

CHROMET® 9-B9

Low Alloy, Low Hydrogen ■ AWS E9015-B9

KEY FEATURES

- Improved long term creep properties
- Can weld equivalent (P91) 9CrMo steels
- Designed to weld the modified steels T91, P91 or Grade 91, which are designed to provide improved creep strength, toughness fatigue and oxidation, and corrosion resistance at elevated temperatures.

WELDING POSITIONS

All

CONFORMANCES

AWS A5.5 E9015-B91
BS EN ISO 3580-B E 6216-9C1MV

TYPICAL APPLICATIONS

- Intended for high integrity structural service at elevated temperature
- Main Steam Piping
- Power Plants
- Oil Refineries
- Coal Liquefaction Plants
- Gasification Plants

DIAMETERS / PACKAGING

Diameter mm (in)	4.5 kg (10 lb) Easy Open Can	5 kg (11 lb) Easy Open Can	5.5 kg (12 lb) Easy Open Can
2.5 (3/32)	CH9B9-25		
3.2 (1/8)	CH9B9-32		
4.0 (5/32)		CH9B9-40	
5.0 (3/16)			CH9B9-50

MECHANICAL PROPERTIES⁽¹⁾ - As Required per AWS A5.5/A5.5M

	Yield Strength ⁽²⁾ MPa (ksi)	Tensile Strength MPa (ksi)	Elongation %	Charpy V-Notch J (ft•lbf) @ 20°C (68°F)	Hardness HV10 ⁽⁴⁾ @ PWHT
Requirements - AWS E9015-B9	530 (77) min	620 (90) min	17 min	–	–
Typical Results⁽³⁾ PWHT 2 hr @ 760°C (1400°F) Stress-Relieved	RT 590 (86)	710 (103)	22.5	75 (55)	240
550°C (1022°F)	>360 (52)	>450 (65)	–	–	–
600°C (1112°F)	>255 (37)	>375 (54)	–	–	–
650°C (1202°F)	>175 (25)	>285 (41)	–	–	–

DEPOSIT COMPOSITION⁽¹⁾ - As Required per AWS A5.5/A5.5M

	%C	%Mn ⁽⁵⁾	%Si ⁽⁵⁾	%S	%P	%Cr
Requirements - AWS E9015-B9	0.08 - 0.12	0.40 - 0.75	0.30 max	0.01 max	0.01 max	8.0 - 10.0
Typical Results⁽³⁾	0.10	0.55	0.25	0.008	0.008	9.0
	%Ni ⁽⁵⁾	%Mo	%Nb	%V	%Cu	%Al
Requirements - AWS E9015-B9	0.2 - 0.4	0.85 - 1.2	0.03 - 0.07	0.15 - 0.25	0.25 max	0.04 max
Typical Results⁽³⁾	0.3	1.0	0.04	0.20	0.05	<0.01

TYPICAL OPERATING PROCEDURES

Polarity	Amperage mm (in)			
	2.5 (3/32)	3.2 (1/8)	4.0 (5/32)	5.0 (0.19)
DC+	70 - 110	80 - 140	100 - 180	140 - 240
AC	70 - 110	80 - 140	100 - 180	140 - 240

⁽¹⁾Typical all weld metal. ⁽²⁾Measured with 0.2% offset. ⁽³⁾See test results disclaimer ⁽⁴⁾Industry specific data, not required by AWS.

⁽⁵⁾Ni + Mn < 1.0%. Nickel is below 0.4% (as parent metal) although AWS allows up to 1.0%Ni. See Chromet 9MV-N or Chromet 9MVN+ for variant with 0.4 - 1.0%Ni conforming to BS EN ISO specification.

NOTE: Additional test data available upon request.

Material Safety Data Sheets (MSDS) and Certificates of Conformance are available on our website at 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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