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## **METALPRICES.COM**

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**LAST UPDATED: JUNE 2017**

The most up-to-date MetalPrices.com Methodology and Specification Guide is available on [www.argusmedia.com](http://www.argusmedia.com)

## Methodology overview

Argus Media's MetalPrices.com is a global provider of information on the metals markets. Data are published on [MetalPrices.com](http://MetalPrices.com) and through other Argus Media subscription channels. [MetalPrices.com](http://MetalPrices.com) features news, analysis, fundamental data and market commentary. It also includes data from some third parties and metals exchanges that may be subject to separate user agreements and licensing. For more information, contact [sales@metalprices.com](mailto:sales@metalprices.com).

### Methodology rationale

Argus strives to construct methodologies that reflect the way the market trades. Argus aims to produce price assessments which are reliable and representative indicators of commodity market values and are free from distortion. As a result, the specific currencies, volume units, locations and other particulars of an assessment are determined by industry conventions.

In the metals markets, Argus publishes physical market prices in the open market as laid out in the specifications and methodology guide. Argus uses the trading period deemed by Argus to be most appropriate, in consultation with industry, to capture market liquidity.

In order to be included in the assessment process, deals must meet the minimum volume, delivery, timing and specification requirements in our methodology. In illiquid markets, and in other cases where deemed appropriate, Argus assesses the range within which product could have traded by applying a strict process outlined later in this methodology.

### Survey process

Argus price assessments are informed by information received from a wide cross-section of market participants, including producers, consumers and intermediaries. Argus reporters engage with the industry by proactively polling participants for market data. Argus will contact and accept market data from all credible market sources including front and back office of market participants and brokers. Argus will also receive market data from electronic trading platforms and directly from the back offices of market participants. Argus will accept market data by telephone, instant messenger, email or other means.

Argus encourages all sources of market data to submit all market data to which they are a party that fall within the Argus stated methodological criteria for the relevant assessment. Argus encourages all sources of market data to submit transaction data from back office functions.

Throughout all markets, Argus is constantly seeking to increase the number of companies willing to provide market data. Reporters are mentored and held accountable for expanding their pool of contacts. The number of entities providing market data can vary significantly from day to day based on market conditions.

For certain price assessments identified by local management, if more than 50pc of the market data involved in arriving at a price assessment

is sourced from a single party the supervising editor will engage in an analysis of the market data with the primary reporter to ensure that the quality and integrity of the assessment has not been affected.

### Market data usage

In each market, Argus uses the methodological approach deemed to be the most reliable and representative for that market. Argus will utilise various types of market data in its methodologies, to include:

- Transactions
- Bids and offers
- Other market information, to include spread values between grades, locations, timings, and many other data

In many markets, the relevant methodology will assign a relatively higher importance to transactions over bids and offers, and a relatively higher importance to bids and offers over other market information. Certain markets, however, will exist for which such a hierarchy would produce unreliable and non-representative price assessments, and so the methodology must assign a different relative importance to ensure the quality and integrity of the price assessment. And even in markets for which the hierarchy normally applies, certain market situations will at times emerge for which the strict hierarchy would produce non-representative prices, requiring Argus to adapt to publish representative prices.

### Verification of transaction data

Reporters carefully analyse all data submitted to the price assessment process. These data include transactions, bids, offers, volumes, counterparties, specifications and any other information that contributes materially to the determination of price. This high level of care described applies regardless of the methodology employed. Specific to transactions, bids, and offers, reporters seek to verify the price, the volume, the specifications, location basis and counterparty. In some transactional average methodologies, reporters also examine the full array of transactions to match counterparties and arrive at a list of unique transactions. In some transactional average methodologies, full details of the transactions verified are published electronically and are accessible by subscribers. The deals are also published in the daily report.

Several tests are applied by reporters in all markets to transactional data to determine if it should be subjected to further scrutiny. If a transaction has been identified as failing such a test, it will receive further scrutiny. For assessments used to settle derivatives and for many other assessments, Argus has established internal procedures that involve escalation of inquiry within the source's company and escalating review within Argus management. Should this process determine that a transaction should be excluded from the price assessment process, the supervising editor will initiate approval and, if necessary, documentation procedures.

### Primary tests applied by reporters

- Transactions not transacted at arms length, including deals between related parties or affiliates
- Transaction prices that deviate significantly from the mean of all transactions submitted for that day

- Transaction prices that fall outside of the generally observed lows and highs that operated throughout the trading day
- Transactions that are suspected to be a leg of another transaction or in some way contingent on an unknown transaction
- Single deal volumes that significantly exceed the typical transaction volume for that market
- Transaction details that are identified by other market participants as being for any reason potentially anomalous and perceived by Argus to be as such
- Transaction details that are reported by one counterparty differently than the other counterparty
- Any transaction details that appear to the reporter to be illogical or to stray from the norms of trading behavior. This could include, but is not limited to, divergent specifications, unusual delivery location and counterparties not typically seen
- Transactions that involve the same counterparties, the same price and delivery dates are checked to see that they are separate deals and not one deal duplicated in Argus records

**Secondary tests applied by editors for transactions identified for further scrutiny**

**Transaction tests**

- The impact of linkage of the deal to possible other transactions such as contingent legs, exchanges, options, swaps, or other derivative instruments. This will include a review of transactions in markets that the reporter may not be covering.
- The nature of disagreement between counterparties on transactional details.
- The possibility that a deal is directly linked to an offsetting transaction that is not publicly known, for example a “wash trade” which has the purpose of influencing the published price.
- The impact of non-market factors on price or volume, including distressed delivery, credit issues, scheduling issues, demurrage, or containment.

**Source tests**

- The credibility of the explanation provided for the outlying nature of the transaction.
- The track record of the source. Sources will be deemed more credible if they:
  - Regularly provide transaction data with few errors
  - Provide data by Argus’ established deadline
  - Quickly respond to queries from Argus reporters
  - Have staff designated to respond to such queries
- How close the information receipt is to the deadline for information, and the impact of that proximity on the validation process

**Assessment guidelines**

When insufficient, inadequate or no transaction information exists, or when Argus concludes that a transaction-based methodology will not produce representative prices, Argus reporters will make an assessment of market value by applying intelligent judgment based on a broad array of factual market information. Reporters must use

a high degree of care in gathering and validating all market data used in determining price assessments, a degree of care equal to that applying to gathering and validating transactions. The information used to form an assessment could include deals done, bids, offers, tenders, spread trades, exchange trades, fundamental supply and demand information and other inputs.

