



Unibrazed 120S-1 (ER120S-1)

UNIBRAZE 120S-1 deposits high-strength, very tough weld metal for critical applications. Originally developed for welding HY100 steels for military applications, it is also used for a variety of structural applications where tensile strength requirements exceed 100 ksi (690 MPa), and excellent toughness is required to temperatures as low as -60°F (-51°C). UNIBRAZE 120S-1 can be welded in all positions. Recommended shielding gas is CO₂ or Argon/O₂ mix.

Typical Deposit Composition

Carbon	0.07
Sulphur	0.008
Manganese	1.70
Phosphorus	0.006
Molybdenum	0.50
Silicon	0.50
Nickel	2.40
Chromium	0.40
Others	0.50 max

Typical Mechanical Properties

(SR 1 Hr. at 1275°F)

Tensile Strength	120,000 psi
Yield Strength	105,000 psi
Elongation	15 %
CVN (ft·lb f) @ 0° F	75 (as welded GMAW 98Ar/2O ₂)
CVN (ft·lb f) @ -60° F	100 (as welded GMAW 98Ar/2O ₂)

Specifications

AWS A5.28/ ASME SFA5.28 Class ER120S-1

Standard Sizes

MIG: .035" (.9mm), .045" (1.2mm),
TIG: 1/16" (1.6mm), 3/32" (2.4mm), 1/8" (3.2mm)

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 particular purpose with respect to its products.