

Valast® 450

Abrasion-resistant strip for long-lasting performance

Developed for construction, mining and agricultural applications, abrasion-resistant Valast 450 steel sheet withstands harsh wear and tear whilst maintaining lasting quality. With a typical hardness of 450 HBW, abrasion resistance is up to 2.5 times greater than S355 structural steel*. Users benefit from extended operational life and reduced maintenance costs. This product also enables production of lighter, more fuel-efficient vehicles or greater payloads if steel thicknesses are reduced in vehicles.

Valast 450 is available in extra-wide strip dimensions (2m) and customised lengths. Combined with consistent flatness, this allows

efficient, repeatable processing with improved nesting yield, and minimised waste and part rejection rate. A low CET ensures that it is suitable for all conventional welding methods.

Tata Steel's hot-rolled Valast 450 strip surface quality offers potential for a reduction of shot blasting and pre-painting requirements.

Typical applications of hard-wearing Valast 450 include tipper and dumper truck bodies, asphalt pavers, crushing and screening equipment, concrete mixer trucks and garbage trucks.

*Abrasive Wear Test ASTM G65

Mechanical properties

Valast 450	Hardness*	Yield strength**	Tensile strength**	Elongation**	Bending radius***
3 ≤ thickness ≤ 11 mm	HBW	R _{p0.2} (MPa)	R _m (MPa)	A ₅ (%)	
Guaranteed	420-480				4.5t
Typical value	450	1225	1450	9	-

* 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

*** Minimal radius at bending over 90° - bend line parallel to the rolling direction

Chemical composition

Valast 450	C	Mn	P	S	Si	Al _{sol}	Nb	V	Ti	Mo	B
Guaranteed	≤ 0.230	≤ 1.100	≤ 0.020	≤ 0.005	≤ 0.100	≥ 0.015	≤ 0.060	≤ 0.100	≤ 0.060	≤ 0.250	≤ 0.005

All values are in weight%

Impact strength

Direction	Temperature	Guaranteed	Typical
Longitudinal ≥ 6 mm	-40°C	≥ 34 J/cm ² *	75 J/cm ²

* A value of 34 J/cm² corresponds to 27J for a full size 10x10 mm test piece

Tolerances

Thickness

Complies with ½ EN 10051.

Length, width, shape and flatness

Complies with EN 10051. Tighter tolerances available on request.

Weldability

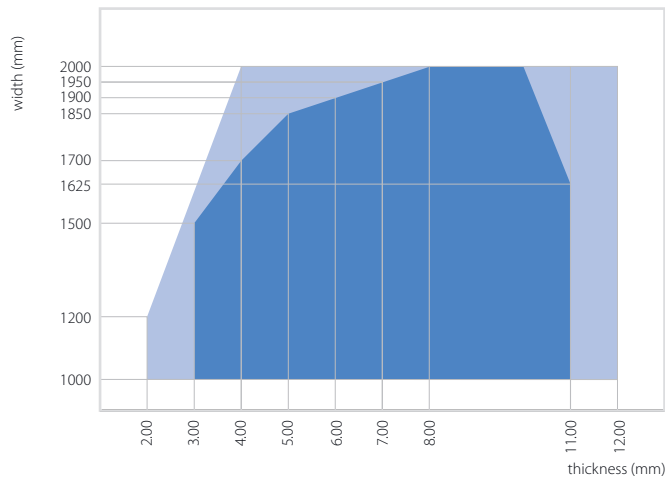
Tata Steel's investment in a research and development programme has ensured a low CET of less than 0.33 in Valast 450 steel – ensuring that all conventional welding methods can be used.

CEV max	CET max	PCM max
0.45	0.33	0.32

Surface

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

Dimensional window of Valast® 450



- Available
- Please contact us for availability

For coil orders below 1500 mm width, a minimum order quantity may apply. Please contact us to discuss.

Certification

A 3.1 certificate is issued with Valast 450. Other certificate types are available on request.

Product support

Our proactive customer technical services team offers technical consultancy and practical, hands-on support to help you to get the best from Valast 450. Using our steel know-how and application knowledge, we can assist you in maximising processing efficiency and end product performance. Please contact us for enquiries referring to material no. 1.8722.

Further information

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