipe
- B718** Specification for Nickel-Chromium-Molybdenum-Cobalt-Tungsten-Iron-Silicon Alloy (UNS N06333) Plate, Sheet, and Strip
- B719** Specification for Nickel-Chromium-Molybdenum-Cobalt-Tungsten-Iron-Silicon Alloy (UNS N06333) Bar
- B722** Specification for Nickel-Chromium-Molybdenum-Cobalt-Tungsten-Iron-Silicon Alloy (UNS N06333) Seamless Pipe and Tube
- B723** Specification for Nickel-Chromium-Molybdenum-Cobalt-Tungsten-Iron-Silicon Alloy (UNS N06333) Welded Pipe
- B726** Specification for Nickel-Chromium-Molybdenum-Cobalt-Tungsten-Iron-Silicon Alloy (UNS N06333) Welded Tube
- B729** Specification for Seamless UNS N08020, UNS N08026, and UNS N08024 Nickel-Alloy Pipe and Tube
- B739** Specification for Nickel-Iron-Chromium-Silicon Alloy Welded Tube
- B749** Specification for Lead and Lead Alloy Strip, Sheet, and Plate Products
- B750** Specification for GALFAN (Zinc-5 % Aluminum-Mischmetal) Alloy in Ingot Form for Hot-Dip Coatings
- B751** Specification for General Requirements for Nickel and Nickel Alloy Welded Tube
- B756** Specification for Nickel-Chromium-Molybdenum-Tungsten Alloy (UNS N06110) Rod and Bar
- B759** Specification for Nickel-Chromium-Molybdenum-Tungsten Alloys (UNS N06110) Pipe and Tube
- B775** Specification for General Requirements for Nickel and Nickel Alloy Welded Pipe
- B791** Specification for Zinc-Aluminum (ZA) Alloy Foundry and Die Castings (Withdrawn 1999)³
- B792** Specification for Zinc Alloys in Ingot Form for Slush Casting
- B805** Specification for Precipitation Hardening Nickel Alloys Bar and Wire
- B814** Specification for Nickel-Chromium-Iron-Molybdenum-Tungsten Alloy (UNS N06920) Plate, Sheet, and Strip
- B818** Specification for Cobalt-Chromium-Nickel-Molybdenum-Tungsten Alloy (UNS R31233) Plate, Sheet and Strip

B834 Specification for Pressure Consolidated Powder Metallurgy Iron-Nickel-Chromium-Molybdenum (UNS N08367), Nickel-Chromium-Molybdenum-Columbium (Nb) (UNS N06625), Nickel-Chromium-Iron Alloys (UNS N06600 and N06690), and Nickel-Chromium-Iron-Columbium-Molybdenum (UNS N07718) A

B860 Specification for Zinc Master Alloys for Use in Hot Dip Galvanizing

B892 Specification for ACuZinc5

B894 Specification for ACuZinc5

B897 Specification for Configuration of Zinc and Zinc Alloy Jumbo, Block, Half Block, and Slab Ingot

3. Significance and Use

3.1 The terms defined in this document are generic in respect to the standards under the jurisdiction of Committee B02 on Nonferrous Metals and Alloys. The same terms may have different definitions in other ASTM technical committees.

3.2 Some definitions may differ within the committee because of limitations on items such as weights or dimensions. In such cases the terms will be more precisely defined in the *Terminology* section of the standards in which these terms are used.

4. Index of Terms

4.1 Alphabetical Listing of Terms

average diameter
bar
billet
can
cathodic protection
cobalt alloy
coiled sheet
compact
contact resistance
contact resistance probe
die casting
ellipsis
fill pin
fineness
flat sheet
foundry casting
galvanic anode
graphite permanent mold casting
heat
ingot
liquidus
lot
lot number
melt
nickel
nickel alloy
nickel-base alloy
nickel-based alloy
nominal wall
nonferrous material
part
permanent mold casting

pig
pipe
plate
platinum group metal
powder
powder blend
precious metals
precipitation hardening
pressure die-casting
producer
rod
rough part
saline electrolyte
sand casting
seamless pipe
semi-permanent mold casting
shapes
sheet
shot
solidus
sponge
spring wire
strip
test report
thin-wall tube
tube
weaving wire
welded pipe
wire

