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## ***ARGUS SCRAP MARKETS***

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

## Methodology overview

### 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 ferrous scrap, steel feedstocks, stainless steel scrap, ferro-alloys, aluminium, copper, brass, minor metals, zinc, titanium scrap, nickel and super alloys scrap 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 falls 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 in order 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 in order 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 behaviour. 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 informa-

tion 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 instead 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 energy 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

Argus ferrous scrap, steel feedstocks, stainless steel scrap, ferro-alloys, aluminium, copper, brass, minor metals, zinc, titanium scrap, nickel and super alloys scrap prices are published in the Argus Scrap Markets report. Subsets of these prices appear in other Argus market reports and newsletters in various forms. The price data are available independent of the text-based report in electronic files that can feed into various databases. These price data are also supplied through various third-party data integrators. 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.

A publication schedule is available at [www.argusmedia.com](http://www.argusmedia.com)

### 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.

### 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 sub-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 energy commodity or energy 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 that 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 in order 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 qualitative 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 begun.

### 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.

### The report

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.

Market information received after the timestamp or cut-off time established for a given assessment may not be considered for inclusion in the assessment process for that day but may be considered for inclusion in the next assessment.

In markets where liquidity is split across several locations, information may be normalised to a single reference hub, for example by making adjustments for transportation costs, where appropriate and in line with market practice.

### Publication schedule

Prices follow regional holiday schedules. Should a holiday fall on the day a price would normally be assessed, the assessment will be made and published on the next Argus publication date. Note, minor metal and ferro-alloy prices republished from Argus Non-Ferrous Markets publish on the day before US public holidays, see the [Argus Non-Ferrous Markets methodology](#).

A publication schedule is available at [www.argusmedia.com](http://www.argusmedia.com)

### Survey method and verification

Price assessments 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. Market surveys are intended to be balanced in approach and are conducted by experienced industry specialists.

In most cases, information relating to material that falls outside of the stated specifications will not be used in the assessment process. Exceptions may be made if an acceptable and appropriate normalisation process can be applied.

In markets where liquidity is split across several locations, verified spot trades may be normalised to a single reference hub, for example by making adjustments for transportation costs, where appropriate and in line with market practice.

### Truckloads

Argus assesses full truckloads — market activity for partial or mixed truckloads is excluded from assessments.

## US monthly ferrous scrap supplement

Argus publishes a monthly supplement focused on the US ferrous scrap market once the monthly ferrous trade has concluded and prices have been assessed. All prices included are republished from Argus Scrap Markets.

Argus US Ferrous Scrap includes:

- Delivered US consumer
- US dealer selling prices
- Delivered Canada consumer
- Delivered US foundry, speciality consumer

And monthly snapshot prices for

- HRC ex-works US midwest
- Plate delivered US
- Basic pig iron cfr New Orleans
- HMS 1/2 80:20 cfr Turkey

## Aluminium

### Introduction

Argus Scrap Markets publishes price assessments and market commentary on aluminium markets.

### Basis of assessment

Assessments are for the named material delivered by truck, meeting the quantity and timing criteria listed in the table below. Assessments are of the range in which repeatable trade took place or in which it could have taken place in the absence of transactions since the last assessment.

### Timing of assessment

Prices are assessed and published daily, weekly or quarterly on the day specified in the table below.

### US markets

Market information received after 4pm Houston time on the day of assessment may not be included in the assessment process.

### European markets

Market information received after 5pm London time on the day of assessment may not be included in the assessment process.

### Asia-Pacific markets

Market information received after 4pm Houston time on the day of assessment may not be included in the assessment process.

### Rounding

Assessments are published to up to four decimal places, ending in 0 or 5.

### Currency and unit

Prices are assessed and published in the currencies and units specified below.

### Weekly premiums

Argus Scrap Markets includes weekly aluminium prices republished from Argus Non-Ferrous Markets.

- P1020 duty paid cif Japan forward quarter
- P1020 duty paid 3-month in-warehouse Rotterdam
- P1020 duty paid spot in-warehouse Rotterdam
- P1020 duty unpaid 3-month in-warehouse Rotterdam
- P1020 duty unpaid spot in-warehouse Rotterdam
- P1020 US midwest spot
- P1020 US midwest spot monthly average
- P1020 US midwest transaction
- 6061 billet US spot
- 6061 billet del US transaction
- 6063 billet del US spot
- 6063 billet del US transaction
- 6063 billet del Italy
- 6063 billet del Germany
- 6063 extrusion duty paid spot in-warehouse Rotterdam

See the [Argus Non-Ferrous Markets methodology](#).

### A356.2

The Argus assessment of A356.2 prices is calculated daily as the sum of the daily LME aluminium cash settlement, the weekly Argus US midwest P1020 spot premium and a monthly assessment of the A356.2 alloy surcharge based on discussion with market participants. The monthly surcharge is assessed on the 15th of each calendar month or the next publication day if the 15th is a weekend or holiday.



Aluminium specifications							
Assessment	Quality	Transacted/ transactable	Day of assessment	Min lot size	Timing	Currency/ unit	Delivery
<b>Aluminium mill, extruder scrap delivered US</b>							
10/10 extrusions	ISRI Toto	on day of assessment	Tuesday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
1100 & 3003	ISRI Tooth; Aluminum Association 1100 and 3003	on day of assessment	Tuesday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
5052 clips	ISRI Tooth; Aluminum Association 5052	on day of assessment	Tuesday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
6061 new, bare	Aluminum Association 6061, new bare extrusion scrap	on day of assessment	Tuesday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
6063 new, bare	ISRI Tata; Aluminum Association 6063; new bare extrusion	on day of assessment	Tuesday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
Cans (UBC)	ISRI Taldon; used aluminium beverage cans	on day of assessment	daily	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
EC wire	ISRI Talon; Electrical Conductor wire	on day of assessment	Tuesday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
Litho sheet	ISRI Tabloid	on day of assessment	Tuesday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
MLC	ISRI Taboo; mixed low copper aluminium alloy clips and/or solids for processing in mill	on day of assessment	Tuesday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
Old sheet	ISRI Taint/tabor, max. 2% iron content	on day of assessment	Tuesday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
Painted siding	ISRI Tale for processing in mill	on day of assessment	Tuesday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
<b>Aluminium secondary smelter scrap, delivered US</b>							
A356 wheels	ISRI Troma; Aluminum Association A356; alloy wheels	on day of assessment	Thursday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
Aluminium-copper radiators	ISRI Talk	since last assessment	Thursday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
Clean, old aluminium radiators	ISRI Tally	since last assessment	Thursday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
High grade turnings	ISRI Telic; zinc max. 1.5%	since last assessment	Thursday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
Irony 6063 extrusions	Post-consumer 6063 extrusions with irony attachments such as steel hinges	since last assessment	Thursday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
Mixed 2000/7000 solids	ISRI:Tough; Aluminum Association 2000 series, 7000 series	since last assessment	Thursday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee

Assessment	Quality	Transacted/ transactable	Day of assessment	Min lot size	Timing	Currency/ unit	Delivery
Mixed 2000/7000 turnings	ISRI:Tough; Aluminum Association 2000 series, 7000 series	since last assessment	Thursday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
MLC secondary	ISRI Taboo; mixed low copper aluminium alloy clips and/or solids for processing in secondary smelter	since last assessment	Thursday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
Old cast	ISRI Tense	since last assessment	Thursday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
Old sheet	ISRI Taint/tabor	since last assessment	Thursday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
Painted siding	ISRI Tale for processing in secondary smelter	since last assessment	Thursday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
Tweak	ISRI Tweak	since last assessment	Thursday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
Twitch	ISRI Twitch	since last assessment	Thursday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
Zorba min 95/2 del US facility	ISRI Zorba: min 95% metallic content with min 2% copper and brass	since last assessment	Friday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
<b>Aluminium secondary smelter scrap, global</b>							
Taint/Tabor cif Asia port	ISRI Taint/Tabor	on day of assessment	Friday	38,000lbs	30-60 days	\$/lb (outright)	cif major ports in China, Taiwan, South Korea and Japan
Tense cif Asia port	ISRI Tense	on day of assessment	Friday	38,000lbs	30-60 days	\$/lb (outright)	cif major ports in China, Taiwan, South Korea and Japan
Zorba min 99/3 cif China	ISRI Zorba: min 99% metallic content with min 3% copper and brass	on day of assessment	Friday	38,000lbs	30-60 days	\$/lb (outright)	cif Shanghai, Ningbo, Tianjin, Dalian, Guangzhou
Zorba min 95/2 cif India	ISRI Zorba: min 95% metallic content with min 2% copper and brass	on day of assessment	Friday	38,000lbs	30-60 days	\$/lb (outright)	cif Mumbai
Zorba min 99/3 fas USEC	ISRI Zorba: min 99% metallic content with min 3% copper and brass	on day of assessment	Friday	38,000lbs	30 days	\$/lb	delivered alongside ship, US east coast port
Zorba min 99/3 fas USWC	ISRI Zorba: min 99% metallic content with min 3% copper and brass	on day of assessment	Friday	38,000lbs	30 days	\$/lb	delivered alongside ship, US west coast port
Taint/Tabor del European smelter	ISRI Taint/Tabor	on day of assessment	Thursday	38,000lbs	30-60 days	€/t (outright)	delivered smelter Germany, Austria, Italy
Tense del European smelter	ISRI Tense	on day of assessment	Thursday	38,000lbs	30-60 days	€/t (outright)	delivered smelter Germany, Austria, Italy
Wheels del European smelter	ISRI Troma	on day of assessment	Thursday	10t	30 days	€/t (outright)	delivered smelter Germany, Austria, Italy
Wheels del UK consumer	ISRI Troma	on day of assessment	Friday	10t	30 days	£/t (outright)	UK



Assessment	Quality	Transacted/ transactable	Day of assessment	Min lot size	Timing	Currency/ unit	Delivery
Commercial turnings del UK consumer	ISRI Telic	on day of assessment	Friday	10t	30 days	£/t (outright)	UK
Cast del UK consumer	ISRI Tense	on day of assessment	Friday	10t	30 days	£/t (outright)	UK
Old rolled del UK consumer	ISRI Taint/Tabor	on day of assessment	Friday	10t	30 days	£/t (outright)	UK
<b>Aluminium secondary alloys</b>							
Aluminium-alloy die castings ADC12 cif Japan	Si 9.6-12%, Fe 1.3%max, Cu 1.5-3.5% Mg 0.3%max, Mn 0.5%max, Zn 1%max, Ni 0.5%max, Sn 0.2%max, Al: remainder. Ingot, packaged in container	since last assessment	Thursday	20t	four weeks	\$/lb (outright)	cif Japanese main ports, duty unpaid
319.1	Aluminum Association 319.1	since last assessment	Thursday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
356.1	Aluminum Association 356.1	since last assessment	Thursday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
A356.2	Aluminum Association A356.2	on day of assessment	daily (see above)	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
A360.1	Aluminum Association A360.1	since last assessment	Thursday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
A380.1	Aluminum Association A380.1	since last assessment	Thursday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
A413.1	Aluminum Association A413.1	since last assessment	Thursday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
B390	Aluminum Association B390	since last assessment	Thursday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
LM6 del consumer works, UK	BS LM6	on day of assessment	Friday	38,000lbs	30 days	£/t (outright)	UK
LM24 del consumer works, UK	BS LM24	on day of assessment	Friday	38,000lbs	30 days	£/t (outright)	UK
LM25 del consumer works, UK	BS LM25	on day of assessment	Friday	38,000lbs	30 days	£/t (outright)	UK
DIN 226 del consumer works, Europe	EN 1706 46200, VAR: 226	on day of assessment	Thursday	38,000lbs	30 days	€/t (outright)	Germany, Austria, Italy
DIN 230 del consumer works, Europe	EN 1706 44100, VAR: 230	on day of assessment	Thursday	38,000lbs	30 days	€/t (outright)	Germany, Austria, Italy
DIN 231 del consumer works, Europe	EN 1706 47000, VAR: 231	on day of assessment	Thursday	38,000lbs	30 days	€/t (outright)	Germany, Austria, Italy
DIN 239 del consumer works, Europe	EN 1706 43100, VAR: 239	on day of assessment	Thursday	38,000lbs	30 days	€/t (outright)	Germany, Austria, Italy

## Copper and brass

### Introduction

Argus Scrap Markets publishes price assessments and market commentary on the copper and brass markets.

