



**Date: 6/2/08**

**TYPE: Dual Shield® B9**  
**AWS/ASME A5.29, Class E91T1-B9M-H8**

**Shielding Gas: 75% Argon/25% CO2**

**STOCK NUMBERS:**

242250033	0.045" (1.2 mm) x 33# (15kg) Spl
242250041	0.045" (1.2 mm) x 15# (6.8kg) Spl <b>(Special Order)</b>
242250009	1/16" (1.6 mm) x 33# (15 kg) Spl <b>(Special Order)</b>

**DESCRIPTION:**

**Dual Shield® B9** is an all-positional flux-cored electrode designed for the welding of modified 9% chromium creep resisting steels, such as ASTM A335 Grade P91 or ASTM A213 T91. This product is specially formulated with a combined Mn-Ni < 1.20% to meet a variety of customers' specification.

All **Dual Shield B9** product is layer level wound and packaged on wire spool basket to allow for the product to be placed in an heated storage oven. In addition, the wire is packaged in a vacuum sealed foil bag to prevent moisture pick up until such time the sealed bag has been opened.

**APPLICATION:**

**Dual Shield B9** has been formulated for use with 75% Argon / 25% CO<sub>2</sub> shielding gas. This product operates well out-of-position, especially in the 6 o'clock position on pipe producing a flat to slightly convex weld bead.

All product is available in both .045 in. (1.2 mm) and 1/16 in. (1.6 mm) diameters on 15 lb (6.8 kg) and 33 lb (15 kg) spools.

**TYPICAL MECHANICAL PROPERTIES:**

<b><u>Tested in accordance with AWS A5.29</u></b>	<b>PWHT</b> <b>2 hr. @</b> <b>1400° F (760° C)</b>
Tensile Strength, psi (MPa)	110,000 (758)
Yield Strength, psi (MPa)	90,000 (620)
% Elongation in 2" (51 mm)	20
Charpy Impact Toughness ft-lb. (J) @ 72°F (22° C)	25 (34)



**TYPICAL WELD METAL CHEMISTRY:**

<u>C</u>	<u>Mn</u>	<u>Si</u>	<u>P</u>	<u>S</u>	<u>Cr</u>	<u>Ni</u>	<u>Mo</u>	<u>V</u>	<u>Nb</u>	<u>N</u>	<u>Al</u>	<u>Cu</u>
0.1	0.9	0.2	0.010	0.008	9.0	0.2	1.0	0.22	0.035	0.034	0.002	0.02

**Immediately from the vacuum sealed bag the diffusible hydrogen is 4ml/100 g weld metal.**

**X-Factor: < 15**

**Mn-Ni ration is < 1.20%**

**OPERATING PARAMETERS:**

Diameter	Position	Volts	Amps	WFS
0.045" (1.2 mm)	Flat	26-32	170-290	250-600
	Vertical	24-26	170-200	250-340
	Overhead	25-27	180-230	290-425
1/16" (1.6 mm)	Flat	26-33	200-365	170-330

**Note: all parameters were established with 75% Argon/25% CO2**

**FOR MORE INFORMATION -**

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