5. Terminology

5.1 Terms and Their Definitions

average diameter, *n*—the average of the maximum and minimum outside the diameters, as determined at any one section of the pipe or tube. **B160, B161, B163, B165, B167, B407, B423, B444, B445, B535, B622, B677, B690, B710, B722, B723, B726, B729, B739, B751, B759, B775**

bar, *n*—an elongated, forged or rolled metal product with uniform strength, length and section (such as rectangular, square, round, oval or hexagonal). **B327, B518**

NOTE 1—In the following standards the term “bar” has a similar definition, but with greater and more specific detail. **B160, B164, B166, B408, B425, B446, B473, B511, B512, B637, B639, B649, B672, B691, B719, B756, B805**

billet, *n*—a formed shape that may be further worked, or a solid, semifinished, round, or rectangular product that has been hot-worked by forging, rolling, or extrusion.

brightener bar, *n*—brightener bar is a zinc alloy containing aluminum which is added to the galvanizing bath to adjust the aluminum content of the bath to: suppress the formation of iron-zinc alloy layers, increase the brightness and ductility of the galvanized coating, and improve the drainage of zinc from the work as it exits the bath; also called brightener. **B860**

can, *n*—the container used to encapsulate the powder during the pressure consolidation process; it is removed from the final part. **B834**

cathodic protection, *n*—protection of a metal from corrosion by making it a cathode through the galvanic sacrifice of a less noble metal or through an impressed electric current.

B418

cobalt alloy, *n*—a material that conforms to a specification that contains cobalt as the principal component.

DISCUSSION—The cobalt content requirement is not always stated in the specification and is not always determined by chemical analysis. If not specified, it may be taken to be 100 % minus the sum of the mean values permitted by the specification for all other elements having a specified range or a specified maximum. For conformance purposes, the mean value for cobalt, whether if specified, or the calculated value for cobalt, is compared on an individual basis to the mean values permitted by the specification for each of the other elements having a specified range or a specified maximum. If an element other than cobalt is not specified, but is listed as remainder or balance, then, for conformance purposes the mean value for cobalt is compared to the calculated value for that other element.

coiled sheet, *n*—sheet in coils with slit edges.

B69

compact, *n*—the consolidated powder from one can; it may be used to make one or more parts.

B834

contact resistance, *n*—the resistance to current flow between two touching bodies, consisting of constriction resistance and film resistance.

B667

contact resistance probe, *n*—an apparatus for determining electrical contact resistance characteristics of a metal surface.

DISCUSSION—Probe, in this instance, should be distinguished from the classical tool whose function it is to touch or move an object.

B667

die casting, *n*—a casting process in which molten metal is injected under high velocity and pressure into a metal die and solidified; also, a product produced by such a process. Alternately known as pressure die casting.

B6, B240, B892, B894

ellipsis, *n*—in a tabular entry, three periods (...) that indicate that there is no requirement.

fill pin, *n*—the part of the compact in the spout used to fill the can; it is usually integral to the part produced.

B834

fineness, *n*—a measure of the purity of precious metals expressed in parts per thousand.

flat sheet, *n*—sheet with sheared, silt, or sawed edges that has been flattened or leveled.

B69

foundry casting, *n*—a casting process wherein a molten metal is poured by gravity into the cavity of a mold and solidified; also, a product of such a process.

B86

galvanic anode, *n*—a metal electrode that sacrificially corrodes when coupled to a more noble metal in a conducting medium, thereby supplying a protective electric current to the more noble electrode.

B418

graphite permanent mold casting, *n*—a metal object produced by introducing molten metal by gravity or low pressure into a graphite mold and allowing it to solidify.

B86

hardener, *n*—an aluminum-base master alloy added to Special High Grade Zinc (SHG) to produce a zinc alloy for die casting.

B327

heat, *n*—refer to melt.

ingot, *n*—a casting of simple shape suitable for hot-working or remelting.

liquidus, *n*—the lowest temperature at which an alloy under equilibrium conditions begins to freeze on cooling or is completely melted on heating.

lot, *n*—a quantity of metal made under conditions that, for sampling purposes, are considered uniform.