### Basis of assessment

Assessments are for the named material meeting the lot size, timing and delivery criteria listed in the table below. Assessments are of the range in which repeatable trade took place or in which it could have taken place in the absence of transactions since the last assessment.

#### Notes

- Brass alloy copper next active month spread: the price of the copper component only, expressed as a differential to the Comex next active month settlement (the nearest base contract month following the current delivery month).
- Brass alloy copper cash spread: the price of the copper component only, expressed as a differential to the Comex current month (spot) settlement.
- Brass alloy zinc cash spread: the price of the zinc component only, expressed as a differential to the LME official current month (spot) settlement.
- Spreads for #1 wire and tube, #2, and Bare bright del Europe are assessed as a percentage of the LME copper cash settlement.
- Brass alloy scrap transaction prices: calculated using the relevant exchange prices for copper and zinc with Argus assessments for copper and zinc spreads in brass scrap applied to each metal's future price and combined in the proportion of the alloy: (% copper \* (Comex Copper spot settlement + the Argus C200-series copper cash spread assessment)) + (% zinc \* (LME Zinc cash price + the Argus C200-series zinc cash spread))

### Timing of assessment

Prices are assessed and published weekly on the day specified in the table below.

#### US markets

Market information received after 4pm Houston time on the day of assessment may not be included in the assessment process.

#### European markets

Market information received after 5pm London time on the day of assessment may not be included in the assessment process.

#### Asia-Pacific markets

Market information received after 4pm Houston time on the day of the assessment may not be included in the assessment process.

### Rounding

Assessments are published to up to four decimal places, ending in 0 or 5.

### Copper cathode premiums

Argus Scrap Markets includes weekly copper cathode premiums republished from Argus Non-Ferrous Markets.

- Grade A del US midwest
- Grade A del US midwest transaction
- Grade A del southern Europe
- Grade A cif Rotterdam
- Grade A del Germany

See the [Argus Non-Ferrous Markets methodology](#).

## Copper and brass specifications

Assessment	Quality	Transacted/ transactable	Day of assessment	Minimum quantity	Timing	Basis	Currency/ unit
<b>Brass/bronze alloys</b>							
C83600	CDA C83600	since last assessment	Thursday	truckload	30 days	del US	\$/lb
C84400	CDA C84400	since last assessment	Thursday	truckload	30 days	del US	\$/lb
C87300	CDA C87300	since last assessment	Thursday	truckload	30 days	del US	\$/lb
C87500	CDA C87500	since last assessment	Thursday	truckload	30 days	del US	\$/lb
C89833	CDA C89833	since last assessment	Thursday	truckload	30 days	del US	\$/lb
C89836	CDA C89836	since last assessment	Thursday	truckload	30 days	del US	\$/lb
C95800	CDA C95800	since last assessment	Thursday	truckload	30 days	del US	\$/lb
<b>Brass alloy scrap</b>							
C200-series del US cash spread	ISRI Label	since last assessment	Wednesday	truckload	30 days	del US	\$/lb
C200-series del US next active spread	ISRI Label	since last assessment	Wednesday	truckload	30 days	del US	\$/lb
C200-series del US zinc cash spread	ISRI Label	since last assessment	Wednesday	truckload	30 days	del US	\$/lb
C260 (70:30) del US transaction	calculated as (0.7* (Comex Copper spot settlement + the Argus C200-series copper cash spread assessment)) + (0.3 * (LME Zinc cash price + the Argus C200-series zinc cash spread))						\$/lb
C260 (70:30) cash spread del Europe	ISRI Label, 68.5- 71.5% copper	day of assessment	Tuesday	38,000lbs	30 days	Germany, Belgium, Italy	\$/t

Assessment	Quality	Transacted/ transactable	Day of assessment	Minimum quantity	Timing	Basis	Currency/ unit
C260 (70:30) del Europe trans- action	calculated as (0.7* (LME Copper spot settlement + the Argus C200-series copper cash spread assessment)) + (0.3 * (LME Zinc cash price + the Argus C200-series zinc cash spread))						\$/t
C210 cash transaction del US	calculated as (0.95* (Comex Copper spot settlement + the Argus C200-series copper cash spread assessment)) + (0.05 * (LME Zinc cash price + the Argus C200-series zinc cash spread))						\$/lb
C220 cash transaction del US	calculated as (0.9* (Comex Copper spot settlement + the Argus C200-series copper cash spread assessment)) + (0.1 * (LME Zinc cash price + the Argus C200-series zinc cash spread))						\$/lb
C230 cash transaction del US	calculated as (0.85* (Comex Copper spot settlement + the Argus C200-series copper cash spread assessment)) + (0.15 * (LME Zinc cash price + the Argus C200-series zinc cash spread))						\$/lb
C240 cash transaction del US	calculated as (0.8* (Comex Copper spot settlement + the Argus C200-series copper cash spread assessment)) + (0.2 * (LME Zinc cash price + the Argus C200-series zinc cash spread))						\$/lb
C270 cash transaction del US	calculated as (0.65* (Comex Copper spot settlement + the Argus C200-series copper cash spread assessment)) + (0.35 * (LME Zinc cash price + the Argus C200-series zinc cash spread))						\$/lb
<b>Copper, brass scrap</b>							
#1 wire and tube cif Asia cash spread	ISRI Berry/Candy	since last assessment	Thursday	42,000lbs	30-60 days	cif major ports in China, Taiwan, South Korea and Japan	\$/lb
#1 wire and tube cif Asia next active month spread	ISRI Berry/Candy	since last assessment	Thursday	42,000lbs	30-60 days	cif major ports in China, Taiwan, South Korea and Japan	\$/lb
#1 wire and tube cif Asia trans- action	calculated as the Comex copper spot settlement + the Argus #1 wire and tube cif Asia cash spread assessment						
#1 wire and tube del Europe	ISRI Berry/Candy	day of assessment	Tuesday	38,000lbs	30 days	Netherlands, Germany, Greece, Spain, Italy	% of LME
#1 wire and tube del US cash spread	ISRI Berry/Candy	since last assessment	Wednesday	truckload	30 days	del US	\$/lb
#1 wire and tube del US next active month spread	ISRI Berry/Candy	since last assessment	Wednesday	truckload	30 days	del US	\$/lb
#1 wire and tube del US trans- action	calculated as the Comex copper spot settlement + the Argus #1 wire and tube cash spread assessment						
#2 cif Asia ports cash spread	ISRI Birch/Cliff	since last assessment	Thursday	42,000lbs	30-60 days	cif major ports in China, Taiwan, South Korea and Japan	\$/lb
#2 cif Asia ports next active month spread	ISRI Birch/Cliff	since last assessment	Thursday	42,000lbs	30-60 days	cif major ports in China, Taiwan, South Korea and Japan	\$/lb
#2 cif Asia ports transaction	calculated as the Comex copper settlement + the Argus #2 copper cash spread assessment						
#2 del Europe	ISRI Birch/Cliff	day of assessment	Tuesday	38,000lbs	30 days	Netherlands, Germany, Greece, Spain, Italy	% of LME
#2 del Europe transaction	calculated as the LME copper cash settlement * the Argus #2 copper del Europe assessment						
Bare bright cif Asia cash spread	ISRI Barley	since last assessment	Thursday	42,000lbs	30-60 days	cif major ports in China, Taiwan, South Korea and Japan	\$/lb
Bare bright cif Asia next active month spread	ISRI Barley	since last assessment	Thursday	42,000lbs	30-60 days	cif major ports in China, Taiwan, South Korea and Japan	\$/lb
Bare bright cif Asia transaction	calculated as the Comex copper spot settlement + the Argus bare bright cif Asia cash spread assessment						
Bare bright del Europe	ISRI Barley	day of assessment	Tuesday	38,000lbs	30 days	Netherlands, Germany, Greece, Spain, Italy	% of LME
Bare bright del US cash spread	ISRI Barley	since last assessment	Wednesday	truckload	30 days	del US	\$/lb
Bare bright del US next active month spread	ISRI Barley	since last assessment	Wednesday	truckload	30 days	del US	\$/lb
Bare bright del US transaction	calculated as the Comex copper spot settlement + the Argus bare bright cash spread assessment						
Mixed motors cif Asia	ISRI Elmo	day of assessment	Thursday	42,000lbs	30-60 days	cif major ports in China, Taiwan, South Korea, Malaysia and India	\$/lb
Radiators del US	ISRI Ocean	since last assessment	Wednesday	truckload	30 days	del US	\$/lb
Red brass solids del US	ISRI Ebony	since last assessment	Wednesday	truckload	30 days	del US	\$/lb
360 rod borings del US	ISRI Niche, CDA: C36000 alloy scrap	since last assessment	Wednesday	truckload	30 days	del US	\$/lb
Yellow brass cif Asia ports	ISRI Honey	since last assessment	Thursday	42,000lbs	30-60 days	cif China, Taiwan, South Korea, Japan	\$/lb

## Copper chops (nodules)

### Introduction

Argus Scrap Markets publishes price assessments and market commentary on the US copper markets.

### Basis of assessment

Assessments are of delivered consumer prices for the named material meeting the lot size, timing and delivery criteria listed in the table below. Assessments are of the range in which repeatable trade took place or in which it could have taken place in the absence of transactions since the last assessment

#### Note

- Copper chops cash spreads are assessed as a differential to the Comex current month (spot) copper settlement
- Copper chops next active month spreads are assessed as a differential to the Comex next active month settlement (the nearest base contract month following the current delivery month)

### Timing of assessment

Assessments for copper wire nodules del US consumer (bare bright, #1 clove and #2 cobra) are assessed and published weekly, on Wednesday. Assessments for copper wire nodules fas US port (bare bright, #1 clove and #2 cobra) are assessed and published weekly, on Thursday.

Market information received after 4pm Houston time on the day of assessment may not be included in the assessment process.

### Rounding

Assessments are published to up to four decimal places, ending in 0 or 5.