The assessment process employing judgment is rigorous, replicable, and uses widely accepted valuation metrics. These valuation metrics mirror the process used by physical commodity traders to internally assess value prior to entering the market with a bid or offer. Applying these valuation metrics along with sound judgment significantly narrows the band within which a commodity can be assessed, and greatly increases the accuracy and consistency of the price series. The application of judgment is conducted jointly with the supervising editor, in order to be sure that guidelines below are being followed. Valuation metrics include the following:

**Relative value transactions**

Frequently, transactions occur which instead of being an outright purchase or sale of a single commodity, are exchanges of commodities. Such transactions allow reporters to value less liquid markets against more liquid ones and establish a strong basis for the exercise of judgment.

- Exchange one commodity for a different commodity in the same market at a negotiated value.
- Exchange delivery dates for the same commodity at a negotiated value.
- Exchange a commodity in one location for the same commodity at another location at a negotiated value.

**Bids and offers**

If a sufficient number of bids and offers populate the market, then in most cases the highest bid and the lowest offer can be assumed to define the boundaries between which a deal could be transacted.

**Comparative metrics**

- The relative values between compared commodities are readily discussed in the market and can be discovered through dialogue with market participants. These discussions are the precursor to negotiation and conclusion of transactions.
- Comparison to the same commodity in another market centre
- Comparison to a more actively traded but slightly different specification commodity in the same market centre
- Comparison to the same commodity traded for a different delivery timing
- Comparison to the commodity’s primary feedstock or primary derived product(s).
- Comparison to trade in the same commodity but in a different modality (as in barge versus oceangoing vessel) or in a different total volume (as in full cargo load versus partial cargo load)

**Volume minimums and transaction data thresholds**

Argus typically does not establish thresholds strictly on the basis of a count of transactions, as this could lead to unreliable and non-representative assessments and because of the varying

transportation infrastructure found in all commodity markets. Instead, minimum volumes are typically established which may apply to each transaction accepted, to the aggregate of transactions, to transactions which set a low or high assessment or to other volumetrically relevant parameters.

For price assessments used to settle derivatives, Argus will seek to establish minimum transaction data thresholds and when no such threshold can be established Argus will explain the reasons. These thresholds will often reflect the minimum volumes necessary to produce a transaction-based methodology, but may also establish minimum deal parameters for use by a methodology that is based primarily on judgment.

Should no transaction threshold exist, or should submitted data fall below this methodology's stated transaction data threshold for any reason, Argus will follow the procedures outlined elsewhere in this document regarding the exercise of judgment in the price assessment process.

### Transparency

Argus values transparency in metal markets. As a result, where available, we publish lists of deals in our reports that include price, basis, counterparty and volume information. The deal tables allow subscribers to cross-check and verify the deals against the prices. Argus feels transparency and openness is vital to developing confidence in the price assessment process.

### Swaps and forwards markets

Argus publishes forward assessments for numerous markets. These include forward market contracts that can allow physical delivery and swaps contracts that swap a fixed price for the average of a floating published price. Argus looks at forward swaps to inform physical assessments but places primary emphasis on the physical markets.

### Publications and price data

Metals prices are published on [MetalPrices.com](http://MetalPrices.com). Subsets of these prices appear in other Argus market reports and newsletters in various forms. The Argus website also provides access to prices, reports and news with various web-based tools. All Argus prices are kept in a historical database and available for purchase. Contact your local Argus office for information.

### Corrections to assessments

Argus will on occasion publish corrections to price assessments after the publication date. We will correct errors that arise from clerical mistakes, calculation errors, or a misapplication of our stated methodology. Argus will not retroactively assess markets based on new information learned after the assessments are published. We make our best effort to assess markets based on the information we gather during the trading day assessed.

If transaction information is submitted in error, and the company submitting informs Argus of the error within 24 hours of the original submission, Argus will make its best effort to correct the price data. After 24 hours, Argus will review both the material effect that the

correction will have on the price data and the amount of time that has elapsed from the date of the published price data before deciding whether to issue a correction. After 30 days, Argus is unlikely to make a correction based on information submitted in error, and data submitters are not expected to file corrections to submitted data.

### Ethics and compliance

Argus operates according to the best practices in the publishing field, and maintains thorough compliance procedures throughout the firm. We want to be seen as a preferred provider by our subscribers, who are held to equally high standards, while at the same time maintaining our editorial integrity and independence. Argus has a strict ethics policy that applies to all staff. The policy can be found on our website at [www.argusmedia.com](http://www.argusmedia.com). Included in this policy are restrictions against staff trading in any metal commodity or metal related stocks, and guidelines for accepting gifts. Argus also has strict policies regarding central archiving of email and instant messenger communication, maintenance and archiving of notes, and archiving of spreadsheets and deal lists used in the price assessment process. Argus publishes prices that report and reflect prevailing levels for open-market arms length transactions (please see the [Argus Global Compliance Policy](#) for a detailed definition of arms length).

### Consistency in the assessment process

Argus recognises the need to have judgment consistently applied by reporters covering separate markets, and by reporters replacing existing reporters in the assessment process. In order to ensure this consistency, Argus has developed a programme of training and oversight of reporters. This programme includes:

- A global price reporting manual describing, among other things, the guidelines for the exercise of judgment
- Cross-training of staff between markets to ensure proper holiday and sick leave backup.
- Editors who float between markets to monitor staff application of best practices.
- Experienced editors overseeing reporting teams are involved in daily mentoring and assisting in the application of judgment for illiquid markets
- Editors are required to sign off on all price assessments each day, thus ensuring the consistent application of judgment.

### Review of methodology

The overriding objective of any methodology is to produce price assessments which are reliable and representative indicators of commodity market values and are free from distortion. As a result, Argus editors and reporters are regularly examining our methodologies and are in regular dialogue with the industry to ensure that the methodologies are representative of the market being assessed. This process is integral with reporting on a given market. In addition to this ongoing review of methodology, Argus conducts reviews of all of its methodologies and methodology documents on at least an annual basis.

Argus market report editors and management will periodically and as merited initiate reviews of market coverage based on a qualita-

tive analysis that includes measurements of liquidity, visibility of market data, consistency of market data, quality of market data and industry usage of the assessments. Report editors will review:

- Appropriateness of the methodology of existing assessments
- Termination of existing assessments
- Initiation of new assessments

The report editor will initiate an informal process to examine viability. This process includes:

- Informal discussions with market participants
- Informal discussions with other stakeholders
- Internal review of market data

Should changes, terminations, or initiations be merited, the report editor will submit an internal proposal to management for review and approval. Should changes or terminations of existing assessments be approved, then formal procedures for external consultation are started.

