



STOCK PROFILE

**ABRASION RESISTANT AND
HIGH YIELD STEEL PLATE**



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Abrasion Resistant and High Yield Steel Plate

THK	ABRO 400	ABRO 500	CREUSABRO 4800	CREUSABRO 8000	ABRO M X120Mn12	ULTRACLAD 801	690 HIGH YIELD STEEL
	Hardness 400HBW Av	Hardness 500HBW Av	Hardness As Supplied 360 HBW, In Service up to 440HBW	Hardness As Supplied 430-500 HBW	Hardness As Supplied 200HBW, In Service above 500HBW	Wear Resistant Material Hardness 50 – 60HRC	
3	•		•				•
4	•		•				•
5	•		•	•	•		•
6	•	•	•	•	•		•
8	•	•	•	•	•	•	•
10	•	•	•	•	•	•	•
12	•	•	•	•	•	•	•
15	•	•	•	•	•	•	•
20	•	•	•	•	•	•	•
25	•	•	•	•	•	•	•
30	•	•	•	•	•	•	•
35	•	•					•
40	•	•	•	•	•		•
45	•						•
50	•	•	•	•			•
60	•						•
65	•						•
70	•						•
75	•	•					•
80	•	•					•
85	•						
90							•
100	•						•
120	•						•

Other thicknesses available on request

Also available, a comprehensive range of punched, plasma and laser perforated screens in abrasion and corrosion resistant grades to suit customer's individual applications, from 200HBW through to 63HRC.

Full technical and material selection advice and support provided.

Typical Mechanical Properties

Abrasion Resistant Steels - Values based on 20mm thickness

Grade	Yield stress	Tensile strength	Elongation	Impact ISO V-notch
Abro 400	1000 MPa	1300 MPa	12%	30J @ - 40°C
Abro 500	1300 MPa	1650 MPa	8%	25J @ - 20°C
Creusabro 4800	900 MPa	1200 MPa	12%	45J @ - 20°C
Creusabro 8000	1250 MPa	1630 MPa	12%	40J @ - 20°C
Abro M	340 MPa	880	30%	
Ultraclad 801	Chrome Carbide Overlay Plate	50/60 HRC		

High Yield Steel

Grade	Yield stress	Tensile strength	Elongation	Impact ISO V-notch
690 Yield	690 MPa min	790 – 930 MPa	18% min	27J @ - 45°C

Typical Chemical Composition

Abrasion Resistant Steels - Values based on 20mm thickness

Grade	C	Mn	Si	S	P	Ni	Cr	Mo	B
Abro 400	0.18	1.80	0.50	0.025	0.025	0.80	1.00	0.30	0.005
Abro 500	0.30	1.80	0.50	0.025	0.025	0.80	1.00	0.50	0.005
Creusabro 4800	0.20	1.60		0.005	0.018	0.20	1.90	0.40	
Creusabro 8000	0.28	1.60	0.50	0.005	0.015	0.40 approx	1.60	0.20 min	
Abro M	1.15	13.0	0.40	0.025					
Ultraclad 801	5.00	0.70					30.00		

High Yield Steel - Values based on 8 ≤ 30mm thickness

Grade	C	Mn	Si	P	S	B	Cr	Cu	Mo	Nb	Ni	Ti	V	Al
690 Yield	0.14	1.35	0.40	0.012	0.003	0.002	0.01	0.01	0.12	0.035	0.01	0.025	0.05	0.035

Product Application Profile

Spec	Operating Temp	Cold forming	Hot forming	Welding	Drilling	Profiling	Wearlife x Mild Steel	Impact strength
Abro 400	200°C Max	B	X	A	B	GPWL	3 to 4	High
Abro 500	200°C Max	C	X	B	C	GPWL	6 to 8	High
Creusabro 4800	350°C Continuous 400°C Intermittent	B	A	A	B	GPWL	3 to 5	High
Creusabro 8000	300°C Continuous 350°C Intermittent	C	A	B	C	GPWL	8 to 10	High
Abro M	Ambient only	B	B	B	C to X	PWL	20 to 30	Very high
Ultraclad 801	450°C Continuous 600°C Intermittent	A	X	A	X	PWL	20 to 30	Moderate to high
690 Yield	Ambient	A	X	A	A	GPWL	1.5 to 2	Very high

A = Possible
 B = Possible with some difficulty
 C = Difficult
 X = Not possible*

P = Plasma
 W = Water jet
 L = Laser
 G = Gas

*Consult our technical sales for recommended methods of fixing.

Note: IMS UK and its suppliers undertake continual material development and the data is a general guide, accurate at the time of printing. Buyers and users should satisfy themselves as to the suitability of the selected steel for their particular application.

Processing Facilities

- CAD / CAM Profiling
- Oxy – gas Profiling
- Forming
- Beveling
- Plasma Profiling
- DXF Compatible
- Drilling and Countersinking
- Welded Fabrications
- Laser Profiling
- Perforating

STOCK PROFILE

Part of the IMS Group, with sales offices established in over 14 European countries, IMS UK is a major distributor and processor of Abrasion Resistant and High Yield Steel plate throughout the UK and Ireland.



IMS have an extensive stock of 3mm - 120mm plate, including their branded ABRO range of abrasion resistant grades, and offer full technical and material selection advice and support to provide cost effective solutions for complex applications.

The abrasion resistant stock range comprises standard 400 and 500 brinell grades, 11-14% manganese, as well as the more specialised Creusabro 4800 and Creusabro 8000 materials. Weld overlay Ultraclad 800 offers even higher performance in certain

applications. For high strength and weight saving applications RQT 701 is also available.

With over 100 years of specialist knowledge within the steel industry, the company offers in-house manufacturing facilities, to provide profiled, formed and drilled parts and welded fabrications, supported by a CAD/CAM design service ensuring precision manufactured components.

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Abro 500	200°C Max	C	X	B	C	GPWL	6 to 8	High
Creusabro 4800	350°C Continuous 400° C Intermittent	B	A	A	B	GPWL	3 to 5	High
Creusabro 8000	300°C Continuous 350°C Intermittent	C	A	B	C	GPWL	8 to 10	High
Abro M	Ambient only	B	B	B	C to X	PWL	20 to 30	Very high
Ultraclad 801	450°C Continuous 600°C Intermittent	A	X	A	X	PWL	20 to 30	Moderate to high
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