

Data sheet and application

DIM L-1.4502 ©

Material no.: 1.4502
 EN/DIN 8556: SG X8 CrTi 18
 EN ISO 14343-A: G Z17 Ti
 AWS/ASME SFA A5.9: R430 (mod.)

Highly alloyed, non-corrosive

Characteristics

Solid wire electrode for armouring on stainless steels with 13-18% Cr as well as for gas, water and steam fittings made of unalloyed or low alloy steels for operating temperatures up to +500°C.

Excellent lubricity and conveying properties. Very good welding and flow behavior. The Ti-content protects against intercrystalline corrosion (grain decay).

Seawater-resistant as well as scale-resistant in air and oxidizing, especially sulfur-containing combustion gases up to +950°C.

Also suitable for joint welding on stainless steel, ferritic 13-18% Cr and for applications where color matching with the base material is required.

Materials

Corrosion-resistant applications on all weldable carrier materials unalloyed and low-alloyed.

Compounds with corrosion-resistant Cr-steels as well as other alloy-like materials with C content $\leq 0.20\%$.

Exhaust system for automobiles.

1.4000 X6Cr13 / X7Cr14 / 1.4002 X7CrAl13 / 1.4016 X8Cr17 / 1.4057 X17CrNi16-2
 1.4059 GX22CrNi17 / 1.4509 X2CrTiNb18 / 1.4510 X3CrTi17 / 1.4511 X8CrNb17 / 1.4512 X2CrTi12 1.4523
 X8CrMo17 / AISI 430Ti, AISI431

Chemical composition

C	Si	Mn	Cr	Ti
0,07	0,8	0,6	17,5	+

Certificate of batch upon request.

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Mechanical properties of pure weld metal

a*

Yield strength Rp0.2 MPa	Tensile strength Rm MPa	Elongation A (L0=5d0) %	Impact energy ISO-V KV J +20°C
≥ 300	≥ 500	≥ 20	-

	u*	u - 1st layer	u - 2nd layer	u - 3rd layer	a*
Brinell-hardness HB	150-200	300-400	200-300	170-220	130

u* untreated, welding state - base material unalloyed, protective gas Ar + 8-10% CO₂

a* annealed, 720°C/2 h – protection gas Ar + 8-10% CO₂

The hardness of the weld metal is mainly influenced by the mixing with the respective base material and its chemical composition. The higher the mixing ratio and the C content of the base material, the higher the hardness of the weld metal. Protective gases with higher CO₂ contents also lead to higher hardness.

Processing instructions

Protection gases: Argon + 8-10% CO₂ / Argon + 3% O₂ or max. 5% CO₂ (depending on application)