### Changes to methodology

Formal proposals to change methodologies typically emerge out of the ongoing process of internal and external review of the methodologies. Formal procedures for external consultation regarding material changes to existing methodologies will be initiated with an announcement of the proposed change published in the relevant Argus report. This announcement will include:

- Details on the proposed change and the rationale
- Method for submitting comments with a deadline for submissions
- For prices used in derivatives, notice that all formal comments will be published after the given consultation period unless submitter requests confidentiality.

Argus will provide sufficient opportunity for stakeholders to analyse and comment on changes, but will not allow the time needed to follow these procedures to create a situation wherein unrepresentative or false prices are published, markets are disrupted, or market participants are put at unnecessary risk. Argus will engage with industry throughout this process in order to gain acceptance of proposed changes to methodology. Argus cannot, however, guarantee universal acceptance and will act for the good order of the market and ensure the continued integrity of its price assessments as an overriding objective.

Following the consultation period, Argus management will commence an internal review and decide on the methodology change. This will be followed by an announcement of the decision, which will be published in the relevant Argus report and include a date for implementation. For prices used in derivatives, publication of stakeholders' formal comments that are not subject to confidentiality and Argus' response to those comments will also take place.

## Metal market prices

Argus publishes metal prices that report and reflect prevailing levels for open-market arms length transactions.

Various methodological approaches are employed in reporting metals markets to produce the most representative price assessments. These include volume-weighted averages of deals done, lows and highs of deals done, and other methods.

In illiquid markets, Argus assesses the range within which metals could have traded, based on bids and offers, movements of similar or related grades, and extensive polling of market participants. Formula-priced deals, market fundamentals and information regarding trade in material that does not meet specifications also inform assessments but a primary emphasis is placed on the physical markets.

To be included in the price formation process, deals must meet the strict delivery, timing and specification requirements in the methodology, and must be executed at arms length between a willing buyer and seller.

### Survey method and verification

Price assessments on MetalPrices.com rely on a wide variety of sources for information, including refiners, marketers, importers, traders and brokers.

Argus does not restrict itself to one subsection of the market, such as a single trading platform or a single informational channel, for the market information collected. The market surveys are intended to be balanced in approach and are conducted by experienced industry specialists.

### Acronyms and abbreviations

BS: British Standard  
 CDA: Copper Development Association  
 EN: European Norms  
 ISRI: Institute of Scrap Recycling Industries  
 LME: London Metal Exchange  
 SSINA: Specialty Steel Industry of North America  
 VAR: Verband der Aluminiumrecycling-Industrie

## US aluminum

Prices are republished from Argus Metal Prices. See the [Argus Metal Prices methodology](#).

### US aluminum

#### Assessment

Aluminum 6061 billet US premium
Aluminum 6063 billet US premium
Aluminum alloy secondary 319.1 del US
Aluminum alloy secondary A360.1 del US
Aluminum alloy secondary A380.1 del US
Aluminum alloy secondary A413.1 del US
Aluminum P1020 US midwest premium
Aluminum scrap 10/10 extrusions mill grade del US
Aluminum scrap 1100 & 3003 clips mill grade del US
Aluminum scrap 113 sows del US
Aluminum scrap 5052 clips mill grade del US
Aluminum scrap 6061 new bare mill grade del US
Aluminum scrap 6061 truck wheels mill grade del US
Aluminum scrap 6063 new bare mill grade del US
Aluminum scrap A356 wheels mill grade del US
Aluminum scrap aluminium-copper radiators del US
Aluminum scrap cans (UBC) mill grade del US
Aluminum scrap EC wire mill grade del US
Aluminum scrap high grade turnings del US
Aluminum scrap litho sheet mill grade del US
Aluminum scrap mixed 2000/7000 solids del US
Aluminum scrap MLC mill grade del US
Aluminum scrap MLC secondary del US
Aluminum scrap old cast del US
Aluminum scrap old sheet del US
Aluminum scrap painted siding mill grade del US
Aluminum scrap painted siding secondary del US

## Copper

Prices are republished from Argus Metals International and Argus Metal Prices. See the [Argus Metals International methodology](#) and the [Argus Metal Prices methodology](#).

### Copper

#### Assessment

Copper cathode grade A del US midwest premium	See the <a href="#">Argus Metals Prices methodology</a>
Copper scrap bare bright del US cash spread	See the <a href="#">Argus Metals Prices methodology</a>
Copper scrap bare bright del US next active month spread	See the <a href="#">Argus Metals Prices methodology</a>
Copper scrap #1 wire and tube del US cash spread	See the <a href="#">Argus Metals Prices methodology</a>
Copper scrap #1 wire and tube del US next active month spread	See the <a href="#">Argus Metals Prices methodology</a>
Copper cathode grade A premium del southern Europe	See the <a href="#">Argus Metals International methodology</a>
Copper cathode grade A premium in-warehouse Rotterdam	See the <a href="#">Argus Metals International methodology</a>
Copper scrap #2 copper del Europe cash spread	See the <a href="#">Argus Metals International methodology</a>
Copper scrap bare bright del Europe cash spread	See the <a href="#">Argus Metals International methodology</a>
Copper scrap #1 wire and tube del Europe cash spread	See the <a href="#">Argus Metals International methodology</a>
Copper scrap motors cif China	See the <a href="#">Argus Metals International methodology</a>
Copper scrap bare bright cif Asia cash spread	See the <a href="#">Argus Metals International methodology</a>
Copper scrap bare bright cif Asia next active month spread	See the <a href="#">Argus Metals International methodology</a>
Copper scrap #1 wire and tube cif Asia cash spread	See the <a href="#">Argus Metals International methodology</a>
Copper scrap #1 wire and tube cif Asia next active month spread	See the <a href="#">Argus Metals International methodology</a>
Copper scrap #2 copper cif Asia ports cash spread	See the <a href="#">Argus Metals International methodology</a>
Copper scrap #2 copper cif Asia ports next active month spread	See the <a href="#">Argus Metals International methodology</a>

## Non-US aluminium

Prices are republished from Argus Metals International. See the [Argus Metals International methodology](#).

### Non-US aluminium

#### Assessment

Aluminium scrap Zorba cif China
Aluminium scrap Taint/Tabor cif Asia port
Aluminium scrap Taint/Tabor cif China
Aluminium scrap Tense cif China
Aluminium scrap Tense del European smelter
Aluminium 6063 extrusion duty paid premium in-warehouse Rotterdam
Aluminium P1020 duty paid 3-month premium in-warehouse Rotterdam
Aluminium P1020 duty unpaid 3-month premium in-warehouse Rotterdam
Aluminium P1020 duty paid spot premium in-warehouse Rotterdam
Aluminium P1020 duty unpaid spot premium in-warehouse Rotterdam
Aluminium P1020 duty paid forward quarter premium cif Japan
Aluminium P1020 duty paid spot premium cif Japan
Aluminium alloy secondary DIN 226 fob European smelter
Aluminium alloy secondary DIN 230 fob European smelter
Aluminium alloy secondary DIN 231 fob European smelter
Aluminium alloy secondary DIN 239 fob European smelter
Aluminium alloy secondary LM24 fob England smelter
Aluminium alloy secondary LM25 fob England smelter
Aluminium alloy secondary LM6 fob England smelter

## Brass/bronze alloys

Prices are republished from Argus Metal Prices. See the [Argus Metal Prices methodology](#).

