



Unibrazed 630-16 (17-4PH)

Classifications: AWS A5.4/ASME SFA 5.4 E630-16 UNS W37410

Description: Unibrazed 630-16 is a precipitation hardening steel covered electrode use for welding materials of similar chemical composition such as 17-4 and 17-7. Can be used in the as welded condition or in the heat treated condition to obtain higher strength. Mechanical properties of the alloy are greatly influenced by the heat treatment.

NOTE: Mechanical properties below reflect utilization of post-weld heat treatment between 1875°F and 1925°F for one hour, followed by precipitation hardening between 1135°F and 1165°F for four hours.

Typical Chemical Composition

C	Mn	Si	Fe	Cr	Mo	Ni	Nb	N	S	P	Cu	FN
.03	.56	.44	BAL	16.58	0.2	4.78	.24	*	.02	.018	3.55	

* Nitrogen in these weld deposits is usually between .04% and .08%

Typical Mechanical Properties

Tensile Strength	150,000 PSI	1030 MPA
Yield Strength	133,800 PSI	920 MPA
Elongation	10%	

Welding Parameters

Process	Diameter x Length	Voltage	Amperage	
			Flat	Vertical & Overhead
SMAW	3/32" (2.4mm) x 12" (305mm)	24-28	70-85	65-75
	1/8" (3.2mm) x 14" (355mm)	26-30	85-110	80-90
	5/32" (4.0mm) x 14" (355mm)	28-32	110-140	100-120
	3/16" (4.8mm) x 14" (355mm)	28-32	120-160	110-130

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