B6, B32, B240, B418, B749

lot number, *n*—a unique alphanumeric designation for a lot that is traceable to manufacturing records.

B32

melt, *n*—all the metal that, while molten, was held at the same time in the same holding vessel.

nickel, *n*—a refined nickel primarily produced from ore or matte or similar raw material containing a minimum of 99.80 percent nickel by weight.

B39

nickel alloy, *n*—a material that contains nickel as the principal component.

DISCUSSION—Beginning in 1992, only alloys containing nickel as the principal constituent have been categorized as a nickel alloy for the purpose of new coverage in B02 specifications. Prior to 1992, nickel alloys were defined as alloys nominally containing less than 50 % iron with nickel as the highest nonferrous element present. The nickel content requirement is not always stated in the specification and is not always determined by chemical analysis. If not specified, it may be taken to be 100 % minus the sum of the mean values permitted by the specification for all other elements having a specified range or a specified maximum. For conformance purposes, the mean value for nickel, whether specified or calculated, is compared on an individual basis to the mean values permitted by the specification for each of the other elements having a specified range or a specified maximum. If an element other than nickel is not specified, but is listed as remainder or balance, then, for conformance purposes the mean value for nickel is compared to the calculated value for that other element.

nickel-base alloy and nickel-based alloy—these terms are not used in ASTM standards under the jurisdiction of Committee B02 and are not preferred. See **nickel alloy**.

nominal wall, *n*—specified wall thickness with a published plus and minus tolerance from the specified thickness at any point.

B535, B710, B722, B723, B726, B739, B751, B775

nonferrous material, *n*—metals and alloys that do not contain iron as the principal component.

DISCUSSION—The iron content is not always stated in the specification and is not always determined by chemical analysis. The iron content may be taken to be 100 % minus the sum of the mean values permitted by the specification for all other elements having a specified range or a specified maximum. For conformance purposes, the mean value for iron, whether specified or calculated, is compared on an individual basis to the mean values permitted by the specification for each of the other elements having a specified range or a specified maximum. If an element other than iron is not specified, but is listed as remainder or balance, then, for conformance purposes the mean value for iron is compared to the calculated value for that other element.

part, *n*—a single item coming from a compact, either prior to or after machining. **B834**

permanent mold casting, *n*—a metal object produced by introducing molten metal by gravity or low pressure into a mold constructed of durable material, usually iron or steel, and allowing it to solidify. See also graphite permanent mold casting. **B86, B792**

pig, *n*—an oblong or square mass of metal that has been cast while still molten into a mold that gives the metal its particular shape; most commonly used for lead and tin in weights that can be handled manually. **B29, B339**

pipe, *n*—a tubular metal product, cast or wrought, of dimensions that conform to those referred to commercially as standard pipe sizes. **B161, B165, B167, B407, B423, B444, B445, B535, B622, B677, B690, B710, B722, B723, B729, B759, B775**

plate, *n*—a flat-rolled metal product of same minimum thickness and width arbitrarily dependent on the type of metal. **B69, B333, B434, B435, B463, B536, B575, B582, B599, B620, B625, B709, B718, B814, B818**

platinum group metal, *n*—these metals are palladium, platinum, rhodium, iridium, osmium, and ruthenium. **B522, B540, B541**

powder, *n*—particles of a solid characterized by small size, nominally within the range of from 0.1 to 1000 µm.

powder blend, *n*—a homogeneous mixture of powder from one or more heats; it is limited to the amount that can be mixed in the same blender at one time. **B834**

precious metals, *n*—the eight noble metals: gold, silver, palladium, platinum, rhodium, iridium, osmium, and ruthenium.

precipitation hardening, *n*—hardening caused by the precipitation of a constituent from a supersaturated solid solution.