### Brass/bronze alloys

#### Assessment

Brass/bronze alloy C83600 del US
Brass/bronze alloy C84400 del US
Brass/bronze alloy C87300 del US
Brass/bronze alloy C87500 del US
Brass/bronze alloy C95800 del US
Brass/bronze alloy C89833 del US
Brass/bronze alloy C89836 del US

## Brass alloy scrap

Prices are republished from Argus Metals International and Argus Metal Prices. See the [Argus Metals International methodology](#) and the [Argus Metal Prices methodology](#).

### Brass alloy scrap

#### Assessment

Brass scrap C210 cash spread del US	See the <a href="#">Argus Metals Prices methodology</a>
Brass scrap C220 cash spread del US	See the <a href="#">Argus Metals Prices methodology</a>
Brass scrap C230 cash spread del US	See the <a href="#">Argus Metals Prices methodology</a>
Brass scrap C240 cash spread del US	See the <a href="#">Argus Metals Prices methodology</a>
Brass scrap C260 (70:30) cash spread del US	See the <a href="#">Argus Metals Prices methodology</a>
Brass scrap C270 cash spread del US	See the <a href="#">Argus Metals Prices methodology</a>
Brass scrap 360 rod borings US	See the <a href="#">Argus Metals Prices methodology</a>
Brass scrap radiators del US	See the <a href="#">Argus Metals Prices methodology</a>
Brass scrap red brass solids del US	See the <a href="#">Argus Metals Prices methodology</a>
Brass scrap yellow brass cif Asia ports	See the <a href="#">Argus Metals International methodology</a>
Brass scrap 70:30 (C260) spread del Europe	See the <a href="#">Argus Metals International methodology</a>

## Zinc

Prices are republished from Argus Metals International and Argus Metal Prices. See the [Argus Metals International methodology](#) and the [Argus Metal Prices methodology](#).

### Zinc

#### Assessment

Zinc special high grade del US premium	See the <a href="#">Argus Metals Prices methodology</a>
Zinc special high grade in-warehouse Rotterdam premium	See the <a href="#">Argus Metals International methodology</a>
Zinc scrap old zinc diecast del US	See the <a href="#">Argus Metals Prices methodology</a>

## Nickel

Prices are republished from Argus Metals International and Argus Metal Prices. See the [Argus Metals International methodology](#) and the [Argus Metal Prices methodology](#).

### Nickel

#### Assessment

Nickel cathode 4x4inch premium (small lots) delivered US	See the <a href="#">Argus Metals Prices methodology</a>
Nickel cathode 4x4inch premium (truckloads) delivered US	See the <a href="#">Argus Metals Prices methodology</a>
Nickel cathode 1x1inch premium (small lots) delivered US	See the <a href="#">Argus Metals Prices methodology</a>
Nickel cathode 1x1inch premium (truckloads) delivered US	See the <a href="#">Argus Metals Prices methodology</a>
Nickel cathode full plate premium in-warehouse Rotterdam	See the <a href="#">Argus Metals International methodology</a>
Nickel cathode 4x4inch premium in-warehouse Rotterdam	See the <a href="#">Argus Metals International methodology</a>
Nickel-Cobalt refinery scrap nickel contained del US processor	See the <a href="#">Argus Metals Prices methodology</a>
Nickel-Cobalt refinery scrap cobalt contained del US processor	See the <a href="#">Argus Metals Prices methodology</a>

## Stainless steel

Prices are republished from Argus Metals International and Argus Metal Prices. See the [Argus Metals International methodology](#) and the [Argus Metal Prices methodology](#).

### Stainless steel

#### Assessment

Stainless steel 301 flat rolled coil surcharge fob US producer	See the <a href="#">Argus Metals Prices methodology</a>
Stainless steel 304 flat rolled coil surcharge fob US producer	See the <a href="#">Argus Metals Prices methodology</a>
Stainless steel 316 flat rolled coil surcharge fob US producer	See the <a href="#">Argus Metals Prices methodology</a>
Stainless steel 301 flat rolled coil fob US producer	See the <a href="#">Argus Metals Prices methodology</a>
Stainless steel 304 flat rolled coil fob US producer	See the <a href="#">Argus Metals Prices methodology</a>
Stainless steel 316 flat rolled coil fob US producer	See the <a href="#">Argus Metals Prices methodology</a>
Stainless steel scrap 304 (18-8) solids del US processor	See the <a href="#">Argus Metals Prices methodology</a>
Stainless steel scrap 304 (18-8) turnings del US processor	See the <a href="#">Argus Metals Prices methodology</a>
Stainless steel scrap 316 solids del US processor	See the <a href="#">Argus Metals Prices methodology</a>
Stainless steel scrap 316 turnings del US processor	See the <a href="#">Argus Metals Prices methodology</a>
Stainless steel 409/410 scrap solids del US processor	See the <a href="#">Argus Metals Prices methodology</a>
Stainless steel 430 scrap solids del US processor	See the <a href="#">Argus Metals Prices methodology</a>
Stainless steel scrap molybdenum contained in 316 scrap solids del US consumer	See the <a href="#">Argus Metals Prices methodology</a>
Stainless steel scrap chrome contained in 304/316 scrap solids del US consumer	See the <a href="#">Argus Metals Prices methodology</a>
Stainless steel scrap iron contained in 304/316 scrap solids del US consumer	See the <a href="#">Argus Metals Prices methodology</a>
Stainless steel scrap nickel contained in 304/316 scrap solids spread del US consumer	See the <a href="#">Argus Metals Prices methodology</a>
Stainless steel 304 (18-8) scrap solids cif Rotterdam	See the <a href="#">Argus Metals International methodology</a>
Stainless steel 304 (18-8) scrap solids cif Japan	See the <a href="#">Argus Metals International methodology</a>
Stainless steel 304 (18-8) scrap solids cif South Korea	See the <a href="#">Argus Metals International methodology</a>
Stainless steel 304 (18-8) scrap solids cif Taiwan	See the <a href="#">Argus Metals International methodology</a>



### Non-US minor metals

Prices are republished from Argus Metals International. See the [Argus Metals International methodology](#).

