

# CROMOTEN 9M (SPL)

## CLASSIFICATIONS

**AWS A/SFA 5.5** E-9016 B9

**IDENTIFICATION:** Name Printed

## CHARACTERISTICS

A hydrogen-controlled electrode to deposit niobium & vanadium modified 9Cr-1.0Mo weld metal. The composition of the core wire closely matches with the weld metal chemistry. The electrode burns with smooth & stable arc, low spatter, uniform bead and easily detachable slag. The deposited weld metal is of radiographic quality and can be used at all positions. The weld metal is designed to meet strength requirements even after prolong holding at elevated temperatures and also to have good impact resistance even at sub-zero temperatures.

The electrodes shall be re-dried at 300°C for 1 hour prior to use.

## TYPICAL APPLICATIONS

The electrode is suitable for welding similar composition creep resistant steels used for boilers, power plants, oil refineries, chemical plants, etc. Suitable for joining steels conforming to Grade T91 of SA-199/SA-199M and SA-213/SA-213M, Grade F91 of SA-182/SA-182M and SA-336/SA-336M, Grade C12A of SA-217/SA-217M, Grade P91 of SA335/SA-335M, Grade FP91 of SA-369/SA-369M, Grade 91 of SA-387/SA-387M. etc.

**CURRENT CONDITIONS:** AC (70V), DC (+)

5.0	4.0	3.2	2.5
140-190	110-160	90-120	50-80

## WELDING POSITIONS

F, H, V -up, OH

## REDRYING CONDITIONS

300°C for 1 hour (Optionally also available in vacuum-packed condition)

### WELD METAL CHEMISTRY (%)

C - 0.08-0.12 Mn - 1.2 max Si - 0.25 max Cr - 8.5-9.5  
 Ni - 0.40-1.0 Mo - 0.85-1.10 V - 0.20-0.30 Nb - 0.02-0.10  
 Cu - 0.25 max N - 0.03-0.07 Al - 0.04 max S - 0.01 max  
 P - 0.01 max

Diffusible H<sub>2</sub> content <5 ml / 100gm of weld metal

### PACKING DATA

Dia., mm	5.0	4.0	3.2	2.5
Length, mm	350	350	350	350
Wt. per carton, kg	4	4	4	4
Net wt per box, kg	16	16	16	16

### MECHANICAL PROPERTIES-ALL-WELD (PWHT 760°C/ 2hr)

Condition	UTS MPa	YS MPa	% Elong. (L =4Xd)	CVN Impacts, J 18°C
PWHT	620min.	530 min.	19	45



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