



Unibraze® 308H-T1

Classification: AWS A5.22/ASME SFA 5.22 E308HT1-1, E308HT1-4 UNS W30831

Description: Unibraze® 308H-T1 is a gas-shielded, flux cored, stainless steel designed to weld in all positions. It has a nominal weld metal composition of 20% Cr, 10% Ni and a C of .04 to .08%. The higher carbon content in Unibraze 308H-T1 provides high tensile and creep strength at elevated temperatures. It is typically used for welding 304H Base material. It is designed for use with 100% CO₂ or a blend of 75-80% Argon/Balance CO₂. Shielding gas mixtures with more that 75-80% Argon is not recommended.

Chemical Composition: (100% CO₂)

| | C | Cr | Ni | Mo | Mn | Si | P | S | Cu |
|------------------------|-------------|---------------|--------------|------------|-------------|------------|------------|------------|------------|
| Requirement | .04- .08 | 18.0- 21.0 | 9.0- 11.0 | .75 max | .50- 2.5 | 1.0 max | .04 max | .03 max | .75 max |
| Typical Results | .05 | 18.9 | 9.21 | .07 | 1.04 | .55 | .02 | .01 | .09 |

Mechanical Properties: (100% CO₂)

| | Requirement | Typical Results |
|-------------------------|---------------------------|------------------------|
| Tensile Strength | 80,000 psi min. (550 MPa) | 88,200 psi (608 MPa) |
| Elongation | 30% min. | 38% |

NOTE: Strength will be slightly higher with Ar + 20~25% CO₂

Optimum Welding Parameters: DC+ (100% CO₂)

| Diameter | Amps | Volts | WFS (IPM) | ESO | Deposition Rate (lbs/hr) |
|-----------------|-------------|--------------|------------------|------------|---------------------------------|
| .035" | 150 | 26 | 500 | 5/8" -3/4" | 5.4 |
| .035" | 165 | 27 | 600 | 5/8" -3/4" | 6.3 |
| .045" | 160 | 26 | 300 | 5/8" -3/4" | 6.3 |
| .045" | 200 | 28 | 425 | 5/8" -3/4" | 9.2 |
| 1/16" | 215 | 27 | 195 | 3/4" - 1" | 7.0 |
| 1/16" | 250 | 28 | 240 | 3/4" - 1" | 8.6 |

NOTE: Lower by ~2 volts when using Ar + 20~25% CO₂

Notice: The results reported are based upon testing of the product under controlled laboratory conditions in accordance with American Welding Society Standards. Actual use of the 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 are not guarantees for use in the field. The manufacturer disclaims any warranty of merchantability or fitness for any purpose with respect to its products.