

Weldox 1300

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High Strength Steel

Weldox 1300 is a general structural steel with a minimum yield strength of 1300 MPa (189 ksi).
Values in brackets are in imperial units for information only.

Applications	Load carrying structures having very high demands on low weight.														
Designation	Weldox 1300E with guaranteed impact toughness at -40°C (-40°F) Weldox 1300F with guaranteed impact toughness at -60°C (-76°F)														
Chemical composition (ladle analysis)	C*	Si*	Mn*	P	S	B*	Nb*	Cr*	V*	Cu	Ti	Al* total	Mo*	Ni*	N
	max %	max %	max %	max %	max %	max %	max %	max %	max %	max %	max %	min %	max %	max %	max %
	0.25	0.50	1.40	0.020	0.005	0.005	0.04	0.80	0.08	0.10	0.02	0.020	0.70	2.0	0.010
* Intentional alloying elements. The steel is grain-refined															
	Plate thickness			CEV	CET										
				Typical values											
				%	%	$CEV = C + \frac{Mn}{6} + \frac{Cr+Mo+V}{5} + \frac{Ni+Cu}{15}$									
	8 mm (0.314")			0,63	0,40	$CET = C + \frac{Mn+Mo}{10} + \frac{Cr+Cu}{20} + \frac{Ni}{40}$									
	10 mm (0.394")			0,65	0,42										
Mechanical properties	Plate thickness mm (inch)			Yield strength ¹⁾ R _{p0,2} min MPa ²⁾ (ksi)		Tensile strength ¹⁾ R _m MPa ²⁾ (ksi)			Elongation ¹⁾ A ₅ min %						
	4,0 - 10,0 (0.157-0.394)			1300 (189)		1400 - 1700 (203-247)			8						
¹⁾ For transverse test pieces															
²⁾ 1 MPa = 1 N/mm ²															
Impact properties	Steel grade and quality			Test temperature °C (°F)		Impact energy (J) for test on transverse ¹⁾ Charpy V 10 x 10 test specimens ²⁾ , min, J (ft-lbf)									
	Weldox 1300E			-40 (-40)		27 (20)									
	Weldox 1300F			-60 (-76)		27 (20)									
¹⁾ Unless otherwise agreed, transverse impact testing according to EN 10025 option 30 will apply.															
²⁾ For plate thicknesses less than 12 mm, subsize Charpy V-specimens are used.															
The specified minimum value is then proportional to the cross section of the specimen.															
Testing	Testing according to EN 10025.														

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Delivery condition	Q Quenched and tempered.
Dimensions	Weldox 1300 is delivered in plate thicknesses of 4-10 mm (0.157-0.394"). More detailed information on dimensions is provided in our brochure 41-General product information Weldox, Hardox, Armox and Toolox-UK.
Tolerances	<ul style="list-style-type: none">- All plates are produced with AccuRollTech™ thickness precision guarantee. <p>AccuRollTech™ meets the requirements of EN 10 029, but offers more narrow tolerances.</p> <ul style="list-style-type: none">- Tolerances on flatness according to Class N (Normal tolerances). <p>More detailed information is given in our brochure 41-General product information Weldox, Hardox, Armox and Toolox-UK as well as at www.weldox.com</p>
Surface condition	According to EN 10163-2, Class A, Subclass 1 (repair by welding is allowed).
General technical delivery requirements	According to our brochure 41-General product information Weldox, Hardox, Armox and Toolox-UK.
Heat treatment and fabrication	<p>Weldox 1300 has obtained its mechanical properties by a quenching and tempering process. Weldox 1300 is not suited for applications requiring hot working at temperatures above 200° C (392° F) since the material may then lose its guaranteed properties.</p> <p>For information concerning welding and fabrication, consult our Technical Customer Service.</p> <p>Appropriate health and safety precautions must be taken when welding, cutting, grinding or otherwise working on the product. Grinding, especially of primer coated plates, may produce dust with high particle concentration.</p>

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