AWS E309L-16

Smootharc™ Plus 309L-16

DESCRIPTION:

Utilizing a high alloy core wire that is low in carbon to reduce susceptibility to sensitization during high temperature service, **Smootharc Plus 309L-16** is ideal for the out-of-position welding of austenitic stainless steels to unalloyed or low alloy steels. It delivers excellent welding performance and can also be used for welding buffer layers on unalloyed steels prior to joining to other austenitic stainless grade steels.
Note: Actual certs are included in every master carton of stainless stick electrodes art no charge.

FEATURES:	BENEFITS:
• Spray-like arc transfer	• Low spatter and less clean-up
• Extremely high moisture resistance	• Extends shelf life of product in open environments
• Directional arc	• Metal goes where directed, excellent for out-of-position welding
• Easy strike and re-strike	• Easy to use, less chance of starting defects
• All-position	• Welds extremely well in flat, horizontal, vertical, and overhead positions
• Self-detaching slag	• Less cleaning time and less chance of slag inclusions
• Electrode does not overheat	• Minimal stub loss, cost-effective

TYPICAL WELD METAL PROPERTIES**(Chem Pad):

Weld Metal Analysis		AWS Spec
Carbon (C)	0.03	0.04 max
Chromium (Cr)	23.0	22.0 to 25.0
Nickel (Ni)	12.5	12.0 to 14.0
Molybdenum (Mo)	0.1	0.75 max
Manganese (Mn)	0.7	0.5 to 2.5
Silicon (Si)	0.7	0.90 max
Phosphorus (P)	0.02	0.04 max
Sulphur (S)	0.025	0.03 max
Copper (Cu)	0.1	0.75 max

TYPICAL MECHANICAL PROPERTIES**(AW):

		AWS Spec
Tensile Strength	87,000 psi (600 MPa)	75,000 psi
Yield Strength	68,000 psi (469 MPa)	not required
Elongation % in 2”	39%	30%
Schaeffler Number	6-15	not required
DeLong Ferrite	6-15	not required
WRC Number Range	6-15	not required

CONFORMANCES AND APPROVALS:

• AWS A5.4, E309L-16, ASME SFA 5.4

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RECOMMENDED WELDING PROCEDURES:

GENERAL:	DCEP (electrode positive, work negative) or AC
ARC LENGTH:	Short (less than half the diameter of the electrode)
FLAT & HORIZONTAL:	Angle electrode 10-15° from 90°
VERTICAL-UP:	Use weaving techniques; reduced amperage compared to flat position setting
OVERHEAD:	Use slight weaving motion within the puddle
STORAGE:	Smootharc Plus electrodes have a high degree of moisture resistance; however, for critical applications, the electrode should be held at 225°F after opening
RECONDITIONING:	If exposed to atmosphere for extended periods, recondition at 500°F for one (1) hour

RECOMMENDED OPERATING PARAMETERS:

Diameter Inches	Diameter mm	Type of Power	Flat & Horizontal - Minimum Amps	Flat & Horizontal - Optimum Amps	Flat & Horizontal - Maximum Amps
3/32	2.4	DCEP or AC	45	65	80
1/8	3.2	DCEP or AC	55	105	120
5/32	4.0	DCEP or AC	65	140	170
3/16	4.8	DCEP or AC	160	170	205

AVAILABLE DIAMETERS AND PACKAGES:

Diameter Inches	Diameter mm	Length Inches	Length mm	6-lb. Can	10-lb. Can
3/32	2.4	10	254	S737531-039	–
1/8	3.2	14	355	–	S737544-088
5/32	4.0	14	355	–	S737551-088
3/16	4.8	14	355		S737558-088

Material Safety Data Sheets on any Hobart Brothers Company product may be obtained from Hobart Customer Service.

Because Hobart Brothers Company is constantly improving products, Hobart reserves the right to change design and/or specifications without notice.

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