### Copper chops (nodules) specifications

Assessment	Quality	Minimum quantity	Currency/unit	Assessment frequency	Transacted/transactable	Timing	Basis
Bare Bright Copper Chops (wire nodules) del US consumer cash spread	minimum Cu 99.95	truckload	\$/lb	weekly	since last assessment	30 days	del US
Bare Bright Copper Chops (wire nodules) del US consumer active month spread	minimum Cu 99.95	truckload	\$/lb	weekly	since last assessment	30 days	del US
Bare bright Copper Chops (wire nodules) del US consumer transaction	calculated in \$/lb as the Comex copper spot settlement + the Argus bare bright copper chops del US cash spread						
Bare Bright Copper Chops (wire nodules) fas US port cash spread	minimum Cu 99.95	38,000lbs	\$/lb	weekly	since last assessment	30 days	fas US
Bare Bright Copper Chops (wire nodules) fas US port active month spread	minimum Cu 99.95	38,000lbs	\$/lb	weekly	since last assessment	30 days	fas US
Bare Bright Copper Chops (wire nodules) fas US port transaction	calculated in \$/lb as the Comex copper spot settlement + the Argus bare bright copper chops fas US port cash spread						
#1 Copper Chops (wire nodules) del US consumer cash spread	ISRI: clove	truckload	\$/lb	weekly	since last assessment	30 days	del US
#1 Copper Chops (wire nodules) del US consumer active month spread	ISRI: clove	truckload	\$/lb	weekly	since last assessment	30 days	del US
#1 Copper Chops (wire nodules) del US consumer transaction	calculated in \$/lb as the Comex copper spot settlement + the Argus #1 copper chops del US cash spread						
#1 Copper Chops (wire nodules) fas US port cash spread	ISRI: clove	38,000lbs	\$/lb	weekly	since last assessment	30 days	fas US
#1 Copper Chops (wire nodules) fas US port active month spread	ISRI: clove	38,000lbs	\$/lb	weekly	since last assessment	30 days	fas US
#1 Copper Chops (wire nodules) fas US port transaction	calculated in \$/lb as the Comex copper spot settlement + the Argus #1 copper chops fas US port cash spread						
#2 Copper Chops (wire nodules) del US consumer cash spread	ISRI: cobra	truckload	\$/lb	weekly	since last assessment	30 days	del US
#2 Copper Chops (wire nodules) del US consumer active month spread	ISRI: cobra	truckload	\$/lb	weekly	since last assessment	30 days	del US
#2 Copper Chops (wire nodules) del US consumer transaction	calculated in \$/lb as the Comex copper spot settlement + the Argus #2 copper chops del US cash spread						
#2 Copper Chops (wire nodules) fas US port cash spread	ISRI: cobra	38,000lbs	\$/lb	weekly	since last assessment	30 days	fas US
#2 Copper Chops (wire nodules) fas US port active month spread	ISRI: cobra	38,000lbs	\$/lb	weekly	since last assessment	30 days	fas US
#2 Copper Chops (wire nodules) fas US port transaction	calculated in \$/lb as the Comex copper spot settlement + the Argus #2 copper chops fas US port cash spread						

## Nickel

Argus Scrap Markets includes weekly and monthly nickel price assessments republished from Argus Non-Ferrous Markets.

### Nickel premiums

- 1x1 inch (small lots) del US (monthly)
- 1x1 inch (truckloads) del US (monthly)
- 4x4 inch (small lots) del US
- 4x4 inch (truckloads) del US
- Briquettes del US
- Nickel 200 scrap
- 4x4 inch in-warehouse Rotterdam (Russian origin)
- 4x4 inch in-warehouse Rotterdam (non-Russian origin)
- Full plate in-warehouse Rotterdam (Russian origin)
- Full plate in-warehouse Rotterdam (non-Russian origin)
- Briquettes in-warehouse Rotterdam
- Nickel full plate cif Shanghai

### Nickel transaction prices

- 4x4 inch (truckloads) del US transaction
- 4x4 inch in-warehouse Rotterdam transaction (Russian origin)
- 4x4 inch in-warehouse Rotterdam transaction (non-Russian origin)
- Full plate in-warehouse Rotterdam transaction (Russian origin)
- Full plate in-warehouse Rotterdam transaction (non-Russian origin)
- Briquettes in-warehouse Rotterdam transaction

See the [Argus Non-Ferrous Markets methodology](#).

## Zinc and lead

### Introduction

Argus Scrap Markets publishes price assessments and market commentary on the zinc and lead markets.

### Basis of assessment

Assessments are of delivered consumer prices for the named material meeting the lot size, timing and delivery criteria listed in the table below. Assessments are of the range in which repeatable trade took place or in which it could have taken place in the absence of transactions since the last assessment.

### Timing of assessment

Special high grade zinc ingot, scrap and ingot prices are assessed and published weekly, on Monday. Lead ingot and scrap prices are assessed and published weekly, on Tuesday. Zinc dross prices are assessed quarterly on the first business day of the named quarter.

Market information received after 4pm Houston time on the day of assessment may not be included in the assessment process.

### Rounding

Assessments are published to up to four decimal places, ending in 0 or 5.

### Special high grade zinc, lead ingot

Argus Scrap Markets includes weekly Special high grade zinc and lead ingot price assessments republished from Argus Non-Ferrous Markets.

- Special high grade del US premium 99.995%
- Special high grade del US transaction
- Special high grade in-warehouse Rotterdam premium
- 
- Lead ingot primary 99.97% premium del US
- Lead ingot primary 99.97% del US transaction

See the [Argus Non-Ferrous Markets methodology](#).

### Zinc and lead specifications

Assessment	Quality	Minimum quantity	Currency/unit	Assessment frequency	Transacted/transactable	Timing	Basis
<b>Zinc</b>							
Scrap old zinc diecast del US	ISRI: saves	truckload	\$/lb	weekly	since last assessment	30 days	del US
Scrap new zinc diecast del US	ISRI: scabs	truckload	\$/lb	weekly	since last assessment	30 days	del US
Galvanizers top dross del US	ISRI: seal	truckload	\$/lb	quarterly	since last assessment	three months forward	del US
Galvanizers bottom dross del US	ISRI: seam	truckload	\$/lb	quarterly	since last assessment	three months forward	del US
<b>Die casting alloys</b>							
ZAMAK #3	ASTM: AG 40A	truckload	\$/lb	weekly	since last assessment	30 days	del US
ZAMAK #5	ASTM: AC 41A	truckload	\$/lb	weekly	since last assessment	30 days	del US
ZAMAK #7	ASTM: AG 40B	truckload	\$/lb	weekly	since last assessment	30 days	del US
ZAMAK #2	ASTM: AC 43A	truckload	\$/lb	weekly	since last assessment	30 days	del US
ZA #8	UNS: Z35635	truckload	\$/lb	weekly	since last assessment	30 days	del US
ZA #12	UNS: Z35630	truckload	\$/lb	weekly	since last assessment	30 days	del US
ZA #27	UNS: Z35840	truckload	\$/lb	weekly	since last assessment	30 days	del US
<b>Lead</b>							
Lead scrap, soft del US	ISRI: racks	truckload	\$/lb	weekly	since last assessment	30 days	del US
Lead scrap, mixed del US	ISRI: radio	truckload	\$/lb	weekly	since last assessment	30 days	del US
Undrained, whole old batteries	ISRI: rink	truckload	\$/lb	weekly	since last assessment	30 days	del US

## US scrapyards collection prices

### Introduction

Argus Scrap Markets publishes price assessments on the North American ferrous and non-ferrous markets at the collection level, assessing prices at which scrap yards and processors purchase material from the public and peddlers.

### Basis of assessment

Assessments are the purchasing prices for the named material in each of the seven regions specified below. Assessments are of the most repeatable price, taking into account buying prices collected from publicly-posted price lists and official buying prices collected directly from buy-side sources.

### Timing of assessments

Prices are assessed fortnightly, on Friday, and reflect the market for the previous two weeks ending on the publication day.

Market information received after 4pm Houston time on the day of assessment may not be included in the assessment process.

### Regions

Each specification is assessed in each the following regions, except aluminium scrap cans (UBC) which is assessed in every region but Quebec.

#### US regions

**Northeast:** New York, Massachusetts, Connecticut, Rhode Island, New Jersey, Maryland, Washington DC, Delaware, eastern Pennsylvania, Maine

**Ohio Valley:** Ohio, West Virginia, Kentucky, western Pennsylvania

**Midwest:** Indiana, Illinois, Michigan, Minnesota, Wisconsin, Iowa, Missouri

**Southeast:** Tennessee, Mississippi, Alabama, Louisiana, Georgia, North Carolina, South Carolina, Florida

#### Texas

#### Canadian regions

##### Ontario

##### Quebec

## US yard collection price specifications

Assessment	Quality	Currency /unit*	Assessment frequency	Transacted /trans-actable	Timing	Basis
<b>Aluminium</b>						
Wheels/rims	ISRI Troma/Aluminum Association A356, alloy wheels	\$/lb	Fortnightly	Since last assessment	Prompt	Del yard
Painted siding	ISRI Tale	\$/lb	Fortnightly	Since last assessment	Prompt	Del yard
Old cast	ISRI Tense	\$/lb	Fortnightly	Since last assessment	Prompt	Del yard
MLC	ISRI Taboo	\$/lb	Fortnightly	Since last assessment	Prompt	Del yard
Clean old radiators	ISRI Tally	\$/lb	Fortnightly	Since last assessment	Prompt	Del yard
Scrap cans (UBC)	ISRI Taldon	\$/lb	Fortnightly	Since last assessment	Prompt	Del yard
Old sheet	ISRI Taint/Tabor	\$/lb	Fortnightly	Since last assessment	Prompt	Del yard
10/10 extrusions	ISRI Toto	\$/lb	Fortnightly	Since last assessment	Prompt	Del yard
<b>Brass</b>						
Radiators	ISRI Ocean	\$/lb	Fortnightly	Since last assessment	Prompt	Del yard
Yellow brass	ISRI Honey	\$/lb	Fortnightly	Since last assessment	Prompt	Del yard
Red brass solids	ISRI Ebony	\$/lb	Fortnightly	Since last assessment	Prompt	Del yard
<b>Copper</b>						
Bare bright	ISRI Barley	\$/lb	Fortnightly	Since last assessment	Prompt	Del yard
#1 wire and tube	ISRI Berry/Candy	\$/lb	Fortnightly	Since last assessment	Prompt	Del yard
#2	ISRI Birch/Ciiff	\$/lb	Fortnightly	Since last assessment	Prompt	Del yard
#3 light copper	ISRI Dream	\$/lb	Fortnightly	Since last assessment	Prompt	Del yard
<b>Lead</b>						
Undrained, whole old batteries	ISRI Rink	\$/lb	Fortnightly	Since last assessment	Prompt	Del yard
Soft	ISRI Racks	\$/lb	Fortnightly	Since last assessment	Prompt	Del yard
Steel case (industrial) batteries	ISRI Roper	\$/lb	Fortnightly	Since last assessment	Prompt	Del yard
<b>Stainless steel</b>						
304 (18/8) solids	ISRI Sabot	\$/lb	Fortnightly	Since last assessment	Prompt	Del yard
316 solids	SSINA S31600 scrap clips/solids	\$/lb	Fortnightly	Since last assessment	Prompt	Del yard
<b>Ferrous</b>						
Prepared #1 HMS	HMS 1 (ISRI 200, 201, 202)	\$/gt	Fortnightly	Since last assessment	Prompt	Del yard
Light iron/shred	mixed sheet or miscellaneous steel intended to be shredded	\$/gt	Fortnightly	Since last assessment	Prompt	Del yard
Complete cars	whole passenger automobiles, including motor	\$/gt	Fortnightly	Since last assessment	Prompt	Del yard
Cast iron	mixed cast (ISRI 257)	\$/gt	Fortnightly	Since last assessment	Prompt	Del yard

\* All non-ferrous assessments in \$/lb except for material in Quebec and Ontario, which are in C\$/lb. All ferrous assessments are in \$/gt except for Quebec and Ontario, which are in C\$/nt.