pressure die-casting, *n*—Same as die casting. **B86, B791**

producer, *n*—the primary manufacturer of the material. **B32**

rod, *n*—wrought material of round, solid straight lengths. **B408, B518, B691**

NOTE 2—In the following standards the term “rod” has a similar definition, but is worded differently. **B160, B164, B166, B425, B446, B637, B639, B756**

rough part, *n*—the part prior to final machining. **B834**

saline electrolyte, *n*—a solution customarily consisting of the chlorides of the alkali metals. **B418**

sand casting, *n*—a casting process wherein molten metal is poured by gravity into the cavity of a sand mold and solidified; also, a product of such a process. **B791**

seamless pipe, *n*—a round, hollow product made with a continuous periphery in all stages of manufacture and produced to the particular dimensions commercially known as standard pipe sizes. **B423, B444, B775**

semi-permanent mold casting, *n*—mold casting that is made with an expendable core such as sand. **B791**

shapes, *n*—materials of solid section in such forms as angles, channels, tees, I-beams, and four-fluted bars. **B511**

sheet, *n*—a flat-rolled metal product of some maximum thickness and minimum width arbitrarily dependent on the type of metal; it is thinner than plate. **B69, B463, B599, B625, B688, B709, B718, B749**

shot, *n*—small spherically shaped particles of metal. **B327**

solidus, *n*—the highest temperature at which under equilibrium conditions an alloy begins to melt on heating or is completely solid on cooling.

sponge, *n*—a form of metal characterized by a porous condition that is the result of decomposition or reduction of a compound without fusion.

spring wire, *n*—round wire intended especially for the manufacture of springs. **B471**

strip, *n*—a flat-rolled metal product of some maximum thickness and width arbitrarily dependent on the type of metal, it is narrower than sheet. **B463, B536, B599, B625, B688, B709, B718, B749**

test report, *n*—a document that presents the applicable qualitative or quantitative results obtained by applying one or more given test methods.

DISCUSSION—A single document, containing test report information and certificate of compliance information, may be used.

thin-wall tube, *n*—tube with specified wall thickness 3 % or less of the specified outside diameter. **B751**

tube, *n*—a hollow product of round or any other cross section having a continuous periphery of uniform shape. **B423, B444, B445, B535, B677, B722, B729**

NOTE 3—The following standards use the same definition for “tube,” less the words “of uniform shape.” **B161, B163, B165, B167, B407, B622, B690, B759**

weaving wire, *n*—round wire intended especially for weaving. **B475**

welded pipe, *n*—a round hollow product made by forming flat stock and joining the single longitudinal seam by welding; it is produced to the particular dimensions commercially known as standard pipe sizes. **B775**

wire, *n*—a thin, flexible continuous length of metal, usually of uniform, round cross section. **B473, B649, B672, B691, B805**

6. Index of Terms Specific to a Standard

6.1 Terms and Their Corresponding Standard(s)

bars — **B473, B649, B672**

billet — **B512**

High Grade — **B6**

jumbo ingot — **B897**

mischmetal — **B750**

Prime Western — **B6**

Special High Grade — **B6**
 ribbon anode — **B69, B418**
 wire — **B164, B166**

7. Abbreviations

7.1 Abbreviations

CGG—continuous galvanizing grade zinc
 HG—High Grade Zinc
 MM—mischmetal
 PW—Prime Western Zinc
 SHG—Special High Grade Zinc
 UNS—Unified Numbering System
 V-12—zinc-12 % aluminum master alloy used to produce die casting alloy #3
 ZA—zinc-aluminum
 ZA-8—zinc- 8 % aluminum- 1 % copper die casting alloy
 ZA-12—zinc- 11 % aluminum- 1 % copper die casting and foundry alloy
 ZA-27—zinc- 27 % aluminum- 2 % copper die casting and foundry alloy
 Zn-5Al-MM—zinc- 5 % aluminum-mischmetal galvanizing alloy
 85 Zn/15 aluminum—85 % zinc- 15 % aluminum alloy
 95/5 Zn/Al—95 % zinc- 5 % aluminum alloy
 90/10 Zn/Al—90 % zinc- 10 % aluminum alloy
 90/10 Al/Sb—90 % zinc- 10 % antimony alloy

