



MN12 - WEAR RESISTANT STEEL

Chemical Analysis:

C Mn
< 1,3 12 – 14

Euro norm/Din
EN X120Mn12
1.3401

Application areas:

Is often used as wear resistant material in crushers, excavators and general mining industry. The material is also used as drilling protection in security cabinets. Other applications are the interior of automatic shot-blasting machines.

Produced in:

Plates 1,5 - 50 mm (see next page for complete range)
Round bars Ø 6 – 100 mm
Hardness up to HB700 during cold working
Flat bars 30x10 – 100x10 mm
Square bars

Mechanical Properties

Hardness HB 180-260 OBS! Surface hardness up to HB 700 after plastic forming of surface.

	<u>Typical values</u>
Tensile strength:	615 Mpa
Yield strength:	Difficult to define (350 Mpa)
Elongation:	Min. 35%

Impact toughness

CHARPY V, Specimens are cut parallel with the final rolling direction. The V notch is placed vertical to the rolled surface. See typical values below.

At 20°C : 102 J
-20°C : 68 J

Cutting

Cutting can be performed by gas-, plasma-, water-, and laser technique.

Cold forming

Sheet metal can be bent with a radius, $R = 3 \times \text{Thickness}$, across the rolling direction.



General recommendations for welding

Welding is performed with low heat input – $E < 20 \text{KJ/cm}$, interpass temperature should be limited to about 100°C (210°F) –with water-cooling in between each pass if necessary. Distortions should be hammered between passes if necessary.

No preheating is needed. All standard welding processes can be used.



Formats Plates:

Weight (kg)	Available Dimensions (mm)
24	2000x1000x1,5
32	2000x1000x2
48	2000x1000x3
256	2000x2000x4
	2000x1000x4
480	3000x2000x5
	2000x2000x5
	2000x1000x5
500	2500x2500x5
	2500x1250x5
576	3000x2000x6
	2000x2000x6
	2000x1000x6
432	3000x1500x6
	2000x1500x6
768	3000x2000x8
	2000x2000x8
	2000x1000x8
800	2500x2500x8
	2500x1250x8
576	3000x1500x8
	2000x1500x8
	(1000x1500x8)
960	3000x2000x10
	2000x2000x10
	2000x1000x10
1000	2500x2500x10
	2500x1250x10
720	3000x1500x10
	2000x1500x10
	(1000x1500x10)
1152	3000x2000x12
	2000x2000x12
	2000x1000x12
1200	2500x2500x12
	2500x1250x12
864	3000x1500x12
	2000x1500x12
	(1000x1500x12)
1440	3000x2000x15
	2000x2000x15
	2000x1500x15
	2000x1000x15
1920	3000x2000x20
	2000x2000x20
	2000x2000x20
	2000x1000x20
2400	3000x2000x25
	2000x2000x25
	2000x2500x25
2880	3000x2000x30
	2000x2000x30
	2000x3000x30
3840	3000x2000x40
	2000x2000x40
	2000x4000x40

The different standards may be the nearest comparable