



TENSAWELD MANG-312

FOR DISSIMILAR METALS

DESCRIPTION

- A gas shielded, flux cored, stainless steel electrode designed to weld in all positions
- Nominal weld metal composition of 30% chromium, 9% nickel, and 0.1% carbon
- Produces a two phase weld metal, with substantial ferrite in an austenitic matrix
- High level of ferrite makes the weld metal very resistant to cracking, even when highly diluted
- Can be used with 100% carbon dioxide shielding or a blend of 75-80% AR/balance CO₂
- Shielding gas mixtures with more than 75-80% argon are not recommended
- Provides superb performance characteristics in all positions, using either 100% Co₂ or 75-80% AR/Balance CO₂ shielding gas
- 100% compatibility with Tensalloy™ products

TYPICAL MECHANICAL PROPERTIES (CO₂)

Ultimate Tensile Strength (psi)	114,000
Yield Strength (psi)	90,000
Percent Elongation	25
*Strength levels will be slightly higher with 75-80% Ar/ Balance CO ₂	

TYPICAL WELD DEPOSIT CHEMISTRY (CO₂)

C	0.1
Mn	0.8
Si	0.7
Ni	8.7
Cr	29.5
N	0.05
Ferrite Number - 60	

RECOMMENDED WELDING PARAMETERS

Diameter	0.045"				1/16"			
	WFS (ipm)	250	300	425	780	150	195	240
Amperage	130	160	200	270	190	215	250	305
Voltage	24	26	28	34	25	27	28	29
CTWED (in)	5/8-3/4"				3/4-1"			
Dep. Rate (lbs/hr)	5.4	6.3	9.2	16.2	5.4	7	8.6	11.5
*Optimum conditions are in boldface type. Lower by 1-2 volts when using 75-80% Ar/Balance CO ₂ .								

Notice: The results reported are based upon testing of product under controlled laboratory conditions in accordance with American Welding Society Standards. Actual use of product may produce different results due to varying conditions. An example of such conditions would be electrode size, plate chemistry, environment, weldment design, fabrication methods, welding procedure and service requirements. Thus the results may differ. Consult with us for specific compatibility information.

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CLASSIFICATION

E312T1-E
E312T1-4 per AWS A5.22

COMPATIBILITY

Tensamang™ 11-14% Hadfield
Manganese Steel

APPLICATIONS

Welding of Dissimilar Metals
Manganese to Stainless
Magnetic Separator Drums
Stainless Steel Plates
Stainless Steel Chutes
Excellent Cover Pass For Weld Seams

CHARACTERISTICS

Low Spatter
Excellent Slag Peeling
Flat, Well Washed Beads achievable
with minimal weaving
Minimal clean up

