



WASHINGTON ALLOY'S Quality
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Cert # 05-R0925

409Cb Welding Wire and Rod

U.S. ALLOY CO.
dba Washington Alloy
7010-G Reames Rd.
Charlotte, NC 28216
www.weldingwire.com



ALLOY DESCRIPTION AND APPLICATION; USA 409Cb is a ferritic stainless steel modified with

columbium for special heat- resisting welding on base metals such as exhaust manifolds and catalytic converters. Excellent flow and smooth bead appearance of this alloy ensures corrosion resistance, strengths at high temperatures. Commonly used on 409,409Ti and 410

(Tri-mix gas = 90%He+7.5% Ar+2.5% CO₂)

TYPICAL GMAW WELDING PROCEDURES; DCEP Short Circuit

Wire Diameter	Wire Speed (ipm)	Amps	Volts	Electrical Stick-out	Tri-mix (cfh)
0.023	180-400	30-85	14-19	3/8-1/2"	20-25
0.030	150-350	45-125	15-20	3/8-1/2"	20-25
0.035	120-330	60-150	16-22	3/8-1/2"	20-30
0.045	100-280	90-210	17-22	3/8-1/2"	25-30
<i>Spray 0.030</i>	<i>280-600</i>	<i>160-220</i>	<i>24-28</i>	<i>3/8-1/2"</i>	<i>(1)25-35</i>
<i>0.035</i>	<i>250-470</i>	<i>170-295</i>	<i>23-29</i>	<i>1/2-3/4"</i>	<i>(1)25-35</i>
<i>0.045</i>	<i>200-385</i>	<i>195-360</i>	<i>24-30</i>	<i>1/2-3/4"</i>	<i>(1)30-35</i>
<i>1/16"</i>	<i>110-200</i>	<i>210-380</i>	<i>25-31</i>	<i>1/2-3/4"</i>	<i>(1)35-40</i>

⁽¹⁾ 98%Ar
2%O₂

TYPICAL GTAW WELDING PROCEDURES; DCEN with EWTh-2 truncated conical tip

Filler Wire Size	Tungsten	Amps	Volts	Gas Cup Size	Argon (cfh)	Base thickness
1/16"	1/16"	80-150	12	3/8"	20	1/16-1/8"
3/32"	3/32"	150-250	12	3/8"	20	1/8- 3/16"
1/8"	1/8"	200-375	12	1/2"	25	1/4-1/2"

Procedures may vary with change in position, base metals, filler metals, equipment and other changes.

Argon/oxygen blends for spray and pulsed spray transfer welding used to prevent carbon pickup in the weld metal.

TYPICAL CHEMISTRY (%) & WELD METAL PROPERTIES

Carbon	0.08	Copper	0.75
Manganese	0.80	Molybdenum	0.50
Silicon	1.00	Phosphorus	0.04
Columbium + Tantalum	10 x C min. /0.75max	Elongation	26%
Sulfur	0.03	Yield Strength (psi)	50,000
Chromium	10.50-13.50	Tensile Strength (psi)	67,000
Nickel	0.60		

Iron balance and all single values are maximum percentages

AVAILABLE SIZES: TS 409CB= Spools of 035, 045

TT 409CB = Cut lengths of 035, 045, 1/16, 3/32, 1/8

Other sizes available – please inquire

SPECIFICATIONS; ANSI/AWS A5.9 ER409Cb
ASME SFA 5.9 ER409Cb

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