

# Shield-Bright 312

AWS A5.22 E312T1-1(4) / JIS Z3323 TS312-FB1

Flux  
CORED  
WIRES

## Description and Application

- Shield-Bright 312 was developed for welding of high carbon steels and for the first layer cladding of carbon and low alloy steels. The best results are obtainable when the “buttering” technique is used. Shield-Bright 312 can be used as a clad layer with superior corrosion resistance or as a buffer layer. It was also designed for welding out-of-position and performs well with minimal slag and easy clean-up. Shield-Bright 312 has limited success on lead-free free-machining steels (example:AISI 11XX, 12XX), 303, 416, and 430F stainless steels. Preheating is only necessary at carbon levels over 0.2% for carbon steels.

## Shielding Gas : 100%CO<sub>2</sub> or 75%Ar/25%CO<sub>2</sub>

### Typical Mechanical Properties of All Weld Metal

Shielding gas	Yield Point N/mm <sup>2</sup> {kgf/mm <sup>2</sup> }	Tensile Strength N/mm <sup>2</sup> {kgf/mm <sup>2</sup> }	Elongation (%)
100%CO <sub>2</sub>	620 {63}	810 {83}	24
75%Ar/25%CO <sub>2</sub>	630 {64}	830 {85}	24

### Typical Undiluted Weld Metal Analysis %

Shielding gas	C	Mn	Si	P	S	Cr	Ni
100%CO <sub>2</sub>	0.10	1.20	0.70	0.025	0.006	28.3	9.5
75%Ar/25%CO <sub>2</sub>	0.10	1.30	0.75	0.025	0.006	29.0	9.6

### Approvals

JIS