



309 DC Lime

AWS E309-15

Replaces 020520

170-C, INDEX: 060130

DESCRIPTION:

309 DC Lime is outstanding for use with 309-type base metals, as well as for 18-8 clad steels or dissimilar materials if alloy content is sufficiently high for a solid, yet ductile deposit. It has a convex bead and is an excellent choice when welding highly restrained joints or for crack sensitive materials. Ideal for pipe welding and cryogenic applications.

Note: Actual certs are included in every master carton of stainless stick electrodes at no charge.

Features	Benefits
<ul style="list-style-type: none"> • Electrode doesn't overheat • Globular transfer • Easy strike and re-strike • All-position 	<ul style="list-style-type: none"> • Less stub loss, cost-effective • Exceptional weld metal quality • Easy to use, less chance of starting defects • Welds extremely well in flat, horizontal, vertical (up) and overhead positions
<ul style="list-style-type: none"> • Extremely high moisture resistance • Low oxygen and nitrogen 	<ul style="list-style-type: none"> • Extends shelf life of product in open environment • Excellent for low temperature (-120°F) impact properties

TYPICAL WELD METAL PROPERTIES* (CHEM PAD):

Weld Metal Analysis		AWS Spec
Carbon (C)	0.05	0.08 max
Manganese (Mn)	1.30	0.5 to 2.5
Phosphorus (P)	0.020	0.04 max
Sulphur (S)	0.016	0.03 max
Silicon (Si)	0.56	0.90 max
Copper (Cu)	0.10	0.75 max
Chromium (Cr)	23.10	22.0 to 25.0
Nickel (Ni)	12.70	12.0 to 14.0
Molybdenum (Mo)	0.10	0.75 max

TYPICAL MECHANICAL PROPERTIES* (AS WELDED): AWS Spec

Tensile Strength	88,000 psi (607 MPa)	80,000 psi
Yield Strength	67,000 psi (462 MPa)	not required
Elongation % in 2"	37%	30%
DeLong Ferrite Number Range	6-15	not required
Schaeffler Number Range	6-15	not required
WRC Number Range (1992)	6-15	not required

Note: Nitrogen (N) assumed to be 0.06% for calculation purposes.

CONFORMANCES AND APPROVALS:

- AWS Spec A5.4, Class E309-15 • ASME SFA5.4

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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:** DC Lime electrodes have a high degree of moisture resistance; however, for critical applications, the electrodes should be held at 225°F after opening.
- RECONDITIONING:** If exposed to atmosphere for extended periods, recondition at 500°F for 1 hour

RECOMMENDED OPERATING PARAMETERS:

Diameter		Type of Power	FLAT & HORIZONTAL		
Inches	mm		Minimum Amps	Optimum Amps	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

AVAILABLE DIAMETERS AND PACKAGES:

Diameter		Length		6-lb. Can	10-lb. Can
Inches	mm	Inches	mm		
3/32	2.4	10	254	S470330-032	—
1/8	3.2	14	355	—	S470344-033
5/32	4.0	14	355	—	S470351-033

Material Safety Data Sheets on any McKay product may be obtained from McKay Customer Service.

Because McKay is constantly improving products, McKay reserves the right to change design and/or specifications without notice