Unibraze 630-16
(17-4PH)

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

Description: Unibraze 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 c o n d i t i o n 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 treat- ment 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

			Amperage	
Process	**Diameter x Length**	**Voltage**	**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**