

# Shield-Arc® 70+

AWS E8010-G • Low Alloy, Cellulosic, Pipe

## Conformances

AWS A5.5/A5.5M: 2006	E8010-G, E8010-P1*
ASME SFA-A5.5:	E8010-G, E8010-P1*
ABS:	E8010-G
CWB/CSA W48-06:	E5510-G
TUV:	DIN EN ISO 2560-A:E

\* This product is classified as an E8010-G; however, it also meets the requirements of an E8010-P1.

## Key Features

- ▶ Light slag for minimal arc interference
- ▶ Deep penetration
- ▶ Clean, visible weld puddle
- ▶ Superior puddle control

## Welding Positions

All

## Typical Applications

- ▶ Relatively high silicon pipe
- ▶ API 5L X56 through X70 grade pipe
- ▶ Cross country and in-plant pipe

## DIAMETERS / PACKAGING

Diameter in (mm)	Length in (mm)	50 lb (22.7 kg) Easy Open Can
1/8 (3.2)	14 (350)	ED012841
5/32 (4.0)	14 (350)	ED012849
3/16 (4.8)	14 (350)	ED012845

## MECHANICAL PROPERTIES<sup>(1)</sup> – As Required per AWS A5.5/A5.5M: 2006

	Yield Strength <sup>(2)</sup> MPa (ksi)	Tensile Strength MPa (ksi)	Elongation %	Charpy V-Notch J (ft•lbf)	
				@ -29°C (-20°F)	@ -46°C (-50°F)
Requirements - AWS E8010-G	460 (67) min.	550 (80) min.	19 min.	Not Specified	Not Specified
Typical Results <sup>(3)</sup> - As-Welded	460-620 (67-90)	585-690 (85-100)	19-31	37-81 (27-60)	26-64 (19-47)

## DEPOSIT COMPOSITION<sup>(1)</sup>

	%C	%Mn	%Si	%P	%S
Requirements <sup>(4)</sup> - AWS E8010-G	Not Specified	1.00 min.	0.80 min.	0.03 max.	0.03 max.
Typical Results <sup>(3)</sup>	0.13-0.17	0.60-1.20	0.05-0.30	≤ 0.01	≤ 0.01
	%Ni	%Cr	%Mo	%V	
Requirements <sup>(4)</sup> - AWS E8010-G	0.50 min.	0.30 min.	0.20 min.	0.10 min.	
Typical Results <sup>(3)</sup>	0.75-0.97	0.01-0.20	0.05-0.15	0.02-0.04	

## TYPICAL OPERATING PROCEDURES

Polarity	Current (Amps)		
	1/8 in (3.2 mm)	5/32 in (4.0 mm)	3/16 in (4.8 mm)
DC+	75-130	90-185	140-225

<sup>(1)</sup>Typical all weld metal. <sup>(2)</sup>Measured with 0.2% offset. <sup>(3)</sup>See test results disclaimer below. <sup>(4)</sup>In order to meet the alloy requirements of the "G" designation, the undiluted weld metal shall have the minimum of at least one of the elements listed.

Material Safety Data Sheets (MSDS) and Certificates of Conformance are available on our website at [www.lincolnelectric.com](http://www.lincolnelectric.com)

### TEST RESULTS

Test results for mechanical properties, deposit or electrode composition and diffusible hydrogen levels were obtained from a weld produced and tested according to prescribed standards, and should not be assumed to be the expected results in a particular application or weldment. Actual results will vary depending on many factors, including, but not limited to, weld procedure, plate chemistry and temperature, weldment design and fabrication methods. Users are cautioned to confirm by qualification testing, or other appropriate means, the suitability of any welding consumable and procedure before use in the intended application.

### CUSTOMER ASSISTANCE POLICY

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