

## Valast® 450

### Abrasion resistant steel 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 a Grade 50 structural steel\*. User benefits include 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 (81") and customized lengths. Combined with consistent flatness, this allows

efficient, repeatable processing with improved nesting yield, and minimized 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 refuse trucks.

\*Abrasive Wear Test ASTM G65

#### Mechanical properties

Valast 450	Hardness	Yield strength*	Tensile strength*	Elongation	Bending radius**
0.157" ≤ thickness ≤ 0.315"	HBW	MPa (ksi)	MPa (ksi)	ASTM (2") %	
Guaranteed	420-480				4.5t
Typical value	450	1250 (181)	1475 (214)	10	-

\* 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 <sub>sol</sub>	Nb	V	Ti	Mo	B
Guaranteed	≤ 0.230	≤ 1.000	≤ 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
Longitudinal	-40°F	≥ 20 ft.lbs

#### Tolerances on thickness

Tolerances for strip comply with ASTM A568 and ASTM A635. Tighter tolerances are available on request.

#### Weldability

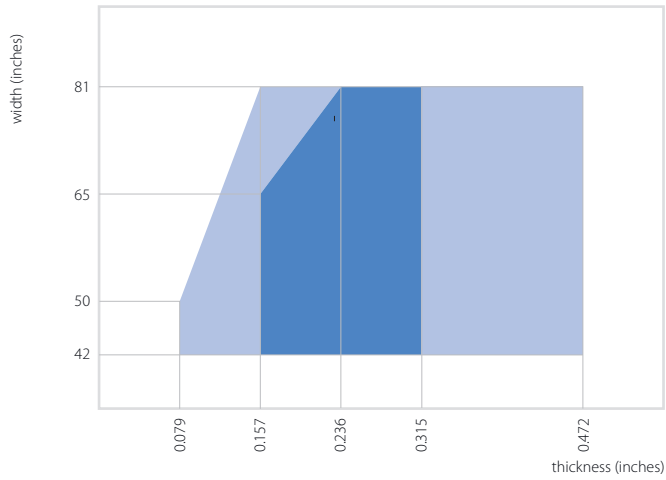
Tata Steel's investment in a research and development programme has ensured a low CET of less than 0.33 in Valast 450 steel – ensuring that all conventional welding methods can be used.

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. This potentially offers a reduction of shot blasting and pre-painting requirements.

## Dimensional window of Valast® 450



- Available
- Please contact for availability

For coil orders below 60" width, a minimum order quantity may apply. Please contact us to discuss.

## 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.

[www.tatasteeleurope.com](http://www.tatasteeleurope.com)

While care has been taken to ensure that the information contained in this publication is accurate, neither Tata Steel, nor its subsidiaries, accept responsibility or liability for errors or for information which is found to be misleading.

Before using products or services supplied or manufactured by Tata Steel and its subsidiaries, customers should satisfy themselves as to their suitability.

Copyright 2019  
Tata Steel Europe Limited

### Tata Steel

PO Box 10.000  
1970 CA IJmuiden  
The Netherlands  
Europe

E: [connect.engineering@tatasteeleurope.com](mailto:connect.engineering@tatasteeleurope.com)  
[www.tatasteeleurope.com/engineering](http://www.tatasteeleurope.com/engineering)

ENG:US:PDF:1219