

# TASETO Welding Materials

Bare Stainless Steel Rods

For Gas Tungsten Arc Welding

## TG310

### ● Applicable Specification

JIS Z 3321 YS310  
AWS A5.9 ER310

### ● Identification Color

End Face : Gold

### ● Applications and Characteristics

TASETO TG310 is the welding material with the chemical composition of 25%Cr-20%Ni. The weld metal is fully austenitic structure. Because of high contents of Cr and Ni, its mechanical properties and resistibility to oxidation in elevated temperature are excellent. TG310 is used for welding of Type 310 stainless steel, and also suitable for welding of dissimilar metals where severe PWHT is required.

### ● Chemical Composition of Wire (%)

|         | C     | Si   | Mn   | P     | S     | Ni    | Cr    | Mo   | Cu   |
|---------|-------|------|------|-------|-------|-------|-------|------|------|
| Typical | 0.085 | 0.36 | 1.56 | 0.009 | 0.007 | 21.30 | 26.54 | 0.07 | 0.08 |

### ● Mechanical Properties of All Weld Metal

|         | 0.2% Proof Stress<br>(MPa) | Tensile Strength<br>(MPa) | 4D Elongation<br>(%) |
|---------|----------------------------|---------------------------|----------------------|
| Typical | 408                        | 583                       | 38.5                 |

### ● Typical Tensile Strength and Elongation at High Temperature

| Test Temperature<br>(°C) | Tensile Strength<br>(MPa) | 5D Elongation<br>(%) |
|--------------------------|---------------------------|----------------------|
| 550                      | 432                       | 35.0                 |
| 650                      | 349                       | 31.0                 |
| 750                      | 257                       | 37.4                 |
| 800                      | 198                       | 41.7                 |

### ● Sizes Available and Recommended Welding Currents (DCEN)

| Rod Diameter (mm)   | 0.8   | 0.9 | 1.0    | 1.2 | 1.6 | 2.0     | 2.4 | 2.6 | 3.2     | 4.0 | 5.0     |
|---------------------|-------|-----|--------|-----|-----|---------|-----|-----|---------|-----|---------|
| Rod Length (mm)     | 1000  |     |        |     |     |         |     |     |         |     |         |
| Welding Current (A) | 50~80 |     | 50~120 |     |     | 100~200 |     |     | 150~250 |     | 220~280 |

\*Rod Diameter 0.8, 0.9 mm : Made to order products