GRITINOX 309Mo

IDENTIFICATION
GRITINOX 309Mo E309Mo-17

CLASSIFICATION
AWS/SFA 5.4: E309Mo-17 BS 2926-1984 23.12.2R
DIN 8556-86 E2312 2R23

DESCRIPTION
A rutile type flux coated electrode which deposits a 23% Cr / 13% Ni / 2.5% Mo austenitic stainless steel weld metal. The high alloy content and ferrite level enable the weld metal to tolerate dilution from mild and low alloy steels without hot cracking or brittle structure. It is widely used to apply buffer layers on steel components where final layers are to be deposited using 316L or other stainless steel electrodes. The
deposited weld metal is of X-ray quality. The electrode is ideal for both fillet and butt welding applications. Type 309Mo weld metal is one of the most versatile for welding mixed combination of low and high alloy ferrous materials. It has superior tolerance to dilution than 309 or 309L because of its higher alloy and ferrite content.

WELD METAL ANALYSIS (RANGE) %

C	Mn	Si	Cr	Ni	Cu	Mo	S	P
0.12 max	0.5 - 2.5	0.30 - 0.90	22 - 25	Dec-14	0.75 max	2.0 - 3.0	0.03 max	0.04 max

MECHANICAL PROPERTIES (RANGE)

TS (N/mm2)	EL (%) (L=4D)	CVN Impact Value	
550 - 660	30 - 40	**Temp**	**Joules**
		0°C	60 - 100

TYPICAL APPLICATIONS

Dissimilar joints between stainless and mild or low alloy steels. Joining ferritic-martensitic 410 and 430 type stainless steels. Buffer layer on mild and low alloy steels prior to overlaying. Welding of similar composition 309Mo type stainless steels, ASTM stainless steels 409, 409S pipe ASTM A249, A312, A409, A814 grades TP 309S, 309.

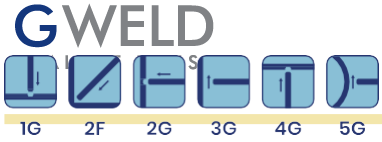
SCALING TEMPERATURE : 1000°C in air

MICROSTRUCTURE : Consists of austenite with 14 to 28 FN

ASME IX QUALIFICATION : QW-432 F-NUMBER 5, QW-442 A-NUMBER 8

REDRYING : 300°C / 2 hrs, max 5 cycles, 10 hr. total.

WELDING POSITION :



PACKING PARAMETERS

Size (mm)	Length (mm)	AMPS AC / DC (+)	Packing / Box (kg)	Packing / Box (Pcs)
2.5	350	50 - 75	2 x 5 = 10	94 x 5 = 470
3.15 / 3.20	350	80 - 120	2 x 5 = 10	60 x 5 = 300
4	350	100 - 160	2 x 5 = 10	38 x 5 = 190
5	350	130 - 210	2 x 5 = 10	24 x 5 = 120