

## Austenite + Ferrite Type Covered Electrode

# GRINOX 29

- Standard —
- Covering Lime-titania Type
- Tip Color Red
- Application
 

Joint welding between dissimilar steels such as middle and high alloy steel, cast steel, high-manganese steel, spring steel, tool steel.

Overlaying on the anticorrosion or heat proof parts such as stamping tool for plastics and rotor.

Underlaying for overlaying of hardened base metals.

Underlaying for overlaying of high alloy steel which is subject to weld crack such as stellite and tungsten.

■ Feature

1. GRINOX29 is austenite + ferrite type covered electrode for stainless steel. It is designed so that the contraction stress during cooling stage becomes lower. This characteristics is suitable for underlaying for overlaying on the highly crack sensitive base metal such as alloyed steel.
2. The deposited metal has hardenability and shows good anti-shock property. Also because of high content of Cr, the deposited metal shows excellent anticorrosion and heat resistance property.
3. GRINOX29 shows excellent weldability and its arc is stable even in low electric current. Also, the deposited metal penetrate into the base metal very smoothly and it shows flat and smooth bead. As the result, welding heat input in to the base metal is kept low.

■ Welding Procedures

1. Before start welding, remove grease and blot completely from welding area.
2. Keep arc length short and electric current as low as possible. Also avoid too much weaving. These help reduce welding distortion and dilution from the base metal.
3. The electrode should be re-dried 30~60 minutes at 150~200°C before use.

■ Typical Chemical Components of the Deposited Metal (%)

C	Cr	Ni	Others
≤0.15	28~30	8~10.5	Mn, Si, etc.

■ Typical Mechanical Properties of the Deposited Metal as welded

Tensile Strength	N/mm <sup>2</sup> (Kgf/mm <sup>2</sup> )	745~853(76.0~87.0)
Yield Point	N/mm <sup>2</sup> (Kgf/mm <sup>2</sup> )	402(41.0)
Elongation	%	≥20
Hardness	HV	265
Hardness after Work Hardening	HV	475
Resistance to Oxidation at High Temperatures		1,000°C

■ Appropriate Welding Current (AC or DCEP)

Diameter (mm)	2.5	3.2	4.0	5.0
Length (mm)	350	350	350	350
Current (A)	50~70	70~100	100~130	130~170
Minimum Quantity (Kg)	3.7	4.0	4.0	4.0

Equivalent to wire for MAG welding: GRINOX29S  
 Equivalent to electrode for TIG welding: GRINOX29T