## Global ferrous scrap — daily and weekly

### Introduction

Argus Scrap Markets publishes daily and weekly price assessments, market commentary and shipping costs on the international and domestic Russian spot markets for ferrous scrap.

### Basis of assessment

Assessments cover the most traded grades of ferrous scrap. Argus does not exclusively rely upon transactions to establish market prices.

Information on transactions, bids and offers that lie outside the specifications of timing, size and quality will be taken into account but information that lies within the specifications of the assessment will be given the most weight. Argus applies editorial judgment to the surveys and will eliminate information that is not judged to be representative of the market in its final assessment of the price.

These specifications standardise the assessment around key criteria relating to cargo size and location.

### Timing of assessment

Assessments are the average of the trading day's or week's activity. Transactions completed after the timestamp listed in the table below will not be considered for inclusion in the assessment.

### HMS 1/2 (80:20) containerised cfr Taiwan

The price is typically assessed as a volume-weighted average of reported trade meeting the specifications below.

- If the total of validated trade meets or exceeds 3,000t and three trades, the price is assessed as the volume-weighted average of trade
- In the absence of sufficient trade, Argus will consider for inclusion in the assessment firm bids, offers and other information in the market as well as making reference to, or "rolling over", the last known traded values, as expressed in the previous day's published price assessment, to limit undue volatility in the published assessment
- In the absence of new market information or if new market information does not indicate a significant shift from the previous day's prices, Argus may report the price as unchanged
- The assessment is rounded to the nearest 25¢/t

### Differentials to HMS1/2 (80:20) cfr Turkey

Argus also publishes scrap grade differentials to the HMS 1/2 (80:20) cfr Turkey price assessment.

#### Differentials are published for

- HMS 1/2 (75:25)
- HMS 1/2 (85:15)
- HMS 1/2 (90:10)
- Shredded
- P&S
- Bonus
- Bundles
- Bushelling
- #1 HMS
- New cutting

### Tokyo Steel posted prices

Prices are as posted by Tokyo Steel in yen/tonne and are converted to US dollars per tonne at the exchange rate on the day of publication. Posted prices are updated as of 5pm Singapore time on the day of publication.

### Ferrous scrap H2 fob Japan

The price is typically assessed as a volume-weighted average of reported trade meeting the specifications below.

If the total of validated trade meets or exceeds 2,500t, the price is assessed as a volume-weighted average of trade. In the absence of sufficient trade, Argus will consider for inclusion in the assessment trade, bids, offers and other information in the market.

Trade on a delivered South Korea, Taiwan or Vietnam basis will be considered for inclusion in the assessment after adjusting the price to a fob Japan basis using a freight cost assessed in discussion with market participants. Trade in H1 and H1/H2 grades will be normalised to the H2 specification for consideration for inclusion in the assessment.

The price is assessed in Yen/t. The final price is also converted to \$/t for publication using the latest exchange rate available at the time of publication. Trade done on a \$/t basis is converted to Yen/t for inclusion in the assessment using the latest available exchange rate for the day of trade. Published prices are rounded to the nearest dollar or the nearest 100 yen.

Prices are assessed and published daily.

### Ferrous scrap HS fob Japan

The price is typically assessed as a volume-weighted average of reported trade meeting the specifications below.

If the total of validated trade meets or exceeds 2,500t, the price is assessed as a volume-weighted average of trade. In the absence of sufficient trade, Argus will consider for inclusion in the assessment trade, bids, offers and other information in the market.

Trade on a delivered China, Vietnam, South Korea or Taiwan basis will be considered for inclusion in the assessment after adjusting the price to a fob Japan basis using a freight cost assessed in discussion with market participants. Trade in Shindachi grades will be normalised to the HS specification for consideration for inclusion in the assessment.

The price is assessed in Yen/t. The final price is also converted to \$/t for publication using the latest exchange rate available at the time of publication. Trade done on a \$/t basis is converted to Yen/t for inclusion in the assessment using the latest available exchange rate for the day of trade. Published prices are rounded to the nearest dollar or the nearest 100 yen.

Prices are assessed and published weekly on Friday.

**Global ferrous scrap specifications — daily and weekly**

Assessment	Quality	Minimum quantity	Location	Timing	Assessment time stamp	Measure
<b>International ferrous scrap - daily</b>						
HMS 1/2 (80:20), cfr Turkey	HMS 1 (ISRI 200, 201, 202); HMS 2 (ISRI 203, 204, 205, 206)	10,000t	cfr Turkish ports	2-6 weeks	4.30pm London time	\$/t
HMS 1/2 80:20 (short-sea), cif Turkey	HMS 1 (ISRI 200, 201, 202); HMS 2 (ISRI 203, 204, 205, 206)	1,000t	cif Turkey	0-30 days	4.30pm London time	\$/t
#1 HMS, cfr Turkey*	HMS 1 (ISRI 200, 201, 202)	5,000t	cfr Turkish ports	2-6 weeks	4.30pm London time	\$/t
HMS 1/2 (90:10), cfr Turkey*	HMS 1 (ISRI 200, 201, 202); HMS 2 (ISRI 203, 204, 205, 206)	5,000t	cfr Turkish ports	2-6 weeks	4.30pm London time	\$/t
HMS 1/2 (85:15), cfr Turkey*	HMS 1 (ISRI 200, 201, 202); HMS 2 (ISRI 203, 204, 205, 206)	5,000t	cfr Turkish ports	2-6 weeks	4.30pm London time	\$/t
HMS 1/2 (75:25), cfr Turkey*	HMS 1 (ISRI 200, 201, 202); HMS 2 (ISRI 203, 204, 205, 206)	5,000t	cfr Turkish ports	2-6 weeks	4.30pm London time	\$/t
Shredded, cfr Turkey*	ISRI 210-211	5,000t	cfr Turkish ports	2-6 weeks	4.30pm London time	\$/t
P&S, 5ft, cfr Turkey*	ISRI 231-232	5,000t	cfr Turkish ports	2-6 weeks	4.30pm London time	\$/t
Bonus cfr, Turkey*	ISRI 231-232	5,000t	cfr Turkish ports	2-6 weeks	4.30pm London time	\$/t
#1 bundles, cfr Turkey*	ISRI 208	5,000t	cfr Turkish ports	2-6 weeks	4.30pm London time	\$/t
#1 busheling, cfr Turkey*	ISRI 207	5,000t	cfr Turkish ports	2-6 weeks	4.30pm London time	\$/t
New cuttings, cfr Turkey*	ISRI 207	5,000t	cfr Turkish ports	2-6 weeks	4.30pm London time	\$/t
Heavy melt #3 posted price, east China del mill <sup>1</sup>	≤800*600mm, thickness ≥6mm	2kg	delivered to Shagang mill	immediate	5.30pm Singapore time	Yn/t
HMS 1/2 (80:20) containerised, cfr Taiwan	HMS 1 (ISRI 200, 201, 202); HMS 2 (ISRI 203, 204, 205, 206)	500t	cfr Taiwan port	up to 10 weeks	5pm Singapore time	\$/t
H2 fob Japan	Being sized by guillotine shear, gas cutting, heavy construction machines, or others. Thickness ≥3mm and ≤6mm, width or height ≤500mm, length ≤1,200mm, unit weight ≤1,000kg	2,500t	fob Japan	4-6 weeks	5pm Singapore time	¥/t, \$/t
<b>Tokyo Steel Tahara plant ferrous scrap - daily</b>						
H2 Japan Tokyo Steel domestic purchase price	Thickness ≥1mm, width ≤700mm, length ≤1,500mm. Scrap from iron wire and rope, iron plate, auto scrap (body, bumper), drums, bicycle scraps, welding rod	4t	delivered to Tahara plant	immediate	5pm Singapore time	¥/t, \$/t
Shindachi Bara Japan Tokyo Steel domestic purchase price	Width ≤700mm, length ≤1,500mm. Newly cutting and blanking chips produced during the fabrication process. Excludes shaped steel, round steel bar, speciality steel	4t	delivered to Tahara plant	immediate	5pm Singapore time	¥/t, \$/t
Shredded A Japan Tokyo Steel domestic purchase price	Auto (body) scrap and equivalents, crushed by shredder machine	4t	delivered to Tahara plant	immediate	5pm Singapore time	¥/t, \$/t
<b>Tokyo Steel Utsunomiya plant ferrous scrap - daily</b>						
H2 Japan Tokyo Steel domestic purchase price	Thickness ≥1mm, width ≤700mm, length ≤1,500mm. Scrap from iron wire and rope, iron plate, auto scrap (body, bumper), drums, bicycle scraps, welding rod	4t	delivered to Utsunomiya plant	immediate	5pm Singapore time	¥/t, \$/t
Shindachi Bara Japan Tokyo Steel domestic purchase price	Width ≤700mm, length ≤1,500mm. Newly cutting and blanking chips produced during the fabrication process. Excludes shaped steel, round steel bar, speciality steel	4t	delivered to Utsunomiya plant	immediate	5pm Singapore time	¥/t, \$/t
Shredded A Japan Tokyo Steel domestic purchase price	Auto (body) scrap and equivalents, crushed by shredder machine	4t	delivered to Utsunomiya plant	immediate	5pm Singapore time	¥/t, \$/t

