

Metal Bulletin

Stainless Steel 304 Europe Index



January 2014

Metal Bulletin Stainless Steel 304 Europe Index

Methodology and Specifications

Metal Bulletin (MB) is the leading independent supplier of market intelligence and pricing to the global metals industries. Metal Bulletin's Stainless Steel 304 Europe Index aims to represent the costs of the raw material needed to produce the steel alloy.

The Stainless Steel 304 Europe Index:

- Models the components of a typical slab of European producers
- Measures the price of the raw materials needed to melt stainless steel of grade 304 in Europe
- Uses industry-wide acknowledge price sources and state-of-the-art index methodology
- Provides prices in USD and updates weekly
- The stainless steel index provides the producer's slab price for a \$64bn+ industry using raw materials prices at the highest available frequency.

Index Methodology

The index reflects the costs of the raw material needed to produce the steel alloy, e.g. the material delivered to the producer. It does not contain production costs itself, nor the producer's margin or any processing costs of the final material.

Slab recipe

The Stainless Steel Index (SSI) is calculated on the weighted slab components of the corresponding stainless grade. The weights are determined from the regions average slab recipe. This slab recipe consists of the raw materials which are used for the production of stainless steel in the specified region and grade. The specification of each raw material consists of the average chemical analysis, the metallic yield and the relative amount in the overall slab.

The slab recipes are obtained directly from primary market participants in the region's stainless steel market. The recipes are averaged and recipes with raw material components that deviate more than one standard error from the median component are excluded. The reliability of the obtained average recipe is then confirmed with market participants. We will update the information on a bi-annual basis initially but reserve the right to change the frequency at which we update the recipe according to market demands. Finally the chemical analysis of the slab is calculated and cross-checked against the grade's specification.

The stainless steel index provides the producer's slab price for a \$64bn+ industry using raw materials prices at the highest available frequency from trustworthy sources.

Metal Bulletin

Stainless Steel 304 Europe Index



Steel grade specification

Each of the stainless grade specification contains a maximum amount of 2% manganese (Mn), 0.08% carbon (C), 0.045% phosphate (P), 0.03% sulphur (S) and 0.1% nitrogen (N). The major components of the grade is given as follows:

SSI 304

AISI/SAE 304, UNS S30400, DIN 1.4301, EN X5CrNi18-10, "18/8"

	% min	%max
Chrome Cr	18	19.5
Nickel Ni	8	10.5
Iron Fe	balance	

Raw material decomposition

The major components Fe, Cr, Ni are decomposed to the raw materials as follows:

	Fe	Cr	Ni
Stainless Scrap	68%	63%	65%
Fe Scrap	21%	<1%	<1%
FeCr	5%	37%	<1%
LME/Fe Ni	6%	<1%	35%
FeSi			<1%
		Sum	100%

While the slab recipe determines the physical composition of the produced stainless steel grade, the price is determined by MBs raw component prices.

Metal Bulletin's Raw Components Prices

Each index is composed of the slab's components weighted according to their relative input weight into the final slab. The final product is within the specifications of the stainless grade of the index according to the AISI/SAE or similar national specification. The prices used are MB standard prices. In the index price composition they are adjusted for the component's contents and market conditions.

The index uses the following raw material prices when determining the index' final price:

- Steel Scrap Stainless 18/8 solids, USD/metric tonne
- Ferrous scrap Rotterdam export shredded fob Rotterdam, USD/metric tonne
- Ferro-chrome 6-8% C basis 60% Cr max. 1.5% Si major European destinations \$ per lb Cr, USD/pound
- Ferro-chrome lumpy Cr charge, basis 52% Cr quarterly major European destinations \$ per lb Cr, USD/pound
- Nickel Metal Europe uncut cathodes premium indicator in warehouse Rotterdam, USD/metric tonne
- Nickel Metal Europe 4x4 cathodes premium indicator in warehouse Rotterdam, USD/metric tonne
- Nickel Metal Europe briquettes premium indicator in warehouse Rotterdam, USD/metric tonne
- Ferro-silicon lumpy basis 75% Si (Scale pro rata) major European destinations, EUR/metric tonne
- Ferro-manganese basis 78% Mn (Scale pro rata) - Stand. 7.5% C major European destinations, EUR/metric tonne
- Molybdenum Drummed molybdic oxide Free market \$ per lb Mo in warehouse, USD/pound
- Europe domestic grade 304 stainless steel cold rolled sheet (2mm) ex-works, EUR/metric tonne
- Nickel Cash-USD/MT-LME
- Nickel 3 Month Forward-USD/MT-LME
- Molybdenum Cash-USD/MT-LME



Metal Bulletin

Stainless Steel 304 Europe Index

Calculation of individual index component prices

The Metal Bulletin Stainless Steel Index uses various raw material prices when determining the index's final price. The prices used are widely recognised industry standards from Metal Bulletin and the London Metal Exchange.

The individual prices used are each calculated to individual specifications using set methodologies. The prices following prices are assessed by Metal Bulletin in line with published Metal Bulletin Pricing Principles.

Metal Bulletin pricing principles

The principles for all Metal Bulletin prices, whether assessed ranges or indices, are the same. They involve the detailed canvassing of buyers and sellers at set periods by reporters, who specialise in the markets they are pricing.

Metal Bulletin is completely impartial and independent and engages with all sides of the market, including sellers, buyers and traders.

Their goal is to discover at what level market participants have concluded business, made offers or received bids over a certain defined period, which is generally the period since the conclusion of the previous price quotation. In addition to reported business – and most particularly when no business has been transacted – Metal Bulletin will weigh bids, offers and assessments of the market by participants.

Details of the deals reported are recorded, and verified on both sides whenever possible. Information relevant to the transaction – such as credit or delivery terms, lot size, grade and chemical specification, and details about the status and position of buyer and seller – are also taken into consideration. At times, Metal Bulletin will ask to see signed contracts or other materials as evidence of claimed deals.

From the information that Metal Bulletin receives, it either produces a range, to reflect the spread of prices at which business has been transacted, offered or bid; or, in the case of indices, a single number.

Metal Bulletin will use its judgment to exclude outlying numbers and discount prices that it believes may otherwise be questionable. Metal Bulletin is completely independent and has no vested commercial interest in any of the markets that it prices.

Metal Bulletin encourages wide participation in its prices: all participants in the market are welcome to contribute transactions, bids, offers and assessments for Metal Bulletin to consider in its formation of prices.

London Metal Exchange Prices

The below prices are priced by the London Metal Exchange and conform to all the published specifications.

Nickel Cash–USD/MT–LME

Nickel 3 Month Forward–USD/MT–LME

Molybdenum Cash–USD/MT–LME

Price Conversions

Prices in currencies other than USD are converted using the official closing FX rate. Prices in other units than MT are converted to MT with the highest available precision. Price sources with a higher frequency than the index' update frequencies are averaged to match the index' update frequency. As example LME's daily Nickel prices are average over one week to match the index weekly price update.