CE

CHROMET 92

Low Alloy, Low Hydrogen · AWS E9015-B92 H4

KEY FEATURES

- B9 (P92) alloyed steel: 9Cr steel designed to weld equivalent 'type 92' steels modified with tungsten, vanadium, niobium, nitrogen, and a small addition of boron to give improved long term creep properties
- P92 steel has rupture strength up to 30% greater than that of P91 steel
- Moisture resistant coating provides low amounts of weld metal hydrogen levels for a surperior weld
- Specifically designed for high integrity structural service at elevated temperature

CONFORMANCES

AWS A5.5: E9015-B92 H4

BS EN ISO 3580-A: E ZCrMoWVNb 9 0.5 2 B 3 2 H5

TYPICAL APPLICATIONS

- Main Steam Piping
- Oil Refineries
- Coal Liquefaction and Gasification Plants
- Power Generation Plants
- Turbine Castings

WELDING POSITIONS

All, except vertical down

DIAMETERS / PACKAGING

Diameter mm (in)	3.7kg (8.2lb) Can	4.2kg (9.3lb) Can	4.3kg (9.5lb) Can
2.5 (3/32)	CH92-25-1		
3.2 (1/8)		CH92-32-1	
4.0 (5/32)			CH92-40-1

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)
Requirements - AWS E9015-B92 H4	530 (77) min	620 (90) min	17 min	-
Typical Results[3] - PWHT 2-4 hr @ 760°C (1400°F)	630 (91)	740 (108)	22	60 (44)
High Temperature - 550°C	419 (61)	511 (74)	15	-
600°C	320 (46)	422 (61)	19.5	-
650°C	229 (33)	340 (49)	19.5	-

DEPOSIT COMPOSITION – *As Required per AWS A5.5/A5.5M*

	%C	%Mn	%Si	%S	% P	%Cr	%Ni	%Mo
Requirements - AWS E9015-B92 H4	0.08-0.13	0.4-1.0	0.40 max	0.015 max	0.020 max	8.0-9.5	0.80 max	0.30-0.60
Typical Results[3]	0.11	0.6	0.25	0.010	0.010	9.0	0.60	0.45
	%W	**%Nb**	**%V**	**%N**	**%B**	**%Al**	**%Cu**	
Requirements - AWS E9015-B92 H4	1.5-2.0	0.04-0.07	0.15-0.25	0.03-0.07	0.001-0.005	0.03 max	0.15 max	
Typical Results[3]	1.7	0.05	0.20	0.05	0.003	<0.01	<0.05	

[1]Typical all weld metal. [2]Measured with 0.2% offset. [3]See test results disclaimer [4]CTWD (Contact Tip to Work Distance). Subtract 1/4 in (6.4 mm) to calculate Electrical Stickout.
[5]Procedures in these areas are procedures for short circuiting mode using 100% CO_2. When using 75% Argon, 25% CO_2 for short circuit transfer, reduce voltage by 1 to 2 volts.

IMPORTANT: SPECIAL VENTILATION AND/OR EXHAUST REQUIRED

Fumes from the normal use of some welding products can contain significant quantities of components - such as chromium and manganese - which can lower the 5.0 mg/m³ maximum exposure guideline for general welding fume.

BEFORE USE, READ AND UNDERSTAND THE SAFETY DATA SHEET (SDS) FOR THIS PRODUCT AND SPECIFIC INFORMATION PRINTED ON THE PRODUCT CONTAINER.

TYPICAL OPERATING PROCEDURES

	Current (Amps)		
Polarity	2.5mm (3/32in)	3.2mm (1/8in)	4.0mm (5/32in)
DC+ or AC	70-110	80-140	100-180

Safety Data Sheets (SDS) and Certificates of Conformance are available on our website at www.lincolnelectric.com

FUMES AND GASES can be hazardous to your health.

- Fumes from the normal use of this product contain significant quantities of potentially hazardous compounds. See consumable product label/insert.
- Keep your head out of the fumes.
- Use enough ventilation and local exhaust to keep fumes and gases from your breathing zone and the general area.
- An approved respirator should be used unless exposure assessments are below applicable exposure limits.

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

The Lincoln Electric Company is manufacturing and selling high quality welding equipment, consumables, and cutting equipment. Our challenge is to meet the needs of our customers and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for information or advice about their use of our products. Our employees respond to inquiries to the best of their ability based on information provided to them by the customers and the knowledge they may have concerning the application. Our employees, however, are not in a position to verify the information provided or to evaluate the engineering requirements for the particular weldment. Accordingly, Lincoln Electric does not warrant or guarantee or assume any liability with respect to such information or advice. Moreover, the provision of such information or advice does not create, expand, or alter any warranty on our products. Any express or implied warranty that might arise from the information or advice, including any implied warranty of merchantability or any warranty of fitness for any customers' particular purpose is specifically disclaimed.

Lincoln Electric is a responsive manufacturer, but the selection and use of specific products sold by Lincoln Electric is solely within the control of, and remains the sole responsibility of the customer. Many variables beyond the control of Lincoln Electric affect the results obtained in applying these types of fabrication methods and service requirements.

Subject to Change – This information is accurate to the best of our knowledge at the time of printing. Please refer to www.lincolnelectric.com for any updated information.

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