**Global ferrous scrap specifications — daily and weekly**

Assessment	Quality	Minimum quantity	Location	Timing	Assessment time stamp	Measure
<b>Tokyo Steel differentials - daily</b>						
H1 to H2 Japan Tokyo Steel domestic purchase price differential	H1: thickness ≥ 1.6mm, width ≤ 700mm, length ≤ 1,500mm. Scrap from pipes, lightweight structural steel, automobile scraps, silicon steel sheets, etc. Silicon scraps excludes used materials			immediate	5pm Singapore time	¥/t, \$/t
Shredded C to Shredded A Japan Tokyo Steel domestic purchase price differential	Shredded C: downgraded or out of grade from Shredded A, crushed by shredder machine			immediate	5pm Singapore time	¥/t, \$/t
<b>International ferrous scrap - weekly</b>						
HS fob Japan	Being sized by guillotine shear, gas cutting, heavy construction machines, or others. Thickness ≥ 6mm, width or height ≤ 500mm, length ≤ 700mm, unit weight ≤ 600kg	2,500t	fob Japan	4-6 weeks	5pm Singapore time, Friday	¥/t, \$/t
HMS 1/2 80/20 cfr Vietnam	HMS 1 (ISRI 200, 201, 202); HMS 2 (ISRI 203, 204, 205, 206)	10,000t	cfr Vietnam	6-10 weeks	5pm Singapore time, Friday	\$/t
Shredded containerised cfr India	ISRI 210-211	500t	cfr Nhava Sheva	2-6 weeks	4.30pm London time, Friday	\$/t
Shredded containerised cfr Pakistan	ISRI 210-211	500t	cfr Pakistan port	2-6 weeks	4.30pm London time, Friday	\$/t
Shredded containerised cfr Bangladesh	ISRI 210-211	500t	cfr Bangladesh port	2-6 weeks	4.30pm London time, Friday	\$/t
HMS 1/2 cif northern Spain	HMS 1 (ISRI 200, 201, 202); HMS 2 (ISRI 203, 204, 205, 206)	500t	Bilbao	0-30 days	4.30pm London time, Wednesday	€/t
Shredded cif northern Spain	ISRI 210-211, E40	500t	Bilbao	0-30 days	4.30pm London time, Wednesday	€/t
OA-grade P&S cif northern Spain	OA grade P&S, ISRI 231-232	500t	Bilbao	0-30 days	4.30pm London time, Wednesday	€/t
Shredded containerised ex-works UK	ISRI 210-211	100t	UK	0-30 days	4.30pm London time, Friday	£/t
Shredded containerised ex-works Antwerp, Rotterdam, Amsterdam, Ghent	ISRI 210-211, E40	100t	Antwerp, Rotterdam, Amsterdam, Ghent (ARAG)	0-30 days	4.30pm London time, Friday	€/t
Turnings containerised ex-works Antwerp, Rotterdam, Amsterdam, Ghent	E5	100t	Antwerp, Rotterdam, Amsterdam, Ghent (ARAG)	0-30 days	4.30pm London time, Friday	€/t
A3 fca for central European Russian mills (\$/t equivalent)	GOST 2787-75	100t	fca for shipment to central European Russia mills	0-30 days	4.30pm London time, Friday	\$/t
A3 fca for central European Russian mills (Rbs/t)	GOST 2787-75	100t	fca for shipment to central European Russia mills	0-30 days	4.30pm London time, Thursday	Rbs/t
A3 fca for Urals mills (\$/t equivalent)	GOST 2787-75	100t	fca for shipment to Urals mills	0-30 days	4.30pm London time, Thursday	\$/t
A3 fca for Urals mills (Rbs/t)	GOST 2787-75	100t	fca for shipment to Urals mills	0-30 days	4.30pm London time, Thursday	Rbs/t
<b>Dockside - weekly</b>						
HMS 1/2del UK northern dock	HMS 1 (ISRI 200, 201, 202); HMS 2 (ISRI 203, 204, 205, 206)	500t	ports north of Birmingham	0-30 days	4.30pm London time, Tuesday	£/t
OA grade P&S del UK northern dock	OA grade P&S	500t	ports north of Birmingham	0-30 days	4.30pm London time, Tuesday	£/t
5A/5C del UK northern dock	5A/5C	500t	ports north of Birmingham	0-30 days	4.30pm London time, Tuesday	£/t
HMS 1/2 del UK southern dock	HMS 1 (ISRI 200, 201, 202); HMS 2 (ISRI 203, 204, 205, 206)	500t	ports south of Birmingham	0-30 days	4.30pm London time, Tuesday	£/t
OA grade P&S del UK southern dock	OA grade P&S	500t	ports south of Birmingham	0-30 days	4.30pm London time, Tuesday	£/t
5A/5C del UK southern dock	5A/5C	500t	ports south of Birmingham	0-30 days	4.30pm London time, Tuesday	£/t
HMS 1/2 del Antwerp, Rotterdam, Amsterdam, Ghent	HMS 1 (ISRI 200, 201, 202); HMS 2 (ISRI 203, 204, 205, 206)	500t	Antwerp, Rotterdam, Amsterdam, Ghent (ARAG)	0-30 days	4.30pm London time, Tuesday	€/t
Bonus del Antwerp, Rotterdam, Amsterdam, Ghent	ISRI 231-232	500t	Antwerp, Rotterdam, Amsterdam, Ghent (ARAG)	0-30 days	4.30pm London time, Tuesday	€/t
#1 HMS del Antwerp, Rotterdam, Amsterdam, Ghent	ISRI 200-202	500t	Antwerp, Rotterdam, Amsterdam, Ghent (ARAG)	0-30 days	4.30pm London time, Tuesday	€/t
A3 del St. Petersburg	GOST 2787-75	500t	St. Petersburg	0-30 days	4.30pm London time, Tuesday	\$/t

**Global ferrous scrap specifications — daily and weekly**

Assessment	Quality	Minimum quantity	Location	Timing	Assessment time stamp	Measure
A3 del St. Petersburg (Rbs/t)	GOST 2787-75	500t	St. Petersburg	0-30 days	4.30pm London time, Tuesday	Rbs/t
A3B del St. Petersburg	GOST 2787-75	500t	St. Petersburg	0-30 days	4.30pm London time, Tuesday	\$/t
A3B del St. Petersburg (Rbs/t)	GOST 2787-75	500t	St. Petersburg	0-30 days	4.30pm London time, Tuesday	Rbs/t

\*Calculated as the sum of the published HMS 1/2 (80:20), cfr Turkey and the relevant published differential

†Delivered price as posted by Shagang mill

**Deep-sea Supramax freight**

Argus publishes calculated freight rates for Supramax-sized ferrous scrap bulk cargoes on specified routes, based on time-charter equivalent rates, bunker fuel costs and Argus assessments of other costs involved with the voyage.

The time-charter rates used in the voyage rate calculations are the \$/day cost of hiring a standard vessel for the voyage duration. The time-charter rates exclude bunker costs, port fees, canal tolls, and other voyage-related fees. Argus assesses time-charter rates each Friday on or the following publication day if Friday is a holiday.

In addition to those specified below, Argus also assumes standard sea margins, broker commissions, bunkering charges per bunkering port visit, time spent in port for loading, unloading and bunkering, and other costs.

**Review of assumptions**

All assumptions are under continual review and are updated at least once a year.

**Calculation**

All \$/t freight rates are calculated using the same generalised formula: Voyage rate (\$/t) = (TCE (\$/day) x Voyage duration (day) + Costs (\$))/Cargo Size (t)

**Routes**

- New York-Iskenderun 40kt Supramax
- Houston-Iskenderun 40kt Supramax
- Rotterdam-Iskenderun 40kt Supramax
- Los Angeles-Incheon 40kt Supramax

**Routing**

Voyages are assumed to be one way. All routes assume avoidance of the Suez and Panama canals. No canal costs are included in the calculation of time-charter equivalent rates.

**Vessel assumptions**

Calculations are based on the standard “Tess 58” type vessel, not fitted with a scrubber, with the following characteristics:

- 58,328mt dwt
- maximum age 15yr

**Fuel**

All vessels are assumed to burn 0.5pc sulphur fuel oil. While in the US and European sulphur emissions control areas (SECAs) and in ports in those regions, all vessels are assumed to consume 0.1pc MGO. Vessels are assumed to consume 0.5pc sulphur fuel oil in all other ports

- laden fuel consumption of 33t/d of fuel oil at 14 knots
- ballast fuel consumption of 32t/d of fuel oil at 14 knots

Fuel prices are the latest Argus assessments at the named fuelling location (Rotterdam, Houston, New York or Los Angeles) available at the time of publication. See the [Argus Marine Fuels methodology](#) for more information about Argus bunker fuel price assessments.

**Cargo size**

Calculations assume cargo size to be the maximum possible given draught restriction, cargo-specific and other factors as determined in regular communication with the market.

**Broker commission on negative TCE rates**

No TCE broker commission is added when the TCE is less than zero. TCE rates can fall below zero if shipowners' costs are larger than the lumpsum for the voyage.

**Port assumptions**

Deep-sea Supramax port assumptions			
Loading port	Cost	Load rate (t/day)	Turn time (hours)
Rotterdam	\$61,000	6,000	12
New York	\$90,000	6,000	12
Houston	\$93,000	6,000	12
Los Angeles	\$55,000	6,000	12
Receiving port	Cost	Unload rate (t/day)	Turn time (hours)
Iskenderun	\$31,000	6,000	12
Incheon	\$42,000	6,000	12

## Short-sea and containerised freight

### Introduction

Argus Scrap Markets publishes short-sea bulk and containerised ferrous scrap freight rates.

### Basis of assessment

Assessments are for transportation meeting the lot size, modality, load and discharge port listed. Assessments are of the range in which repeatable trade took place or in which it could have taken place in the absence of transactions since the last assessment.

### Timing of assessment

Bulk freight prices are assessed weekly, on Friday. Containerised scrap freight prices are assessed monthly, on the last working day of the month. Except for the bulk Japan-eastern China rate, market information received after 4pm London time on the day of assessment may not be included in the assessment process. Information received after 5pm Singapore time on the day of assessment may not be included in the bulk Japan-eastern China assessment process.

### Rounding

Ferrous scrap freight rates are rounded to two decimal places, ending in 0 or 5.

## Ferrous scrap freight specifications

Assessment	Modality	Quantity	Load port	Discharge port
Bulk export New York-Turkey*	Bulk	Supramax	New York	Turkey
Bulk export Houston-Turkey*	Bulk	Supramax	Houston	Turkey
Bulk export ARA-Turkey*	Bulk	Supramax	ARA†	Turkey
Bulk export Los Angeles-South Korea	Bulk	Supramax	Los Angeles	South Korea all
Bulk export Japan-eastern China	Bulk	3,000-5,000t	Japan	Eastern China
Containerised export New York-Mumbai	Container	22-27t	New York	Mumbai
Containerised export Los Angeles-Taiwan	Container	22-27t	Los Angeles	Taiwan all
Containerised export San Francisco-Taiwan	Container	22-27t	San Francisco	Taiwan all
Containerised export Seattle-Taiwan	Container	22-27t	Seattle	Taiwan all

\*Note: includes all Turkish ports except Samsun

†Note: ARA is Amsterdam, Rotterdam, Antwerp

## European domestic ferrous scrap — monthly

Argus Scrap Markets publishes monthly price assessments and market commentary on European domestic ferrous scrap markets.

Assessments are for the named material meeting the lot size, timing and delivery criteria listed in the table below. Assessments are published as a range around an assessed fair-value price at which the bulk of monthly spot business settled, or could have settled in the absence of new assessment-relevant information.

## Timing of assessment

European domestic ferrous scrap prices are assessed and published on or before the 15th day of the calendar month, depending on when the majority of trade for a given grade in a given location is completed.

Market information received after 4.30pm London time on the day of assessment may not be included in the assessment process.

## European ferrous scrap specifications — delivered mill, monthly

Name	Minimum quantity	Timing	Unit	Name	Minimum quantity	Timing	Unit
<b>Germany northwest (including Duisburg, Lingen, Georgsmarienhütte, Bremen, Hamburg)</b>				<b>Germany national average*</b>			
E1 old thin scrap	500t	30 days	€/t	E1 old thin scrap	500t	30 days	€/t
E2 new thick scrap	500t	30 days	€/t	E2 new thick scrap	500t	30 days	€/t
E3 old thick scrap	500t	30 days	€/t	E3 old thick scrap	500t	30 days	€/t
E40 shredded old steel scrap	500t	30 days	€/t	E40 shredded old steel scrap	500t	30 days	€/t
E5 turnings	500t	30 days	€/t	E5 turnings	500t	30 days	€/t
E8 new thin scrap	500t	30 days	€/t	E8 new thin scrap	500t	30 days	€/t
<b>Germany central (including Witten, Siegen, Wetzlar, Salzgitter, Peine, Unterwellenborn)</b>				<i>*Note: arithmetic average of published price assessments for each product in the regions outlined above. Averages are only published once all regional assessments for a given product have been published.</i>			
E1 old thin scrap	500t	30 days	€/t	<b>UK</b>			
E2 new thick scrap	500t	30 days	€/t	OA plate and structural	500t	30 days	£/t
E3 old thick scrap	500t	30 days	€/t	1&2 old steel	500t	30 days	£/t
E40 shredded old steel scrap	500t	30 days	€/t	3B shredded scrap	500t	30 days	£/t
E5 turnings	500t	30 days	€/t	4A new steel bales	500t	30 days	£/t
E8 new thin scrap	500t	30 days	€/t	4C new steel bales	500t	30 days	£/t
<b>Germany east (including Eisenhuttenstadt, Hennigsdorf, Brandenburg, Groditz, Freital, Risa)</b>				8A new loose light cuttings	500t	30 days	£/t
E1 old thin scrap	500t	30 days	€/t	8B new loose light cuttings	500t	30 days	£/t
E2 new thick scrap	500t	30 days	€/t	12 A/C new production heavy steel	500t	30 days	£/t
E3 old thick scrap	500t	30 days	€/t	12D new production clean shovellable steel	500t	30 days	£/t
E40 shredded old steel scrap	500t	30 days	€/t	<b>Italy</b>			
E5 turnings	500t	30 days	€/t	E3 old thick scrap	500t	30 days	€/t
E8 new thin scrap	500t	30 days	€/t	E8 new thin scrap	500t	30 days	€/t
<b>Germany south (including Herbertshofen, Kehl, Volklingen, Dillingen, Bous)</b>				E40 shredded old steel scrap	500t	30 days	€/t
E1 old thin scrap	500t	30 days	€/t	<b>Spain</b>			
E2 new thick scrap	500t	30 days	€/t	E1 old thin scrap	500t	30 days	€/t
E3 old thick scrap	500t	30 days	€/t	E3 old thick scrap	500t	30 days	€/t
E40 shredded old steel scrap	500t	30 days	€/t	E40 shredded old steel scrap	500t	30 days	€/t
E5 turnings	500t	30 days	€/t				
E8 new thin scrap	500t	30 days	€/t				

## US and Canadian ferrous scrap — monthly

### Introduction

Argus Scrap Markets publishes monthly price assessments and market commentary on the US and Canadian ferrous scrap markets.

