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. Valast 450 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 Valast 450 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

	Hardness	Yield strength*	Tensile strength*	Elongation*	Bending radius**
4 ≤ thickness ≤ 8mm	HBW	$R_{p0.2}$ (MPa)	R_m (MPa)	$L_0 = 5.65 \sqrt{S_0}$ (%)	
Guaranteed	420-480				4.5t
Typical value	450	1250	1475	9	-

* Mechanical properties are tested in longitudinal direction
** Minimal radius at bending over 90° - bend line parallel to the rolling direction

Chemical composition

	C	Mn	Si	P	S	Al_{sol}	Nb	V	Ti	Mo	B
Guaranteed	≤ 0.230	≤ 1.000	≤ 0.100	≤ 0.020	≤ 0.005	≥ 0.015	≤ 0.060	≤ 0.100	≤ 0.060	≤ 0.250	≤ 0.005

All values are in weight%

Impact strength

Direction	Temperature	Guaranteed
Longitudinal	-40°C	≥ 34 J/cm² *

* A value of 34 J/cm² corresponds to 27J for a full size 10x10mm test piece

Tolerances

Thickness
Complies with ½ EN 10051.

Length, width, shape and flatness
Complies with EN 10051. Tighter tolerances available on request.
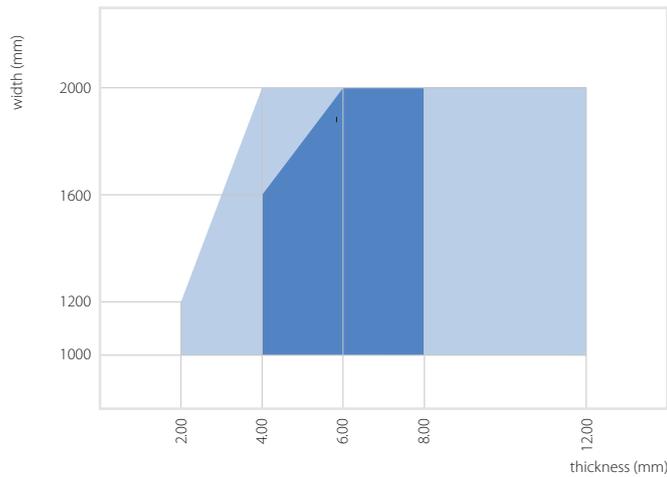
Weldability
Tata Steel's investment in a research and development programme has ensured a low CET of less than 0.33 in Valast 450 steel – ensuring that all conventional welding methods can be used.

CEV max	CET max	PCM max
0.45	0.33	0.32

Surface
Valast 450 hot-rolled strip offers superior surface quality when compared with reversing mill plate in 'as rolled' condition.

Dimensional window of Valast® 450

Available
Please contact for availability

For coil orders below 1500mm 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.

Specialty Steel
Sheet and Plate

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