

# Inweld 320-16

AWS A5.4 E320-16

## Chemical Composition of Inweld 320-16

Fe	C	Cr	Ni	Mo	Cb (Nb) &Ta	Mn	Si	P	S	N	Cu
Balance	0.07	19.0	32.0	2.0-3.0	8 X C	0.5-2.5	0.60	0.04	0.03	---	3.0-4.0
		-21.0	-36.0		- 1.00						

Single values are maximum unless otherwise specified.

## Description and Applications

Inweld 320-16 coated electrodes are used for welding Carpenter 20 or 20 Cb-3 stainless steel. Often referred to as 320Cb-16 or 20 Cb-3\*, this electrode produces weld deposits that resist chemical corrosion from sulfuric acid, phosphoric acid and their salts. Inweld 320-16 is used to weld both castings and wrought alloys of similar analysis without having to do post-weld heat treatment. The Columbium (Cb) content of this electrode gives 320-16 weld deposits excellent resistance to inter-granular corrosion.

## Procedure

Clean the work area. Preheating is not required. Use DC+ (reverse polarity), however an AC machine with a minimum open circuit voltage of 70 volts can be used. The welding current should be kept to a minimum and the welding speed at a maximum to avoid overheating and distortion. The arc length should be kept as short as possible without touching the flux-coating of the electrode to the molten weld pool. The electrode should be tilted 15° in the direction of travel. Stringer beads should be used in the flat, horizontal, & overhead positions. Vertical welding should be done using the weaving technique but not to exceed 2-3 times the diameter of the electrode. Be sure to remove all slag before making additional passes. On the final pass, allow the part to cool before removing the slag cover.

## Typical Weld Metal Properties

	<u>AWS Spec</u>
Tensile Strength:	85,000 psi
Yield Strength:	57,000 psi
Elongation:	34%

## Recommended Parameters

SMAW AC/DC+ (Electrode Positive)

<u>Wire Diameter</u>	<u>Flat Amperage</u>	<u>Vertical &amp; Overhead Amperage</u>
3/32"	70-85	65-75
1/8"	85-110	80-90
5/32"	110-140	100-120
3/16"	120-160	110-130

**INWELDCORPORATION.COM**

**Pennsylvania**  
3962 Portland Street  
Coplay, PA 18037

**North Carolina**  
1029 S. Marietta St.  
Gastonia, NC 28054

**Texas**  
9300 Lawndale St.  
Houston, TX 77012

**California**  
6201 Coliseum Way, Unit A  
Oakland, CA 94621