### Basis of assessment

Assessments are for the named material meeting the lot size, timing and delivery criteria listed in the table below. Assessments are published as a single price at which repeatable trade took place or at which it could have taken place in the absence of transactions since the last assessment.

### US national average prices

US national average prices are the arithmetic average of published price assessments for each product in the regions outlined below. Averages may include regional prices for more than one calendar month, depending on whether each location has concluded trade for the month at the time of publication.

### Southern US ferrous scrap weighted-averages

Monthly averages of the Birmingham, Carolinas and northeast Arkansas monthly ferrous scrap assessments weighted by each region's estimated average scrap consumption based on steelmaking capacity.

Prices are calculated and published in \$/gt once all monthly assessments are completed.

#### Prices are calculated for

- #1 busheling
- Shredded

### Timing of assessment

US prices are assessed and published on or before the 10th working day of the calendar month, depending on when the majority of trade for a given location is completed. Market information received after 4pm Houston time on the day of assessment may not be included in the assessment process.

Canadian and US foundry, specialty consumer grades are assessed and published on or before the 15th day of the calendar month, depending on when the majority of trade for a given location is completed.

## Ferrous scrap specifications — del foundry, monthly

Assessment	Minimum Quantity	Timing	Currency/unit
<b>Delivered foundry, specialty consumer</b>			
<b>Chicago</b>			
Black/foundry busheling	500gt	30 days	\$/gt
Clean auto cast	500gt	30 days	\$/gt
Clean fresh cast iron borings	500gt	30 days	\$/gt
Ductile-quality shredded clips	500gt	30 days	\$/gt
Low-alloy punchings	500gt	30 days	\$/gt
#1 machine cast	500gt	30 days	\$/gt
P&S, 2ft	500gt	30 days	\$/gt
<b>Philadelphia</b>			
Black/foundry busheling	500gt	30 days	\$/gt
P&S, 2ft	500gt	30 days	\$/gt

## Ferrous scrap specifications — fob dealer yard, monthly

Assessment	Minimum Quantity	Timing	Currency/unit
<b>Fob dealer yard</b>			
<b>Buffalo</b>			
#1 HMS	500gt	30 days	\$/gt
#1 bundles	500gt	30 days	\$/gt
#1 busheling	500gt	30 days	\$/gt
Shredded	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
Machine shop turnings	500gt	30 days	\$/gt
<b>Denver</b>			
#1 HMS	500gt	30 days	\$/gt
#1 bundles	500gt	30 days	\$/gt
#1 busheling	500gt	30 days	\$/gt
Shredded	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
<b>Houston</b>			
#1 HMS	500gt	30 days	\$/gt
#1 busheling	500gt	30 days	\$/gt
Shredded	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
Machine shop turnings	500gt	30 days	\$/gt
<b>St Louis</b>			
#1 HMS	500gt	30 days	\$/gt
#1 busheling	500gt	30 days	\$/gt
#1 bundles	500gt	30 days	\$/gt
Shredded	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
Machine shop turnings	500gt	30 days	\$/gt



**Ferrous scrap specifications — del consumer, monthly**

Assessment	Minimum quantity	Timing	Currency/unit
<b>US delivered consumer</b>			
<b>Birmingham</b>			
#1 HMS	500gt	30 days	\$/gt
#1 busheling	500gt	30 days	\$/gt
Shredded	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
Machine shop turnings	500gt	30 days	\$/gt
<b>Carolinas</b>			
#1 HMS	500gt	30 days	\$/gt
#1 busheling	500gt	30 days	\$/gt
Shredded	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
Machine shop turnings	500gt	30 days	\$/gt
<b>Chicago</b>			
#1 HMS	500gt	30 days	\$/gt
#1 busheling	500gt	30 days	\$/gt
#1 bundles	500gt	30 days	\$/gt
Shredded	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
Machine shop turnings	500gt	30 days	\$/gt
<b>Cincinnati/Indianapolis</b>			
#1 HMS	500gt	30 days	\$/gt
#1 busheling	500gt	30 days	\$/gt
#1 bundles	500gt	30 days	\$/gt
Shredded	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
Machine shop turnings	500gt	30 days	\$/gt
<b>Cleveland/Youngstown</b>			
#1 HMS	500gt	30 days	\$/gt
#1 busheling	500gt	30 days	\$/gt
#1 bundles	500gt	30 days	\$/gt
Shredded	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
Machine shop turnings	500gt	30 days	\$/gt
Tin can bundles	500gt	30 days	\$/gt
<b>Texas</b>			
#1 HMS	500gt	30 days	\$/gt
#1 busheling	500gt	30 days	\$/gt
Shredded	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
Machine shop turnings	500gt	30 days	\$/gt
<b>Detroit</b>			
#1 HMS	500gt	30 days	\$/gt
#1 busheling	500gt	30 days	\$/gt
#1 bundles	500gt	30 days	\$/gt
Shredded	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
Machine shop turnings	500gt	30 days	\$/gt
Tin can bundles	500gt	30 days	\$/gt

Assessment	Minimum quantity	Timing	Currency/unit
<b>NE Arkansas</b>			
#1 HMS	500gt	30 days	\$/gt
#1 busheling	500gt	30 days	\$/gt
Shredded	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
Machine shop turnings	500gt	30 days	\$/gt
<b>Philadelphia</b>			
#1 HMS	500gt	30 days	\$/gt
#1 busheling	500gt	30 days	\$/gt
#1 bundles	500gt	30 days	\$/gt
Shredded	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
Machine shop turnings	500gt	30 days	\$/gt
<b>Pittsburgh</b>			
#1 HMS	500gt	30 days	\$/gt
#1 busheling	500gt	30 days	\$/gt
Shredded	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
Machine shop turnings	500gt	30 days	\$/gt
Tin can bundles	500gt	30 days	\$/gt
<b>Quad Cities</b>			
#1 HMS	500gt	30 days	\$/gt
#1 busheling	500gt	30 days	\$/gt
Shredded	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
Machine shop turnings	500gt	30 days	\$/gt
<b>Canada delivered consumer</b>			
<b>Toronto</b>			
#1 HMS	500nt	30 days	C\$/nt
#1 bundles	500nt	30 days	C\$/nt
#1 busheling	500nt	30 days	C\$/nt
Shredded	500nt	30 days	C\$/nt
P&S, 5ft	500nt	30 days	C\$/nt
Machine shop turnings	500nt	30 days	C\$/nt
<b>Montreal</b>			
#1 HMS	500nt	30 days	C\$/nt
#1 busheling	500nt	30 days	C\$/nt
P&S, 5ft	500nt	30 days	C\$/nt
P&S, 2ft	500nt	30 days	C\$/nt
Shredder feed*	500nt	30 days	C\$/nt
Machine shop turnings	500nt	30 days	C\$/nt

*Note: shredder feed prices are assessed on a delivered to shredder basis*

## US ferrous scrap — weekly

### Introduction

Argus Scrap Markets publishes weekly price assessments and market commentary on the US ferrous scrap markets.

### Basis of assessment

Assessments are for the named material meeting the lot size, timing

and delivery criteria listed in the table below. Assessments are of the range in which repeatable trade took place or in which it could have taken place in the absence of transactions since the last assessment.

### Timing of assessment

Prices are assessed and published weekly, on the day specified below. Market information received after 4pm Houston time on the day of assessment may not be included in the assessment process.

### Ferrous scrap specifications

Assessment	Minimum quantity	Timing	Currency/unit
<b>Regional ferrous scrap - Friday</b>			
<b>US eastern (del Philadelphia, Pittsburgh, Cleveland/Youngstown)</b>			
#1 HMS	500gt	30 days	\$/gt
Shredded	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
#1 busheling	500gt	30 days	\$/gt
<b>US midwest (del Chicago, Detroit, St Louis, Cincinnati/Indianapolis)</b>			
#1 HMS	500gt	30 days	\$/gt
Shredded	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
#1 busheling	500gt	30 days	\$/gt
<b>US southeast (del Birmingham, Carolinas)</b>			
#1 HMS	500gt	30 days	\$/gt
Shredded	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
#1 busheling	500gt	30 days	\$/gt
<b>Ferrous containerized scrap - Friday</b>			
<b>New York container (fas New York)</b>			
HMS 1/2 (80:20)	500t	2-6 weeks	\$/t
Shredded	500t	2-6 weeks	\$/t
P&S, 5ft	500t	2-6 weeks	\$/t
<b>Los Angeles container (fas Los Angeles)</b>			
HMS 1/2 (80:20)	500t	2-6 weeks	\$/t
Shredded	500t	2-6 weeks	\$/t
P&S, 5ft	500t	2-6 weeks	\$/t
#1 busheling	500t	2-6 weeks	\$/t
<b>San Francisco container (fas San Francisco)</b>			
HMS 1/2 (80:20)	500t	2-6 weeks	\$/t
Shredded	500t	2-6 weeks	\$/t
P&S, 5ft	500t	2-6 weeks	\$/t
<b>Seattle container (fas Seattle)</b>			
HMS 1/2 (80:20)	500t	2-6 weeks	\$/t
Shredded	500t	2-6 weeks	\$/t
P&S, 5ft	500t	2-6 weeks	\$/t
<b>Ferrous scrap export yard buying prices - Tuesday</b>			
<b>Boston (delivered, includes Providence)</b>			
#1 HMS	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
Shredder feed	500gt	30 days	\$/gt
<b>Albany (delivered)</b>			
#1 HMS	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
Shredder feed	500gt	30 days	\$/gt
<b>New York (delivered, includes New Haven)</b>			
#1 HMS	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
Shredder feed	500gt	30 days	\$/gt

