

316LMn

CATEGORY GMAW-GTAW Solid wires

TYPE Solid welding wire for welding fully austenitic CrNiMnMo stainless steels and low temperature steels.

APPLICATIONS Particularly suited for corrosion conditions in urea synthesis plants for welding work on steel X 2 CrNiMo 18 12 and for over-layer claddings of Type 1.4455.. Well suited for joining and cladding applications with matching and similar austenitic CrNi(N) and CrNiMo(Mn,N) steels/cast steel grades.

PROPERTIES Stainless steel with excellent resistance to intercrystalline corrosion and wet corrosion up to 350°C (662 °F). Corrosion-resistance is similar to low-carbon CrNiMo(Mn,N) steels/cast steel grades. Seawater resistant, good resistance to nitric acid, selective attack max. 200 µm. Non magnetic (permeability in field of 8000 A/m 1.01 max.).

CLASSIFICATION

AWS	AWS A5.9: ER 316LMn
EN ISO	ISO 14343-A: G 20 16 3 Mn N L
DIN: W.Nr.	1.4455

SUITABLE FOR 1.4311, 1.4406, 1.4429, 1.4439, 1.3951, 1.3952, 1.3953, 1.3965, 1.6902, 1.6903, 1.6905, 1.5637, 1.5680 X2CrNiMoN17-13-3, X5CrNiN 19-9, X1CrNiMoTi 18-13-2, X8Ni9, 10CrNiTi18-10 and cryogenic 3,5-5% Ni-steels

APPROVALS CE approved

WELDING POSITIONS:



WELD METAL ANALYSIS %

C	Mn	Si	Cr	Ni	Mo	N
0.015-0.03	7.0-7.5	0.4-0.5	20-20.5	15.5-16	3.0	0.15-0.18

MECHANICAL PROPERTIES (TYPICAL)

Heat treatment	R _{P0,2} (N/mm ²)	R _m (N/mm ²)	A ₅ (%)	Impact energy (J) ISO-V			Hardness HRc / HV
				+20C	-40°C	-196°C	
AW	>430	>650	>35			75	

AW: as welded

WELDING PARAMETERS / PACKING

D (mm)	Welding Parameters		Packing	
	Voltage (V)	Current (A) DC-	Spool type	kg / pack
0.8	12-24	55-160	BS-300	15
1.0	15-28	80-240	BS-300	15
1.2	15-29	100-300	BS-300	15

REDRYING TEMPERATURE not required

GAS ACC. EN ISO 14175: M11, M12, M13