

Shield Bright 312

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.

Specifications

Classifications	JIS Z3323 : TS312-FB1 AWS A5.22 : E312T1-1(4)
Approvals	JIS

Approvals are based on factory location. Please contact ESAB for more information.

Typical Tensile Properties

Yield Strength	Tensile Strength	Elongation
100% CO₂		
620 MPa	810 MPa	24 %
75% Ar - 25% CO₂		
630 MPa	830 MPa	24 %

Typical Weld Metal Analysis %

C	Mn	Si	S	P	Ni	Cr
75% Ar - 25% CO₂						
0.10	1.30	0.75	0.006	0.025	9.6	29.0
100% CO₂						
0.10	1.20	0.70	0.006	0.025	9.5	28.3