Assessment	Minimum quantity	Timing	Currency/unit
<b>Philadelphia (delivered)</b>			
#1 HMS	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
Shredder feed	500gt	30 days	\$/gt
<b>US east coast averages</b>			
<i>Published for #1 HMS, P&amp;S 5ft and shredder feed as averages of the midpoints of the Albany, Boston, New York and Philadelphia assessments.</i>			
<b>Houston (delivered)</b>			
#1 HMS	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
Shredder feed	500gt	30 days	\$/gt
<b>Los Angeles (delivered)</b>			
#1 HMS	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
Shredder feed	500gt	30 days	\$/gt
#1 busheling	500gt	30 days	\$/gt
<b>San Francisco (delivered)</b>			
#1 HMS	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
Shredder feed	500gt	30 days	\$/gt
<b>Seattle/Portland (delivered)</b>			
#1 HMS	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
Shredder feed	500gt	30 days	\$/gt
<b>Ferrous scrap prices</b>			
<b>US east coast bulk (fob New York)</b>			
<i>US east coast bulk prices are calculated daily as netbacks from the corresponding cfr Turkey assessment and the midpoint of the weekly New York-Turkey bulk freight rate. Prices are published as a single point.</i>			
HMS 1/2 (80:20)	5,000t	2-8 weeks	\$/t
Shredded	5,000t	2-8 weeks	\$/t
P&S, 5ft	5,000t	2-8 weeks	\$/t
<b>US Gulf coast bulk (fob Houston)</b>			
<i>US Gulf coast bulk prices are calculated daily as netbacks from the corresponding cfr Turkey assessment and the midpoint of the weekly Houston-Turkey bulk freight rate. Prices are published as a single point.</i>			
HMS 1/2 (80:20)	5,000t	2-8 weeks	\$/t
Shredded	5,000t	2-8 weeks	\$/t
P&S, 5ft	5,000t	2-8 weeks	\$/t
<b>US west coast bulk (fob Los Angeles) - Friday</b>			
HMS 1/2 (80:20)	5,000t	2-8 weeks	\$/t
Shredded	5,000t	2-8 weeks	\$/t
P&S, 5ft	5,000t	2-8 weeks	\$/t
<b>Composite delivered US consumer</b>			
<i>Composite prices are calculated on Fridays as the average of monthly prices published for the named material in the markets listed below. Composite prices are published as a single value.</i>			
#1 HMS	Birmingham, Chicago, Philadelphia, Pittsburgh		
Shredded	Birmingham, Chicago, Cleveland, Detroit, Pittsburgh		
#1 busheling	Birmingham, Chicago, Cleveland, Detroit		
P&S, 5ft	Birmingham, Chicago, Philadelphia, Pittsburgh		

## Mexico ferrous scrap

### Introduction

Argus Scrap Markets publishes weekly ferrous scrap price assessments for Mexico.

### Basis of assessment

Assessments are for the named material meeting the lot size, timing and delivery criteria listed in the table below. Assessments are published as a low/high range in which repeatable trade took place or could have taken place in the absence of transactions since the last assessment.

Prices are assessed in Mexican peso/t. The final price is also converted to \$/t for publication using the latest exchange rate available at the time of publication.

### Timing of assessment

Mexico ferrous scrap prices are assessed weekly on Friday. Market information received after 4pm Houston time on the day of assessment may not be included in the assessment process.

## Mexico ferrous scrap specifications

Assessment	Minimum quantity	Timing	Currency/unit
<b>delivered Monterrey/Salttilo mill</b>			
#1 busheling	500t	prompt	PS/t, \$/t
Mixto (mixed HMS)	500t	prompt	PS/t, \$/t
Pesado (HMS)	500t	prompt	PS/t, \$/t
P&S, 5ft	500t	prompt	PS/t, \$/t

## Steel feedstocks

### Introduction

Argus Ferrous Markets publishes weekly price assessments on the international steel feedstocks markets

### fob Black Sea

Assessments are the average of the trading week's activity. Transactions completed after the time stamp for physical transactions (5.30pm London time on Thursday) will not be considered for inclusion in the assessment.

### China domestic

Assessments are the average of the trading week's activity. Transactions completed after the time stamp for physical transactions (5.30pm Singapore time on Friday) will not be considered for inclusion in the assessment.

### Americas

Assessments are for the named material meeting the lot size, timing and delivery criteria listed in the table below. Assessments are of the range in which repeatable trade took place or in which it could have taken place in the absence of transactions since the last assessment.

Prices are assessed and published weekly, on Thursday. Market information received after 4pm Houston time on the day of assessment may not be included in the assessment process.

### Iron ore fines

Argus Scrap Markets includes daily iron ore fines prices republished from Argus Ferrous Markets.

See the [Argus Ferrous Markets methodology](#).

#### Iron ore fines

- Iron ore fines 62% Fe (ICX) cfr Qingdao

### Steel-scrap spreads

#### US midwest hot-rolled coil-#1 busheling spread

Calculated each Tuesday as the HRC ex-works US midwest assessment - the #1 busheling composite US midwest assessment. See the [Argus Ferrous Markets methodology](#) for information about Argus finished steel price assessments.

## Steel feedstocks specifications

Assessment	Quality	Minimum quantity	Location	Timing	Measure
<b>Basic pig iron (weekly)</b>					
ex-works Tangshan (Hebei) domestic inc VAT	basic pig iron, including VAT, L8-10	3,000t	Tangshan ex works	immediate	Yn/t
Russian fob Black Sea	GOST 805-95, PL-1, PL-2 grades	3,000t	fob Russia Black Sea ports	2-6 weeks	\$/t
Ukrainian fob Black Sea	GOST 805-95, PL-1, PL-2 grades	3,000t	fob Ukraine Black Sea ports	2-6 weeks	\$/t
fob southern Brazil	Contains maximum C: 4.5% Si: 1.50% S: 0.05% Mn: 1.00% P: 0.15%	15,000t	fob Vitoria, Acu, Rio de Janeiro	Prompt-6 weeks	\$/t
fob northern Brazil	Contains maximum C: 4.5% Si: 1.50% S: 0.05% Mn: 1.00% P: 0.12%	15,000t	fob Sao Luis	Prompt-6	\$/t
<b>New Orleans, cfr (weekly)</b>					
Basic pig iron (all regions)		5,000t	cfr New Orleans	2-8 weeks	\$/t
Nodular pig iron		5,000t	cfr New Orleans	2-8 weeks	\$/t

## Steel billet

### Introduction

Argus Scrap Markets includes daily and weekly steel billet prices republished from Argus Ferrous Markets.

See the [Argus Ferrous Markets methodology](#).

#### Steel billet

- fob Black Sea (daily)
- Tangshan ex-works inc VAT (daily)

## Finished steel

Argus Scrap Markets includes daily and weekly finished steel prices republished from Argus Ferrous Markets.

See the [Argus Ferrous Markets methodology](#).

#### Daily price assessments

- Rebar fob Turkey

#### Weekly price assessments

- Rebar ex-works Turkey (inc. VAT)
- Rebar ex-works Turkey (inc. VAT) TL/t
- Rebar ex-works US midwest
- Rebar ex-works US south central
- HRC ex-works US midwest
- Plate ex-works US

#### Weekly averages

- HRC fob China
- HRC ex-works northwest Europe EUR/mt
- HRC ex-works northwest Europe USD/mt

#### Monthly averages

- HRC ex-works northwest Europe monthly average EUR/mt
- HRC ex-works Italy monthly average EUR/mt

## Stainless steel

### Introduction

Argus Scrap Markets publishes daily, weekly and monthly price assessments and market commentary on the US and international stainless steel scrap, flat rolled, cold rolled and bar markets.

### Basis of assessment

Assessments are for the named material meeting the lot size, timing and delivery criteria listed in the table below. Assessments are of the range in which repeatable trade took place or in which it could have taken place in the absence of transactions since the last assessment.

Flat rolled coil, cold rolled sheet and bar raw material surcharges are the arithmetic average of surcharges announced by US or European producers. US flat rolled coil and bar assessments are calculated by adding the raw material surcharge averages to assessed base prices. European delivered cold rolled sheet and ex-warehouse China cold rolled coil transaction prices are assessed independently.

Stainless steel scrap nickel contained in 304/316 scrap solids spread del US consumer is expressed as a percentage of the LME official nickel cash price.

The 304 (18-8) solids cif Rotterdam and 316 solids cif Rotterdam prices are assessed in €/t and converted to \$/lb for publication.

### Timing

Weekly price assessments are published each Tuesday or Thursday as detailed below.

Monthly stainless steel scrap price assessments are published on the first publication date on or after the 15th of the calendar month.

Monthly stainless steel prices and monthly flat rolled coil and flat rolled surcharge prices are assessed and published before the first day of each calendar month, except when US or European markets are unsettled at the end of the month. In those cases, the assessments will be made as early in the month as practical.

### US markets

Market information received after 4pm Houston time on the day of assessment may not be included in the assessment process.

### European markets

Market information received after 5pm London time on the day of assessment may not be included in the assessment process.

### Asia-Pacific Markets

Scrap market information received after 4pm Houston time and coil market information received after 5pm Beijing time on the day of assessment may not be included in the assessment process.

### Stainless steel scrap specifications

Assessment	Quality	Quantity	Currency/unit	Assessment frequency	Transacted/transactable	Timing	Basis
<b>Delivered US processor</b>							
17-4 solids	UNS S17400 scrap solids, unprocessed	truckload	\$/lb	weekly (Thursday)	since last assessment	30 days	del US
17-4 turnings	UNS S17400 turnings, unprocessed	truckload	\$/lb	weekly (Thursday)	since last assessment	30 days	del US
201 solids	UNS S20100 solids, unprocessed	truckload	\$/lb	weekly (Tuesday)	since last assessment	30 days	del US
301 solids	UNS S30100 solids, unprocessed	truckload	\$/lb	weekly (Tuesday)	since last assessment	30 days	del US
304 (18-8) solids	ISRI Sabot, unprocessed	truckload	\$/lb	daily	on day of assessment	30 days	del US
304 (18-8) turnings	ISRI Ultra, unprocessed	truckload	\$/lb	daily	on day of assessment	30 days	del US
309 solids	UNS S30900 solids, unprocessed	2,000lbs	\$/lb	weekly (Tuesday)	since last assessment	30 days	del US
310 solids	UNS S31000 solids, unprocessed	2,000lbs	\$/lb	weekly (Tuesday)	since last assessment	30 days	del US
316 solids	SSINA S31600 scrap clips/solids, unprocessed	truckload	\$/lb	daily	on day of assessment	30 days	del US
316 turnings	SSINA S31600 turnings, unprocessed	truckload	\$/lb	daily	on day of assessment	30 days	del US
330 solids	UNS S33000 solids, unprocessed	2,000lbs	\$/lb	weekly (Tuesday)	since last assessment	30 days	del US
409/410 solids	SSINA S40900/S41000 scrap clips/solids, unprocessed	truckload	\$/gross ton	weekly (Thursday)	since last assessment	30 days	del US
409/410 turnings	UNS S409000/s41000 turnings, unprocessed	truckload	\$/gross ton	weekly (Thursday)	since last assessment	30 days	del US
430 solids	SSINA S43000 scrap clips/solids, unprocessed	truckload	\$/gross ton	weekly (Thursday)	since last assessment	30 days	del US
430 turnings	UNS S43000 turnings, unprocessed	truckload	\$/gross ton	weekly (Thursday)	since last assessment	30 days	del US
<b>US west coast (California, Oregon, Washington)</b>							
304 (18-8) solids del US west coast processor	ISRI Sabot, unprocessed	truckload	\$/lb	weekly (Wednesday)	since last assessment	30 days	del US west coast processor
304 (18-8) solids fas US west coast	ISRI Sabot	full container load	\$/lb	weekly (Wednesday)	since last assessment	30 days	fas US west coast ports

