

Valast® 500

Abrasion-resistant strip for long-lasting performance

Tata Steel is expanding its range of abrasion-resistant hot-rolled steels with Valast 500, positioned in the 500 Brinell hardness range. Designed for high wear resistance and formability, Valast 500 is around four times harder than S355MC. This enables the use of thinner material for lightweight applications while delivering excellent abrasion and wear resistance. Typical applications include tipper truck bodies, asphalt finishers, mining equipment, screening machinery, and forestry equipment.

Valast 500 is available in coil form that can be cut to specific lengths to match your exact requirements. This flexibility reduces waste throughout the supply chain compared to reverse mill plate. Additionally, cut-to-length sheets offer superior surface quality and

improved thickness control over traditional plate, potentially eliminating the need for further processing steps such as shot blasting.

Valast 500 ensures consistent properties and thickness for reliable, 24/7 trouble-free processing. It is designed for thermal cutting methods, including laser and (micro) plasma cutting, and it also demonstrates good weldability.

Please note: Valast 500 is currently under development. Final dimensions and specifications in this preliminary datasheet may change. Our technical specialists are available to provide updates and answer your questions.

Chemical composition

Valast 500	C	Mn	P	S	Si	Al _{sol}	Nb	V	Ti	Mo	B
Guaranteed	≤ 0.280	≤ 1.200	≤ 0.020	≤ 0.005	≤ 0.100	≥ 0.015	≤ 0.060	≤ 0.100	≤ 0.060	≤ 0.250	≤ 0.005

All values are in weight%

Mechanical properties

Valast 500	Hardness*	Yield strength**	Tensile strength**	Elongation**
	HBW	R _{p0.2} (MPa)	R _m (MPa)	A ₅ (%)
Guaranteed	470-530			
Typical value	500	1400	1600	9

* Minimum core hardness 450 HBW. Brinell hardness (HBW) according to EN ISO 6506-1, on a milled surface 0.3 – 1 mm below surface. At least one test specimen per heat and 40 tons

** Mechanical properties are tested in longitudinal direction

Bending radius*

Direction	
Longitudinal	3.5t
Transverse	4t

* Minimum radius at bending over 90°; transverse = bend line parallel to rolling direction

Impact strength

Direction	Temperature	Guaranteed	Typical
Longitudinal	-40°C	≥ 34 J/cm ² *	65 J/cm ²
Transverse	-20°C	≥ 34 J/cm ² *	45 J/cm ²

* A value of 34 J/cm² corresponds to 27 J for a full-size 10 × 10 mm test specimen

Tolerances

Thickness

Complies with ½ EN 10051.

Length, width, shape and flatness

Complies with EN 10051. Tighter tolerances available on request.

Weldability

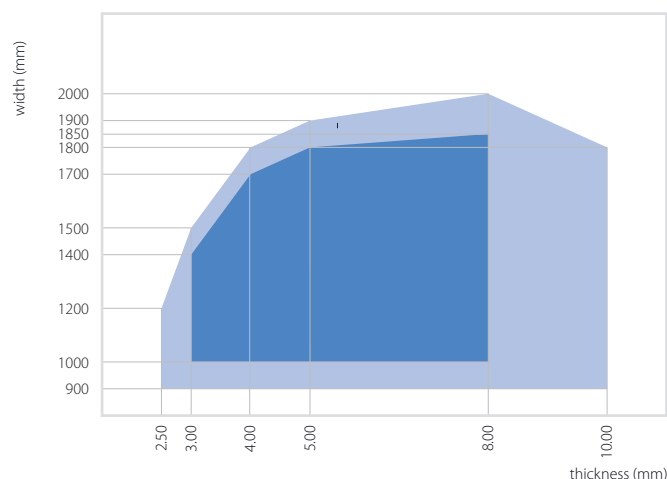
We invested in a research and development programme to ensure a low CET (< 0.37) in Valast 500 steel, making it suitable for all conventional welding methods.

CEV max	CET max	PCM max
0.50	0.37	0.34

Surface

As a hot-rolled strip product Valast offers superior surface quality compared to reversing mill plate in 'as rolled' condition.

Available dimensions of Valast® 500



■ Available
■ In development

Please contact us for other dimensions
For outlier dimensions minimum order quantities may apply

Product support

Our proactive Customer Technical Services team is available to help you optimise your processes and maximise performance with tailored advice and hands-on support. Backed by deep steel expertise and in-depth application knowledge, we'll work with you to boost efficiency, reduce waste, and get the best out of Valast 500. Please contact us for enquiries referring to material Nos. 1.8721 and 1.8734.

Further information

E: connect.engineering@tatasteeleurope.com

www.tatasteelnederland.com

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Tata Steel Nederland

Engineering

Wenkebachstraat 1

1951 JZ Velsen-Noord

The Netherlands

E: connect.engineering@tatasteeleurope.com

www.tatasteelnederland.com/products

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