#### Non-US minor metals

##### Assessment

Antimony ingot min 99.65% ex-works China
Antimony ingot min 99.65% fob China
Arsenic min 99% du Rotterdam
Bismuth min 99.99% ex-works China
Cadmium min 99.99% ex-works China
Cadmium min 99.99% cif India
Chromium (aluminothermic) min 99% Cr ex-works China
Cobalt (Electrolytic metal) min 99.8% ex-works China
Gallium min 99.99% ex-works China
Germanium metal (zone refined ingot) min 99.999% ex-works China
Indium min 99.99% ex-works China
Magnesium min 99.9% ex-works China
Magnesium min 99.9% fob China
Manganese flake 99.7% Mn ex-works China
Manganese flake min 99.7% fob China
Rhenium APR min 69.4% Re ex-works China
Rhenium pellets min 99.9% Re dp Rotterdam
Selenium powder min 99.9% ex-works China
Selenium dioxide min 99% ex-works China
Silicon 5-5-3 min 98.5% Si dat Chinese ports
Silicon 5-5-3 min 98.5% Si fob China
Silicon 4-4-1 min 99% Si dat Chinese ports
Silicon 4-4-1 min 99% Si fob China
Tellurium 99.99% ex-works China
Titanium sponge 99.6% Ti ex-works China
Tungsten carbide min 99.7% ex-works China
Vanadium pentoxide 98% V2O5 ex-works China
Zirconium sponge 99.4% Zr+Hf ex-works China
Germanium dioxide min 99.99% du Rotterdam
Germanium metal min 99.99% cif Main Airport
Tungsten APT du Rotterdam (per mtu WO3)

### Ferro-alloys: North America

Prices are republished from Argus Metal Prices. See the [Argus Metal Prices methodology](#).

#### Ferro-alloys: North America

Ferro-boron 17% B fob warehouse US
Ferro-chrome HC min 60-65% Cr 6-8% C fob US warehouse (per lb Cr)
Ferro-chrome LC min 60-65% Cr 0.05% C max 1.5% Si fob US warehouse (per lb Cr)
Ferro-chrome LC min 60-65% Cr 0.10% C max 1.5% Si fob US warehouse (per lb Cr)
Ferro-chrome LC 60% Cr 0.15% C fob US warehouse
Chrome, charge fob US warehouse
Ferro-manganese HC min 80% Mn 6-8% C fob North America warehouse
Ferro-manganese MC 80% Mn 1-2% C fob North America warehouse
Silico-manganese min 65% Mn 16% Si fob North America warehouse
Ferro-molybdenum min 65% Mo max 1.5% Si fob North America warehouse (per lb Mo)
Ferro-silicon min 75% Si max 0.1% C fob US warehouse (per lb Si)
Ferro-titanium 70% Ti fob North America warehouse
Ferro-tungsten 75% W fob North America warehouse
Ferro-vanadium 78-82% V max 1.5% Si fob North America warehouse (per lb V)
Ferro-niobium 65% Nb fob US warehouse

### US minor metals

Prices are republished from Argus Metal Prices. See the [Argus Metal Prices methodology](#).

#### US minor metals

##### Assessment

Antimony min 99.65% cif US
Arsenic min 99% fob US warehouse
Bismuth ingot min 99.99% fob US warehouse
Cadmium min 99.95% fob US warehouse
Cadmium min 99.99% fob US warehouse
Chrome aluminothermic fob US warehouse
Cobalt min 99.3% fob US warehouse
Cobalt min 99.8% fob US warehouse
Indium ingot min 99.99% fob US warehouse
Magnesium min 99.9% fob US warehouse
Manganese electrolytic metal min 99.7% fob US warehouse
Molybdenum oxide min 57% fob US warehouse
Molybdenum scrap 99.7% del US airmelt consumer
Molybdenum scrap 99.9% del US vacuum consumer
Niobium (columbium) scrap vacuum del US consumer
Niobium (columbium) scrap vacuum del US processor
Rhenium 99.9% fob US warehouse
Rhenium APR catalyst 69.4% fob US warehouse
Ruthenium 99.9% fob US warehouse
Selenium min 99.5% fob US warehouse
Silicon 5-5-3 min 98.5% Si fob US warehouse
Silicon 5-5-3 min 98.5% Si fob US warehouse 90 days
Tantalum scrap 99.9% vacuum melted del US consumer
Tantalum scrap 99.9% vacuum melted del US processor
Tellurium min 99.95% fob US warehouse
Titanium 6Al 4V ingot fob US producer
Titanium scrap 6Al 4V bulk weldable del US dealer/processor
Titanium scrap 6Al 4V clips del US dealer/processor
Titanium scrap 6Al 4V turnings aero quality del US dealer/processor
Titanium scrap grade CP1 solids del US dealer/processor
Titanium scrap grade CP2 solids del US dealer/processor
Titanium scrap grade CP3/4 solids del US dealer/processor
Titanium scrap min 85% Ti non-tin-bearing mixed turnings del US dealer/processor
Titanium scrap min 85% min Ti tin-bearing mixed turnings del US dealer/processor
Tungsten 99.9% scrap solids del US processor
Tungsten 99.9% scrap solids consumer price fob US processor
Tungsten carbide scrap inserts fob US processor
Tungsten carbide scrap rounds fob US processor
Tungsten min 99.9% Chinese bar del US consumer

### Ferro-alloys: non-North America

Prices are republished from Argus Metals International. See the [Argus Metals International methodology](#).

#### Ferro-Alloys: non-North America

Ferro-chrome HC 50% Cr ex-works China
Charge chrome 52% Cr ddp Rotterdam (per lb Cr)
Ferro-niobium min 66% Nb Brazilian Imports fca China port
Silico-manganese 65% Mn 17% Si ex-works China
Silico-manganese 65% Mn 17% Si fob China
Silico-manganese 60% Mn 14% Si ex-works India
Ferro-molybdenum 60% Mo ex-works China
Ferro-molybdenum 60% Mo ex-works India
Ferro-silicon 75% Si fob China

## Ferrous feedstocks: Weekly assessments

Prices are republished from Argus Metals Prices and Argus Steel Feedstocks. See the [Argus Metal Prices methodology](#) and the [Argus Steel Feedstocks methodology](#).

