

Classifications

EN ISO 24598-A	AWS A5.23 / SFA-5.23
S S CrMoW12 FB	F9PZ-EG-G-H4

Characteristics and typical fields of application

Thermanit MTS 4 – Marathon 543 is a wire – flux combination for Submerged Arc Welding high temperature and creep resistance 12% Chromium steel like X20CrMoW12-1.

Marathon 543 is an agglomerated welding flux of the fluoride basic type with high basicity. For more information regarding this welding flux see our detailed data sheet.

Base materials

Similar alloyed creep resistant steels.
X20CrMoV12-1

Typical analysis

wt.-%	C	Si	Mn	Cr	Ni	Mo	W	V	N
wire	0.25	0.15	0.9	11.2	0.60	0.90	0.50	0.25	0.30
all-weld metal	0.18	0.20	0.9	11.2	0.60	0.88	0.50	0.22	0.30

Mechanical properties of all-weld metal - typical values (min. values)

Condition	Yield strength $R_{p0.2}$	Tensile strength R_m	Elongation A ($L_0=5d_0$)	Impact energy ISO-V KV J
	MPa	MPa	%	20°C
a1	≥ 550	≥ 700	≥ 16	≥ 34

a1 = 4 hours 760 °C

Operating data

	Polarity	DC +	Dimension mm	
				2.5
				3.0
				4.0

Preheating and interpass temperature 240 – 280°C. Heat Input < 2,0 kJ/mm

Holding after welding at 80°C/min. 4hrs.

PWHT of 760°C for minimum 2 hours.

Approvals

TÜV (07814), CE