

Shield-Bright 309LMo

Shield-Bright 309LMo was designed for welding type 316 clad steels on the first pass in cladding steels or for welding dissimilar metals such as molybdenum-containing austenitic stainless steels to carbon steels. It is used in paper mills and in power plants to give greater corrosion resistance. This wire performs best when used out-of-position shielded with either Argon/C02 or 100% C02.

Specifications

Classifications

SFA/AWS A5.22 : E309LMoT1-1
SFA/AWS A5.22 : E309LMoT1-4
JIS Z 3323 : TS309LMo-FB1
KS D 3612 : YF309MoLC
EN ISO 17633-A : T 23 12 2 L P C1 2
EN ISO 17633-A : T 23 12 2 L P M21 2

Approvals

DNV-GL : VL 309MoL
KR : RW 309MoLG(C)

Approvals are based on factory location. Please contact ESAB for more information.

Welding Current

DC+

Alloy Type

C Cr Ni Mo

Shielding Gas

M21, C1 (EN ISO 14175)

Typical Tensile Properties

Conditional Statement	Yield Strength	Tensile Strength	Elongation
C1 Shielding Gas			
As welded	480 MPa (70 ksi)	620 MPa (90 ksi)	30 %

Typical Charpy V-Notch Properties

Condition	Testing Temperature	Impact Value
C1 Shielding Gas		
As Welded	-29 °C (-20 °F)	50 J (37 ft-lb)
As Welded	-196 °C (-321 °F)	20 J (15 ft-lb)

Typical Weld Metal Analysis %

C	Mn	Si	S	P	Ni	Cr	Mo
M21 Shielding Gas							
0.030	1.2	0.75	0.008	0.024	13.0	23.5	2.60
C1 Shielding Gas							
0.029	1.0	0.70	0.008	0.024	12.7	22.90	2.60

Deposition Data

Diameter	Current	Voltage	Wire Feed Speed	Deposition Rate
1.2 mm (0.045 in.)	130-220 A	24-29 V	5.8-14.4 m/min (228-567 in./min)	1.9-4.6 kg/h (4.2-10. lbs/h)