



Ballistic steel for human protection

Miilux Protection 400T – quenched and tempered rolled homogenous armor (RHA, MIL-DTL-12560) steel.

Chemical composition content % maximum (ladle analysis)

Steel grade	Thickness	C	Si	Mn	P	S	Cr	Ni	Mo	B
Miilux Protection 400T	4-50 mm	0,28	0,7	1,7	0,030	0,015	1,5	0,8	0,50	0,005

CEV 0,60

Typical mechanical properties

Thickness (mm)	Yield strength Rp 0,2 N/mm ²	Tensile strength Rm N/mm ²	Elongation A5 %	Impact Charpy-V -40 °C Kv Joule	Hardness Range HBW
4-5,9	1000	1250	10	20	360-410
6-15	900	1100	11	25	340-390
16-28	900	1100	11	25	330-380
29-50	850	1050	12	30	310-360

Other hardness ranges are possible by special agreement.

Miilux Protection 400T is supplied in plate thickness 4-50mm (other thicknesses as per agreement).

Delivery condition

Quenched and Tempered

Tolerances

Dimensions according to EN 10029.

Thickness according to EN 10029 Class C or Class D, other thickness tolerances by special agreement.

Flatness according to EN 10029 class N, steel type H.

Surface condition

According to EN 10163-2 class B subclass 3

General technical delivery condition

According to EN 10021, unless otherwise is agreed.

Inspection documents EN 10204-2.2, issued in English.

Welding and flame cutting

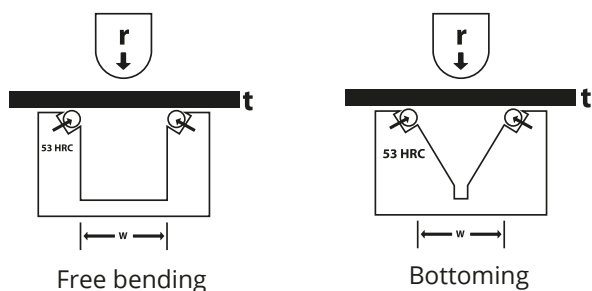
Preheating at least to 100 °C is recommend when combined plate thickness is 30 mm or more. Commonly used filler metals for Miilux Protection 400T are ESAB OK 48.00 and OK Autrod 12.51. Equivalent filler metals can also be found from other suppliers, such as Elga, Lincoln and Oerlikon.

Same preheating temperatures should be used in flame cutting.

Cold forming directive limits for the purpose of description only

Steel grade	Plate thickness (mm)	Free bending < 90° rounding radius of press/ plate thickness R/t Bending line to rolling direction		Free bending -Free hole width/plate thickness W/t		Bottoming 90° -Free hole width/ plate thickness W/t	Spring back (°)
		Transverse	Longitudinal	Transverse	Longitudinal		
Miilux Protection 400T	4-20	5	6	12	13	~15,0	9-13
Miilux Protection 400T	>20	6	7	13	14	~15,0	9-13

Bending should be done with one press | Slow pressing speed is recommended | Lower tool should be roller-type (see drawings)



Machining

Miilux Protection 400T can be machined with rapid steel and hard metal (HSS) drills with a satisfactory life if the drill advance and cutting speed are correspondingly accommodated.