

# GRINOX 9

## IDENTIFICATION

GRINOX 9 E 309-16

## CLASSIFICATION

AWS/SFA 5.4: E309-16, BS 2926-1984 23.12LR

DIN 8556-86 E2312 LR23

## DESCRIPTION

A medium heavy coated rutile type coated electrode which deposits a 23% Cr / 13% Ni 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 308L or other stainless steel electrodes. The deposited weld metal is of radiographic quality. The electrode is ideal for both fillet and butt welding applications.

## WELD METAL ANALYSIS (RANGE) %

C	Mn	Si	Cr	Ni	Cu	Mo	S	P
0.15 max	0.5 - 2.5	0.30 - 0.90	22 - 25	12-14	0.50 max	0.50 max	0.025 max	0.03 max

## MECHANICAL PROPERTIES (RANGE)

TS (MPa)	EL (%) (L=4D)	CVN Impact Value	
		Temp	Joules
550 min	30 min	0°C	60 min

## 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 309 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 8 to 18 FN

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

**REDRYING** : 250°C / 2 hrs. max 5 cycles, 10 hr. total.

## WELDING POSITION :



1G 2F 2G 3G 4G 5G

## PACKING PARAMETERS

# GWELD

Size (mm)	Length (mm)	AMPS AC / DC (+)	Packing / Box (kg)	Packing / Box (Pcs)
2.5	350	60 - 85	2 x 5 = 10	94 x 5 = 470
3.15 / 3.20	350	80 - 100	2 x 5 = 10	60 x 5 = 300
4	350	110 - 140	2 x 5 = 10	38 x 5 = 190
5	350	130 - 200	2 x 5 = 10	24 x 5 = 120