



308/308H Sterling® AP

AWS E308-16 & 308H-16

REPLACES: 020520

160-A, INDEX: 060127

DESCRIPTION:

Excellent for use on Type 301, 302, 304, 305 and 308 base metals, the **308/308H Sterling® AP** is specially formulated with more than .04 carbon to provide maximum elevated temperature strength. It has a smooth running arc that results in a uniform weld bead that is flat to slightly convex. It is also ideal for use as an intermediate layer prior to the deposit of hard-facing materials. It yields a concave weld bead that is smooth and refined.

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

FEATURES	BENEFITS
<ul style="list-style-type: none"> • Directional arc • Easy strike and re-strike • All-position 	<ul style="list-style-type: none"> • Metal goes where directed • 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"> • Self-detaching slag • Spray-like arc transfer • Extremely high moisture resistance 	<ul style="list-style-type: none"> • Less chance of slag inclusions • Low spatter and less clean-up • Extends shelf life of product in open environments

TYPICAL WELD METAL PROPERTIES* (CHEM PAD):

WELD METAL ANALYSIS		AWS Spec	
		E308-16	E308H-16
Carbon (C)	0.06	0.08 max	0.04 to 0.08
Manganese (Mn)	1.00	0.5 to 2.5	0.5 to 2.5
Phosphorus (P)	0.018	0.04 max	0.04 max
Sulphur (S)	0.013	0.03 max	0.03 max
Silicon (Si)	0.50	0.90 max	0.90 max
Copper (Cu)	0.10	0.75 max	0.75 max
Chromium (Cr)	19.50	18.0 to 21.0	18.0 to 21.0
Nickel (Ni)	9.80	9.0 to 11.0	9.0 to 11.0
Molybdenum (Mo)	0.10	0.75 max	0.75 max

TYPICAL MECHANICAL PROPERTIES* (AS WELDED):

		AWS Spec	
		E308-16	E308H-16
Tensile Strength	86,000 psi (593 Mpa)	80,000 psi	80,000 psi
Yield Strength	65,000 psi (449 Mpa)	not required	not required
Elongation % in 2"	41%	35%	35%
DeLong Ferrite Number Range	4-10	not required	not required
Schaeffler Number Range	4-10	not required	not required
WRC Number Range (1992)	4-10	not required	not required

CONFORMANCES AND APPROVALS:

- AWS Spec A5.4, Class E308-16 & E308H-16
- ASME SFA5.4

*The information contained or otherwise referenced herein is presented only as "typical" without guarantee or warranty, and McKay expressly disclaims any liability incurred from any reliance thereon. Typical data are obtained when welded and tested in accordance with AWS A5.4 specification. Other tests and procedures may produce different results. No data is to be construed as a recommendation for any welding condition or technique not controlled by McKay.



308/308H Sterling[®] AP

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 or inverted V. Reduced amperage compared to flat position setting
- OVERHEAD:** Use slight weaving motion within the puddle
- STORAGE:** Sterling AP[®] 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:

FLAT & HORIZONTAL

DIAMETER		TYPE OF POWER	MINIMUM AMPS	OPTIMUM AMPS	MAXIMUM AMPS
INCHES	MM				
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
1/4	6.4	DCEP or AC	180	200	225

AVAILABLE DIAMETERS AND PACKAGES:

DIAMETER		LENGTH		6-LB. CAN	10-LB. CAN
INCHES	MM	INCHES	MM		
3/32	2.4	10	254	S481830-032	—
1/8	3.2	14	355	—	S481844-033
5/32	4.0	14	355	—	S481851-033
3/16	4.8	14	355	—	S481858-033
1/4	6.4	14	355	—	S481880-033

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.

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