### Ferrous feedstocks: weekly assessments

#### Assessment

Ferrous scrap #1 busheling del US eastern consumer	See the <a href="#">Argus Metals Prices methodology</a>
Ferrous scrap #1 busheling del US midwest consumer	See the <a href="#">Argus Metals Prices methodology</a>
Ferrous scrap #1 busheling del US southeast consumer	See the <a href="#">Argus Metals Prices methodology</a>
Ferrous scrap #1 HMS del US eastern consumer	See the <a href="#">Argus Metals Prices methodology</a>
Ferrous scrap #1 HMS del US midwest consumer	See the <a href="#">Argus Metals Prices methodology</a>
Ferrous scrap #1 HMS del US southeast consumer	See the <a href="#">Argus Metals Prices methodology</a>
Ferrous scrap #2 HMS del US eastern consumer	See the <a href="#">Argus Metals Prices methodology</a>
Ferrous scrap #2 HMS del US midwest consumer	See the <a href="#">Argus Metals Prices methodology</a>
Ferrous scrap #2 HMS del US southeast consumer	See the <a href="#">Argus Metals Prices methodology</a>
Ferrous scrap HMS 1/2 (80:20) bulk export fob Los Angeles	See the <a href="#">Argus Metals Prices methodology</a>
Ferrous scrap HMS 1/2 (80:20) bulk export fob New York	See the <a href="#">Argus Metals Prices methodology</a>
Ferrous scrap HMS 1/2 (80:20) containerised fas Los Angeles	See the <a href="#">Argus Metals Prices methodology</a>
Ferrous scrap HMS 1/2 (80:20) containerised fas New York	See the <a href="#">Argus Metals Prices methodology</a>
Ferrous scrap P&S 5ft bulk export fob Los Angeles	See the <a href="#">Argus Metals Prices methodology</a>
Ferrous scrap P&S 5ft bulk export fob New York	See the <a href="#">Argus Metals Prices methodology</a>
Ferrous scrap P&S 5ft containerised fas Los Angeles	See the <a href="#">Argus Metals Prices methodology</a>
Ferrous scrap P&S 5ft containerised fas New York	See the <a href="#">Argus Metals Prices methodology</a>
Ferrous scrap P&S 5ft del US eastern consumer	See the <a href="#">Argus Metals Prices methodology</a>
Ferrous scrap P&S 5ft del US midwest consumer	See the <a href="#">Argus Metals Prices methodology</a>
Ferrous scrap P&S 5ft del US southeast consumer	See the <a href="#">Argus Metals Prices methodology</a>
Ferrous scrap shredded bulk export fob Los Angeles	See the <a href="#">Argus Metals Prices methodology</a>
Ferrous scrap shredded bulk export fob New York	See the <a href="#">Argus Metals Prices methodology</a>
Ferrous scrap shredded containerised fas Los Angeles	See the <a href="#">Argus Metals Prices methodology</a>
Ferrous scrap shredded containerised fas New York	See the <a href="#">Argus Metals Prices methodology</a>
Ferrous scrap shredded del US eastern consumer	See the <a href="#">Argus Metals Prices methodology</a>
Ferrous scrap shredded del US midwest consumer	See the <a href="#">Argus Metals Prices methodology</a>
Ferrous scrap shredded del US southeast consumer	See the <a href="#">Argus Metals Prices methodology</a>
HBI cfr New Orleans	See the <a href="#">Argus Metals Prices methodology</a>
Pig iron basic Brazilian cfr New Orleans	See the <a href="#">Argus Metals Prices methodology</a>
Pig iron basic del Chicago	See the <a href="#">Argus Metals Prices methodology</a>
Pig iron basic del Pittsburgh	See the <a href="#">Argus Metals Prices methodology</a>
Pig iron basic Ukrainian/Russian cfr New Orleans	See the <a href="#">Argus Metals Prices methodology</a>
Pig iron nodular cfr New Orleans	See the <a href="#">Argus Metals Prices methodology</a>
Pig iron nodular del Chicago	See the <a href="#">Argus Metals Prices methodology</a>
Pig iron nodular del Pittsburgh	See the <a href="#">Argus Metals Prices methodology</a>
Ferrous scrap HMS 1-2 (80:20) containerized cfr Taiwan	See the <a href="#">Argus Metals Prices methodology</a>
Pig iron, fob Ukraine ports Black Sea	See the <a href="#">Argus Steel Feedstocks methodology</a>

## Ferrous feedstocks: Argus Steel Feedstocks

Prices are republished from Argus Steel Feedstocks. See the [Argus Steel Feedstocks methodology](#).

### Ferrous feedstocks: Argus Steel Feedstocks

#### Assessment

Ferrous scrap HMS 1-2 75/25 fob Rotterdam
Ferrous scrap HMS 1-2 80/20 cfr Turkey
Ferrous scrap A3 cfr Marmara
Metallurgical Coke 62% CSR fob north China
Metallurgical Coke 65% CSR fob north China
Iron ore fines 65% Fe cfr Qingdao
Iron ore fines 62% Fe cfr Qingdao
Iron ore fines 58% Fe cfr Qingdao

## Steel: Rebar fob Turkey

Prices are republished from Argus Steel Feedstocks. See the [Argus Steel Feedstocks methodology](#).

## Steel: Weekly Asia-Pacific assessments

Prices are republished from Argus Steel Feedstocks. See the [Argus Steel Feedstocks methodology](#).

### Steel: Weekly Asia-Pacific assessments

#### Assessment

CRC, Shanghai ex works
HRC, India ex works
HRC fob China
HRC, Shanghai ex works
Seamless steel pipe, Shanghai ex warehouse
Stainless steel 430 CRC, 2mm Foshan ex warehouse
Rebar fob China
Stainless steel 304 CRC, 2mm Foshan ex warehouse
Stainless steel 304 HRC, 3mm Foshan ex warehouse
Pig iron, Tangshan ex works

## Ferrous scrap: Monthly assessments

Prices are republished from Argus Metal Prices. See the [Argus Metal Prices methodology](#).