8. Index of Keywords Used in B02 Standards

8.1 Index of Keywords

alloys
 aluminum-base master alloy
 aluminum alloy hardener
 analysis
 antimony
 babbit metal
 bar
 bearing alloys
 billet
 bismuth
 blanking dies
 block
 brightener
 cake
 casting
 casting alloys
 cathodic protection
 certification
 CGG alloy
 chemical-copper lead
 chemical analysis
 chemical composition
 chemical requirements
 cobalt alloys
 cold worked
 color
 color code
 compact
 continuous galvanizing grade zinc
 definitions

die casting alloys
 die castings
 fittings
 flux
 flux cored solder
 forgings
 forming dies
 foundry alloys
 foundry castings
 freezing point
 fuses
 fusible alloys
 fusion-welded pipe
 fusion welded
 galvanic anodes
 grades
 grain size
 gravity casting
 high-temperature alloy
 high grade zinc
 hog
 hot-dip coating alloy
 hot chamber die castings
 hot finished
 indium
 ingot
 iron-nickel-chromium-molybdenum
 joining
 jumbo ingot
 lead
 lead-silver alloys
 lead-tin-antimony alloys
 lead-tin-silver alloys
 lead-tin alloys
 lead alloys
 liquidus
 lot
 low-bismuth low-silver lead
 low melting point alloys
 master alloy
 mechanical properties
 N02200
 N02201
 N04400
 N06002
 N06007
 N06022
 N06025
 N06030
 N06045
 N06058
 N06059
 N06060
 N06110
 N06200
 N06210
 N06230
 N06250

N06255	nickel alloys
N06333	nickel alloy
N06455	nickel
N06600	nonferrous material
N06603	nonferrous metals
N06617	permanent mold castings
N06625	pewter
N06686	physical properties
N06690	pig
N06920	pipe
N06975	plate
N06985	powder
N07001	powder parts
N07080	pressure consolidated powder metallurgy
N07252	pressure die castings
N07500	prime western zinc
N07718	product analysis
N07750	pure lead
N07752	R20033
N08020	R30556
N08024	R31233
N08026	refined
N08028	ribbon
N08031	rod
N08120	rolled sheet
N08135	rolled zinc
N08221	sampling
N08320	sand castings
N08330	seamless pipe
N08332	seamless tube
N08367	sheet
N08535	sheet metal dies
N08700	silver
N08800	slush casting
N08801	solder alloy
N08810	solder metal
N08811	solder uses
N08821	solidus
N08825	special high grade zinc
N08904	specimen preparation
N08925	strip
N08926	tension test
N08932	terminology
N09908	tin
N10001	tin-antimony-copper alloys
N10003	tin-antimony alloys
N10276	tin-cadmium-zinc alloys
N10624	tin-copper alloys
N10629	tin-silver alloys
N10665	tin-zinc alloy
N10675	tin alloys
N12160	V-12
N60975	welded pipe
nickel-chromium-molybdenum-columbium	welded tube
nickel-chromium-molybdenum-tungsten	wire
nickel-iron-chromium-molybdenum-columbium	ZA alloys
nickel-iron-chromium-molybdenum-copper-columbium	zinc
nickel alloy forgings	zinc- 5 % aluminum-mischmetal alloy

zinc-aluminum-copper alloys
zinc-aluminum alloys
zinc-base master alloy
zinc-cadmium alloys
zinc-copper-aluminum alloys
zinc-tin-copper alloys
zinc alloy hardener
zinc alloy ingots
zinc alloys
zinc anodes

zinc die casting alloy
zinc master alloys
zinc metal
zinc plate
zinc sheet

9. Keywords

9.1 definitions; nonferrous material; nonferrous metals; terminology

SUMMARY OF CHANGES

Committee B02 has identified the location of selected changes to this standard since the last issue (B899–14) that may impact the use of this standard. (Approved October 1, 2015.)

(1) Added the term and definition of ellipsis based on the Form and Style for ASTM Standards.

Committee B02 has identified the location of selected changes to this standard since the last issue (B899–13) that may impact the use of this standard. (Approved October 1, 2014.)

(1) Revised definition for cobalt alloy and nickel alloy and added method to determine principal component.

(2) Added definition and method to determine principal component for nonferrous material.

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