

MIDALLOY ER409Nb (ER409Cb) Bare Wire

CLASSIFICATION

- AWS Classification ER409Nb (was ER409Cb prior to 2006 revision of AWS 5.9)
Reference AWS/ASME SFA 5.9
- ISO 14343-B SS410Nb W. No 1.4009 A#7 F#6

DESCRIPTION

- Midalloy ER409Nb is a ferritic stainless wire. The Silicon content in Midalloy ER409Nb provides for a smooth spatter free weld deposit. The controlled carbon content along with the niobium (Cb) addition provides excellent welding characteristics.

APPLICATIONS

- Base material plates such as type 409Cb, 409, 439, 430, and other ferritic stainless steels are welded to themselves and to other carbon and alloy steels.
- ER409Nb is an excellent choice to weld automotive exhausts as well as flues and ducts subject to moderately high temperatures.
- Single pass welds on light gage base metal or welds with preheat do not usually require PWHT.

TYPICAL CHEMISTRY

C	Mn	Si	Cr	Ni	Mo	Cu	S	P	Nb (Cb)
.05	0.6	.60	11.5	.35	.3	.05	.015	.015	> 10 x C min.

TYPICAL MECHANICAL PROPERTIES

TENSILE STRENGTH	67,000 PSI
YIELD STRENGTH	50,500 PSI
ELONGATION IN 2"	26%
HARDNESS HB30	150

RECOMMENDED WELDING PARAMETERS

PROCESS	DIAMETER	VOLTAGE	AMPERAGE	GAS / FLUX*
TIG (GTAW)	1/16"	14-18	90-130	100% Ar
	3/32"	15-20	120-175	100% Ar
	1/8"	15-20	150-220	100% Ar
MIG (GMAW)	.035" SHORT ARC	16-26	70-160	Ar-He-CO ₂
	.035" SPRAY ARC	26-31	150-230	92%Ar-2%CO ₂ or
	.045" SPRAY ARC	28-32	180-280	98%Ar-2%O ₂
SUB-ARC (SAW)	3/32"	28-30	275-350	Record IN or
	1/8"	29-32	350-450	Record IND 24

PACKAGING

- TIG 10 lb. tube / 60 lb. carton
- MIG 30 lb. spool
- SUB-ARC 60 lb. coil

8/3/11

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