### Ferrous scrap: Monthly assessments

#### Assessment

Ferrous scrap #1 bundles Chicago del consumer  
 Ferrous scrap #1 bundles Cincinnati del consumer  
 Ferrous scrap #1 bundles Cleveland del consumer  
 Ferrous scrap #1 bundles Detroit del consumer  
 Ferrous scrap #1 bundles Houston fob dealer  
 Ferrous scrap #1 bundles Philadelphia del consumer  
 Ferrous scrap #1 bundles St Louis fob dealer  
 Ferrous scrap #1 busheling Birmingham del consumer  
 Ferrous scrap #1 busheling Chicago del consumer  
 Ferrous scrap #1 busheling Cincinnati del consumer  
 Ferrous scrap #1 busheling Cleveland del consumer  
 Ferrous scrap #1 busheling Detroit del consumer  
 Ferrous scrap #1 busheling Houston fob dealer  
 Ferrous scrap #1 busheling Philadelphia del consumer  
 Ferrous scrap #1 busheling Pittsburgh del consumer  
 Ferrous scrap #1 busheling St Louis fob dealer  
 Ferrous scrap #1 HMS Birmingham del consumer  
 Ferrous scrap #1 HMS Chicago del consumer  
 Ferrous scrap #1 HMS Cincinnati del consumer  
 Ferrous scrap #1 HMS Cleveland del consumer  
 Ferrous scrap #1 HMS Detroit del consumer  
 Ferrous scrap #1 HMS Houston fob dealer  
 Ferrous scrap #1 HMS Philadelphia del consumer  
 Ferrous scrap #1 HMS Pittsburgh del consumer  
 Ferrous scrap #1 HMS St Louis fob dealer  
 Ferrous scrap #1 machine cast Chicago del consumer  
 Ferrous scrap #2 HMS Birmingham del consumer  
 Ferrous scrap #2 HMS Philadelphia del consumer  
 Ferrous scrap #2 HMS Pittsburgh del consumer  
 Ferrous scrap black/foundry busheling Chicago del consumer  
 Ferrous scrap black/foundry busheling Philadelphia del consumer  
 Ferrous scrap clean auto cast Chicago del consumer  
 Ferrous scrap clean auto cast Cleveland del consumer  
 Ferrous scrap clean fresh cast iron borings Chicago del consumer  
 Ferrous scrap ductile-quality shredded clips Chicago del consumer  
 Ferrous scrap factory bundles Birmingham del consumer  
 Ferrous scrap factory bundles Cleveland del consumer  
 Ferrous scrap factory bundles Detroit del consumer

### Ferrous scrap: Monthly assessments

#### Assessment

Ferrous scrap factory bundles Philadelphia del consumer  
 Ferrous scrap factory bundles Pittsburgh del consumer  
 Ferrous scrap low-alloy punchings Chicago del consumer  
 Ferrous scrap machine shop turnings Birmingham del consumer  
 Ferrous scrap machine shop turnings Chicago del consumer  
 Ferrous scrap machine shop turnings Cincinnati del consumer  
 Ferrous scrap machine shop turnings Cleveland del consumer  
 Ferrous scrap machine shop turnings Detroit del consumer  
 Ferrous scrap machine shop turnings Houston fob dealer  
 Ferrous scrap machine shop turnings Philadelphia del consumer  
 Ferrous scrap machine shop turnings Pittsburgh del consumer  
 Ferrous scrap machine shop turnings St Louis fob dealer  
 Ferrous scrap P&S 2ft Chicago del consumer  
 Ferrous scrap P&S 2ft Philadelphia del consumer  
 Ferrous scrap P&S 5ft Birmingham del consumer  
 Ferrous scrap P&S 5ft Chicago del consumer  
 Ferrous scrap P&S 5ft Cincinnati del consumer  
 Ferrous scrap P&S 5ft Cleveland del consumer  
 Ferrous scrap P&S 5ft Detroit del consumer  
 Ferrous scrap P&S 5ft Houston fob dealer  
 Ferrous scrap P&S 5ft Philadelphia del consumer  
 Ferrous scrap P&S 5ft Pittsburgh del consumer  
 Ferrous scrap P&S 5ft St Louis fob dealer  
 Ferrous scrap shredded Birmingham del consumer  
 Ferrous scrap shredded Chicago del consumer  
 Ferrous scrap shredded Cincinnati del consumer  
 Ferrous scrap shredded Cleveland del consumer  
 Ferrous scrap shredded Detroit del consumer  
 Ferrous scrap shredded Houston fob dealer  
 Ferrous scrap shredded Philadelphia del consumer  
 Ferrous scrap shredded Pittsburgh del consumer  
 Ferrous scrap shredded St Louis fob dealer  
 Ferrous scrap tin can bundles Cleveland del consumer  
 Ferrous scrap tin can bundles Detroit del consumer  
 Ferrous scrap tin can bundles Pittsburgh del consumer

## Ferrous scrap freight

Prices are republished from Argus Metal Prices. See the [Argus Metal Prices methodology](#).

### Ferrous scrap freight

#### Assessment

Freight ferrous scrap bulk export New York-Turkey  
 Freight ferrous scrap bulk export Los Angeles-South Korea  
 Freight ferrous scrap containerised export New York-Mumbai  
 Freight ferrous scrap containerised export Los Angeles-Taiwan  
 Freight ferrous scrap containerised export San Francisco-Taiwan  
 Freight ferrous scrap containerised export Seattle-Taiwan

## Rare earth metals

Prices are republished from Argus Metals International. See the [Argus Metals International methodology](#).

### Rare earth metals

Cerium oxide 99.5-99.9% ex-works China
Cerium metal min 99% ex-works China
Dysprosium oxide min 99.5% ex-works China
Dysprosium metal min 99% ex-works China
Europium oxide min 99.99% ex-works China
Gadolinium oxide 99.5-99.9% ex-works China
Lanthanum oxide min 99.999% ex-works China
Lanthanum metal min 99% ex-works China
Mischmetal 35% La 65% Ce ex-works China
Mischmetal low Zn and Mg ex-works China
Neodymium oxide 99.5-99.9% ex-works China
Neodymium metal min 99% ex-works China
Praseodymium oxide 99.5-99.9% ex-works China
Praseodymium metal min 99% ex-works China
Praseodymium-Neodymium oxide min 99% ex-works China
Praseodymium-Neodymium metal min 99% ex-works China
Samarium oxide min 99.5% ex-works China
Terbium oxide min 99.99% ex-works China
Terbium metal min 99.9% ex-works China
Yttrium metal min 99.9% ex-works China
Yttrium oxide min 99.999% ex-works China

## Calculated prices

Prices are calculated by weighting the price of component and feedstock metals according to proprietary formulae. These formulae are reviewed at least annually. Prices are calculated only on those days when one or more component price has changed. Prices are expressed as a low-high range and in US dollars per pound (\$/lb).

