

High Yield Cold Forming Steel Plate



Brown McFarlane offers the widest range of carbon and stainless steel plate, available ex-stock.

High yield cold forming steel plate offers both strength and formability, with excellent surface quality, dimensional and geometrical accuracy and uniformity of properties. Steel structures can be made lighter which means that the payload of machines and equipment can be increased and fuel consumption reduced.

Specifications/Grades

- OPTIM 700 MC
- EN10149 part 2 : S700MC

Other grades available on short lead times. Details on request.

Welding

Despite its high strength, welding is easier than welding of conventional lower yield grades. Good weldability means that preheating is not necessary under normal conditions. Surfaces must be both dry and clean before welding and welding materials must be of sufficiently low hydrogen content. The weld material properties, strength etc, can be of a lower strength than the steel being used, provided that the weld is situated in a less stressed part of the structure.

Applications

- Agricultural equipment
- Axle parts
- Crane booms
- Defence applications
- Low weight piling
- Mechanical handling
- Side impact protection systems
- Truck body
- Vehicle chassis

Key Benefits

- Cut to size.
- Fully accredited quality systems to ISO 9001, 14001 and 18001.
- Guaranteed mechanical properties, excellent cold formability and a clean surface finish, omni directional formability.
- In-house High Definition plasma profiling guaranteed tight tolerances with minimum distortion.
- Low carbon equivalent value offering excellent weldability.
- Delivered worldwide by our international logistics organisation.



Available Sizes

Thickness: 3/4/5/6/8/10/12mm Up to Length: 14000mm Width: 1250/1500mm

SALES & DISTRIBUTION (UK)

P. +44 (0) 1782 289 909
F. +44 (0) 1782 289 804
E. sales@brownmac.co.uk
Brown McFarlane Ltd
Ladywell Works
New Century Street
Stoke-on-Trent
ST1 5QH
United Kingdom

SALES OFFICE (UK)

P. +44 (0) 845 470 1651
F. +44 (0) 845 409 4531
E. glasgow@brownmac.co.uk
Brown McFarlane Ltd
Unit 7, Lonmay Place
Panorama Business Village
Glasgow
G33 4ER
United Kingdom

EXPORT SALES (UK)

P. +44 (0) 1922 471 810
F. +44 (0) 1922 624 778
E. exportsales@brownmac.co.uk
Brown McFarlane Ltd
The Old Foundry
Bath Street
Walsall
WS1 3BZ
United Kingdom

SALES & DISTRIBUTION (UAE)

P. +971 4 880 9077
F. +971 4 880 9078
E. brownmc@brownmc.ae
Brown McFarlane
International FZE
Oryx Works
PO Box 17679
Jebel Ali
Dubai
United Arab Emirates

SALES & DISTRIBUTION (RSA)

P. +27(0) 35 797 3034
F. +27(0) 35 797 3685
E. sales@brownmac.co.za
Brown McFarlane Africa
(Pty) Ltd
PO Box 16
Richards Bay 3900
KwaZulu Natal
South Africa
Also Johannesburg and Durban

SALES OFFICE (SINGAPORE)

P. +65 6899 1708
F. +65 6899 1710
E. salesfareast@brownmac.com
Brown McFarlane Far East
(Pte) Ltd
1 Bukit Batok Crescent
#04-48 WCEGA Plaza
Singapore 658064

Chemical Properties

Heat analysis (%)

Steel Grade	C	Si	Mn	P	S	Al
	max	max	max	max	max	max
Optim 700 MC	0.10	0.20	2.10	0.02	0.01	0.015

Mechanical Properties

In delivery conditions at ambient temperatures

Steel Grade	Yield (min) MPa	Tensile MPa	Elongation (min) A5 %	Impact Strength (min)	
				t°C	Charpy. V (J)
Optim 700 MC	700	750-930	15	-20	40

Carbon Equivalent (CEV)

	Average	Maximum
Optim 700 MC	0.37%	0.41%

Forming

Material can be bent easily in the workshop. The following table indicates the smallest bend radius, with no limitations of bending direction, bending angle 90°, depending on plate thickness.

	Optim 700 MC								
Thickness:	<2.5	(2.5)-3	(3)-4	(4)-5	(5)-6	(6)-7	(7)-8	(8)-10	(10)-12
Bend Radius:	---	3.5	5.0	6.0	8.0	12.0	14.0	16.0	---

Cutting

Plates can be easily cut by using flame, plasma or laser cutting.

When cutting mechanically attention must be paid to the stiffness of the equipment, the blade condition and clearance, and the supporting of the work piece.



Quality steel plate suppliers to the world