**Stainless steel scrap specifications**

Assessment	Quality	Quantity	Currency/ unit	Assessment frequency	Transacted/ transactable	Timing	Basis
<b>Delivered import port</b>							
304 (18-8) solids cif Rotterdam	ISRI Sabot	full container load	€/t	weekly (Thursday)	since last assessment	30-60 days	cif Rotterdam
304 (18-8) solids cif Rotterdam	ISRI Sabot	full container load	\$/lb	weekly (Thursday)	since last assessment	30-60 days	cif Rotterdam
304 (18-8) solids cif Taiwan	ISRI Sabot	full container load	\$/lb	weekly (Thursday)	since last assessment	30-60 days	cif Taipei, Kaohsiung
304 (18-8) solids cif Japan	ISRI Sabot	full container load	\$/lb	weekly (Thursday)	since last assessment	30-60 days	cif Osaka, Tokyo, Norita
304 (18-8) solids cif South Korea	ISRI Sabot	full container load	\$/lb	weekly (Thursday)	since last assessment	30-60 days	cif Seoul, Incheon, Busan
304 (18-8) solids cif India	ISRI Sabot	full container load	\$/lb	weekly (Thursday)	since last assessment	30-60 days	cif Nhava Sheva, Sabarnati
316 solids cif Rotterdam	SSINA S31600 scrap clips/solids, unprocessed	full container load	\$/lb	weekly (Thursday)	since last assessment	30-60 days	cif Rotterdam
316 solids cif Rotterdam	SSINA S31600 scrap clips/solids, unprocessed	full container load	€/t	weekly (Thursday)	since last assessment	30-60 days	cif Rotterdam
316 solids cif Taiwan	SSINA S31600 scrap clips/solids, unprocessed	full container load	\$/lb	weekly (Thursday)	since last assessment	30-60 days	cif Taipei, Kaohsiung
316 solids cif Japan	SSINA S31600 scrap clips/solids, unprocessed	full container load	\$/lb	weekly (Thursday)	since last assessment	30-60 days	cif Osaka, Tokyo, Norita
316 solids cif South Korea	SSINA S31600 scrap clips/solids, unprocessed	full container load	\$/lb	weekly (Thursday)	since last assessment	30-60 days	cif Seoul, Incheon, Busan
316 solids cif India	SSINA S31600 scrap clips/solids, unprocessed	full container load	\$/lb	weekly (Thursday)	since last assessment	30-60 days	cif Nhava Sheva, Sabarnati
<b>Delivered US consumer</b>							
Chrome contained in 304/316 solids	High-carbon ferro-chrome in 304/316 scrap clips/solids	one truck-load min	\$/lb	monthly	since last assessment	30 days	del US
Iron contained in 304/316 solids	Ferrous scrap in 304/316 scrap clips/solids	one truck-load min	\$/lb	monthly	since last assessment	30 days	del US

**Stainless steel coil specifications**

Assessment	Quality	Minimum quantity	Currency/ unit	Assessment frequency	Transacted/ transactable	Timing	Basis
301 flat rolled coil	SSINA S30100; gauge 7-14	truckload	\$/lb	monthly	on day of assessment	30 days	ex-works US
301 flat rolled coil surcharge	SSINA S30100	truckload	\$/lb	monthly	on day of assessment	30 days	ex-works US
304 flat rolled coil	SSINA S30400; gauge 7-14	truckload	\$/lb	monthly	on day of assessment	30 days	ex-works US
304 flat rolled coil surcharge	SSINA S30400	truckload	\$/lb	monthly	on day of assessment	30 days	ex-works US
316 flat rolled coil	SSINA S31600; gauge 7-14	truckload	\$/lb	monthly	on day of assessment	30 days	ex-works US
316 flat rolled coil surcharge	SSINA S31600	truckload	\$/lb	monthly	on day of assessment	30 days	ex-works US
304 cold rolled sheet surcharge	UNS S30400, EN 1.4301, <2mm thickness, 1,000-2,000mm width	truckload	€/t	monthly	on day of assessment	30 days	ex-works Europe
304 cold rolled sheet	UNS S30400, EN 1.4301, <2mm thickness, 1,000-2,000mm width	truckload	€/t	monthly	on day of assessment	30 days	del northwest Europe
316 cold rolled sheet surcharge	UNS S31600, EN 1.4401, EN 1.4404, <2mm thickness, 1,000-2,000mm width	truckload	€/t	monthly	on day of assessment	30 days	ex-works Europe
316 cold rolled sheet	UNS S31600, EN 1.4401, EN 1.4404, <2mm thickness, 1,000-2,000mm width	truckload	€/t	monthly	on day of assessment	30 days	del northwest Europe
430 cold rolled sheet surcharge	UNS43000, EN1.4016, <2mm thickness, 1,000-2,000mm width	truckload	€/t	monthly	on day of assessment	30 days	ex-works Europe
304/2B cold rolled coil	1.5-2.0mm thickness, 1,240mm width, mill edge	5t	yuan/t, inc. VAT	twice weekly (Tu/Th)	on day of assessment	7 days	ex-warehouse China

**Stainless steel bar specifications**

Assessment	Quality	Minimum quantity	Currency/unit	Assessment frequency	Transacted/transactable	Timing	Basis
303 bar	SSINA S30300, 1in smooth round bar	truckload	\$/lb	monthly	on day of assessment	30 days	ex-works US
303 bar surcharge	SSINA S30300	truckload	\$/lb	monthly	on day of assessment	30 days	ex-works US
304 bar	SSINA S30400, 1in smooth round bar	truckload	\$/lb	monthly	on day of assessment	30 days	ex-works US
304 bar surcharge	SSINA S30400	truckload	\$/lb	monthly	on day of assessment	30 days	ex-works US
316 bar	SSINA S31600, 1in smooth round bar	truckload	\$/lb	monthly	on day of assessment	30 days	ex-works US
316 bar surcharge	SSINA S31600	truckload	\$/lb	monthly	on day of assessment	30 days	ex-works US
416 bar	SSINA S41600, 1in smooth round bar	truckload	\$/lb	monthly	on day of assessment	30 days	ex-works US
416 bar surcharge	SSINA S41600	truckload	\$/lb	monthly	on day of assessment	30 days	ex-works US
17-4 bar	SSINA S17400, 1in smooth round bar	truckload	\$/lb	monthly	on day of assessment	30 days	ex-works US
17-4 bar surcharge	SSINA S17400	truckload	\$/lb	monthly	on day of assessment	30 days	ex-works US
15-5 bar	SSINA S15500, 1in smooth round bar	truckload	\$/lb	monthly	on day of assessment	30 days	ex-works US
15-5 bar surcharge	SSINA S15500	truckload	\$/lb	monthly	on day of assessment	30 days	ex-works US



## Ferro-alloys

### Introduction

Argus Scrap Markets includes weekly ferro-alloys prices republished from Argus Non-Ferrous Markets.

See the [Argus Non-Ferrous Markets methodology](#).

#### Ferro-alloys prices

- Charge chrome fob US warehouse
- Ferro-boron 17% B fob US warehouse
- Ferro-chrome HC min 60-65% Cr 6-8% C fob US warehouse (per lb Cr)
- Ferro-chrome LC 60% Cr 0.15% C fob US warehouse
- 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-manganese HC min 80% Mn 6-8% C fob North America warehouse
- Ferro-manganese MC 80% Mn 1-2% C fob North America warehouse
- Molybdenum oxide min 57% fob US 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)
- Silico-manganese min 65% Mn 16% Si fob North America warehouse

## Tool steel scrap

Argus Scrap Markets publishes calculated prices for tool steel scrap.

Prices are calculated by weighting the price of component and feedstock metals according to formulas developed from collaboration with the industry. 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).

#### Prices are assessed for

- H13
- M1

- M2
- M42
- T1
- T15

## Cupro-nickel and super alloys scrap

### Introduction

Argus Scrap Markets publishes weekly price assessments and daily calculated prices for super alloy and cupro-nickel scrap. Weekly price assessments are published each Thursday.

#### Calculated prices

Prices are calculated by weighting the price of component and feedstock metals according to formulas developed in collaboration with the industry. Formulas are revised monthly or as market conditions change. Prices are calculated only on those days when one or more component price has changed. Prices are expressed as a low-high range in US dollars per pound (lb).

Calculated price are produced for:

#### Cupro-nickel

- C70600 (90:10)
- C71500 (70:30)
- Monel 400 (R)

#### Super alloys

- Hastelloy C air melted
- Hastelloy X air melted
- Inconel 600 vacuum melted
- Inconel 601 vacuum melted
- Inconel 607 vacuum melted
- Inconel 625 vacuum melted
- Inconel 718 vacuum melted
- Waspaloy vacuum melted

### Weekly assessments

Assessments are for the named material meeting the lot size, timing and delivery criteria listed in the table below. Assessments are of the range in which repeatable trade took place or in which it could have taken place in the absence of transactions since the last assessment.

Market information received after 4pm Houston time on the day of assessment may not be included in the assessment process.

## Cupro-nickel and super alloys scrap specifications

Assessment	Quality	Minimum quantity	Currency/unit	Assessment frequency	Transacted/transactable	Timing	Basis
Super alloys scrap Invar solids, vacuum melted	UNS K93603 scrap solids, unprocessed	2,000lbs	\$/lb	weekly	since last assessment	30 days	del US
Cupro-nickel scrap Monel (R) turnings	UNS N04400 turnings, unprocessed	2,000lbs	\$/lb	weekly	since last assessment	30 days	del US
Cupro-nickel scrap Monel (K) solids	UNS N05500 solids, unprocessed	2,000lbs	\$/lb	weekly	since last assessment	30 days	del US

## Minor metals

### Introduction

Argus Scrap Markets includes weekly and monthly minor metals prices republished from Argus Non-Ferrous Markets.

See the [Argus Non-Ferrous Markets methodology](#).

#### Minor metals — weekly

Assessments are fob US warehouse, unless stated

- Magnesium min 99.9% (\$/t)
- Manganese electrolytic metal min 99.7% (\$/lb)
- Silicon 5-5-3 min 98.5% Si (30 days) (\$/lb)
- Silicon 5-5-3 min 98.5% Si (90 days) (\$/lb)
- Tantalum scrap 99.9% vacuum melted del US consumer

#### Minor metals — monthly

- Chrome aluminothermic fob US warehouse
- Molybdenum scrap 99.7% airmelt del US consumer
- Molybdenum vacuum grade 99.7% del US vacuum consumer
- Molybdenum scrap 99.9% del US vacuum processor
- Nickel-Cobalt refinery scrap cobalt contained del US processor
- Nickel-Cobalt refinery scrap nickel contained del US processor
- Niobium (columbium) scrap vacuum del US consumer
- Niobium (columbium) scrap vacuum del US processor
- Titanium 6Al 4V ingot fob US producer
- Titanium 6Al 4V ingot in-warehouse Rotterdam
- Tungsten 99.9% scrap 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

## Titanium scrap

### Introduction

Argus Scrap Markets includes weekly titanium scrap prices republished from Argus Non-Ferrous Markets.

See the [Argus Non-Ferrous Markets methodology](#).

#### Titanium scrap — weekly, delivered US dealer/processor

- 6Al 4V bulk weldable
- 6Al 4V clips
- CP1 solids
- CP2 solids
- CP3/4 solids
- Min 85% Ti non-tin-bearing mixed turnings
- Min 85% Ti tin-bearing mixed turnings

#### Titanium scrap — twice weekly, delivered Europe

- Turnings 90/6/4 max 0.5% Sn ddp northwest Europe

#### Titanium scrap — weekly, delivered US processor

- 6Al 4V turnings aero quality