### Calculated prices

Cupro-nickel scrap C70600 (90:10) del US processor
Cupro-nickel scrap C71500 (70:30) del US processor
Cupro-nickel scrap Monel 400 (R) del US processor
Super alloys scrap Hastelloy C air melted del US processor
Super alloys scrap Hastelloy X air melted del US processor
Super alloys scrap Inconel 600 vacuum melted del US processor
Super alloys scrap Inconel 601 vacuum melted del US processor
Super alloys scrap Inconel 617 vacuum melted del US processor
Super alloys scrap Inconel 625 vacuum melted del US processor
Super alloys scrap Inconel 718 vacuum melted del US processor
Super alloys scrap Waspaloy vacuum melted del US processor
Ferrous scrap tool steel H13 fob US processor
Ferrous scrap tool steel M1 fob US processor
Ferrous scrap tool steel M2 fob US processor
Ferrous scrap tool steel M42 fob US processor
Ferrous scrap tool steel T1 fob US processor
Ferrous scrap tool steel T15 fob US processor
Aluminum P1020 US midwest transaction
Aluminum 6061 US billet price del US consumer
Aluminum 6063 US billet price del US consumer
Aluminum scrap smelter purchasing prices index
Brass scrap C210 price del US
Brass scrap C220 price del US
Brass scrap C230 price del US
Brass scrap C240 price del US
Brass scrap C260 price del US
Brass scrap C270 price del US
Brass scrap 70:30 (C260) price del Europe
Copper cathode grade A price del southern Europe
Copper cathode grade A price del US midwest
Copper cathode grade A price in-warehouse Rotterdam
Copper scrap bare bright del US spot price
Copper scrap #1 wire and tube del US spot price
Copper scrap Berry/Candy del Europe price
Copper scrap Birch/Cliff del Europe price
Copper bare bright del Europe price
Copper scrap bare bright cif Asia spot price
Copper scrap #1 wire and tube cif Asia spot price
Copper scrap #2 cif Asia spot price
Tungsten contained in Ammonium Para-Tungstate powder du Rotterdam

**Calculated prices: Alloy calculator**

The intrinsic prices listed in the table below, and in the [Metal-Prices.com Alloy Calculator](#), are calculated by weighting component

metal prices according to the fixed proportions listed on [MetalPrices.com](#).

**Table 20: Alloy calculator**

Cobalt	Super-alloys — vacuum melted	Common alloys of nickel, cobalt, molybdenum, tungsten	Stainless steels
MAR-M 509	Astroloy	AL6X	13-8 MO
Permendur 2V	B 1900	Alnico 1	15-5 PH
Rexalloy	Hastelloy B	Alnico 2	17-4 PH
Stellite 6	Hastelloy C	Alnico 4	17-7 PH
Stellite - 21	Hastelloy C 276	Alnico 5	19-9 DX
Stellite - 25 (L605)	Hastelloy X	Carpenter 20	201
Stellite - 31 (X-40)	IN 100	Alloy 42	202
HS - 188	Incoloy 901	Carpenter 49	204
Vicalloy I	Inconel 600	Incoloy 800	205
Vicalloy II	Inconel 617	Inconel 601	301
WI 52	Inconel 713C	Invar	302
<b>Tool steels</b>	Inconel 713LC	Kovar	303
D 2	Inconel 718	NA 22H	303 SE
H11	Inconel 722	Ni-Span C	304
H13	Inconel X-750	Nichrome (60-15)	304 L
M 1	MAR-M 200	Niresist 1	305
M10	N 155/Multimet	Niresist 2	308
M 2	Nimonic - 100	Niresist 3	309
M 3 (Class 1)	Nimonic - 105	Niresist 4	309 S
M 3 (Class 2)	Nimonic - 115	Niresist 5	310
M30	Nimonic 75	RA 330	310 S
M33	Nimonic 80A	RA 333	311
M34	Nimonic 90	Supertherm	312
M35	Rene 41	Alnico 3	316
M36	Rene 77	A 286	316 L
M 4	Rene 80	Alloy 52	317
M41	Udimet 500	Inconel 617	321
M42	Udimet 520	<b>Super-alloys — air melted</b>	329
M43	Udimet 700	Inconel 625	330
M44	Udimet 710	Hastelloy C	347
M 7	Waspaloy	Hastelloy C 276	348
M46	Hastelloy S	Inconel 600	403
M47	Inconel 625	Hastelloy X	405
M48	Nimonic C263	Incoloy 825	409
M62	MAR M 247	Incoloy 800	410
T 1	Rene 125	<b>Titanium</b>	414
T15	Inconel 601	Titanium 6-4	416
<b>Brass/bronze</b>	<b>Heat-resistant casting alloys</b>	Titanium 6-6-2	420
360, Free-Cutting Brass	HA (10 Cr Bal Fe)	Titanium 5-2.5	430
230, 85/15 Red Brass	HC (26 Cr, 4 Ni)	Titanium 6-2-4-2	431
210, 95/5 Gilding	HD (26 Cr 6 Ni)	<b>Aluminum alloys</b>	434
220, 90/10 Commercial Bronze	HE (26 Cr 10 Ni)	319	439
240, 80/20 Low Brass	HF (20 Cr 10 Ni)	A356.2	440 A
260, 70/30 Cartridge Brass	HH (25 Cr, 12 Ni )	A380	440 B
270, 65/35 Yellow Brass	HI (26 Cr, 5 Ni)	A380.1 (LME Al Alloy)	440 C
380, Low Leaded Bronze	HK (25 Cr, 20 Ni )	319.1	442
863, Manganese Bronze	HK30 (25 Cr, 20 Ni)	B390.1	Nitronic 50
630, Aluminum Bronze	HK40 (25 Cr 20 Ni)	535.2	2203 Duplex
932, High-Leaded Tin Bronze	HL (30 Cr, 20 Ni)	A413.1	2205 Duplex
443, Admiralty Brass	HN ( 25 Ni, 20 Cr )	356.1	904 L
443, Admiralty Brass (Arsenical)	HP ( 35 Ni, 25 Cr )	226 (GBD-AISi9Cu3)	AL6XN
280, 60/40 Muntz Metal	HP-50WZ(c) (35 Ni, 25 Cr)	D12S (JIS H2118-1976)	Ni-Hard
C83600	HT ( 35 Ni, 15 Cr )	<b>Copper-nickel alloys</b>	Ni-Hard Type 4
C84400	HT30 (35 Ni, 15 Cr)	Monel 400 (R)	Nitronic 40
C85400	HU (38 Ni, 18 Cr )	Monel 404	Nitronic 30
C87300	HW (60 Ni, 12 Cr)	Monel 505 (S)	Nitronic 60
C87500	HX ( 65 Ni, 15 Cr )	Monel 500 (K)	444
C95800	<b>Scrap metal</b>	90-10 (C70600)	15-7 PH MO
C87850	Radiators - Automotive	80-20 (C71000)	2507 Duplex
C89833		70-30 (C71500)	X12Cr13 (1.4006)
C89510		75-25 (C71300)	X20Cr13 (1.4021)
C89520			X5CrNiMoCuNb14-5 (1.4594)
C89836			X22CrMoV12-1 (1.4923)
C69300			X10CrMoVNb9-1 (1.4903)
C87845			X19CrMoNbVN11-1 (1.4913)
C65100			
C65300			
C99700			