



4340 Chrome-Moly Welding Wire and Rod

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

Quality Management System
in accordance with
ISO 9001:2000
Cert # 05-R0925



ALLOY DESCRIPTION AND APPLICATION;

4340 is a Chromium-molybdenum low alloy wire that will produce a dense, heat-treatable deposit. This alloy is used to weld AISI/SAE 4340 and 4330 and other heat-treatable alloys or base metals needing flame hardening. Preheat and inter-pass recommended and may also need followed by post heat treating.

TYPICAL GMAW WELDING PROCEDURES; DCEP Short Circuit ⁽¹⁾ 98Ar/2% O₂

Wire Diameter	Wire Speed (ipm)	Amps	Volts	Travel speed (ipm)	(cfh) 75/25
0.023	80-350	30-85	14-19	10-15	20-25
0.030	110-340	40-130	15-20	12-24	20-25
0.035	100-520	60-235	16-25	11-40	20-30
0.045	70-270	90-290	18-23	12-22	25-35
<i>Spray 0.035</i>	<i>320-600</i>	<i>160-300</i>	<i>23-26</i>	<i>11-22</i>	⁽¹⁾ <i>25-35</i>
<i>0.045</i>	<i>170-550</i>	<i>170-375</i>	<i>23-29</i>	<i>12-21</i>	⁽¹⁾ <i>25-35</i>
<i>1/16"</i>	<i>175-350</i>	<i>275-475</i>	<i>25-31</i>	<i>9-19</i>	⁽¹⁾ <i>25-35</i>

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"	100-160	12	3/8"	20	1/16-3/32"
1/16-3/32"	3/32"	120-250	12	3/8"	20	1/8- 3/16"
1/8"	1/8"	150-300	12	1/2"	25	1/4-1/2"

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

TYPICAL WELD CHEMISTRY (%) & WELD METAL PROPERTIES; 100% Ar (GTAW)

Carbon	0.35	PWHT: completely annealed		
Manganese	0.85	welded post weld re-heat treated		
Silicon	0.50	oil quenched at 1600°F then		
Phosphorus	0.011	Tensile Strength (psi)	1150° F	950° F
Sulfur	0.014	Yield Strength (psi)	200,000	289,000
Chromium	0.78		168,000	250,000
Nickel	1.80			
Molybdenum	0.25			

AVAILABLE SIZES: TU 4340 = Spools and rods of

Vacuum melted, Flux cored and Metal core alloys also available

SPECIFICATIONS; AISI/SAE 4340

EAST COAST	GULF COAST	WEST COAST
7010-G Reames Rd	4855 Alpine Drive #190	8535 Utica Ave
Charlotte, NC 28216	Stafford, TX 77477	Rancho Cucamonga, CA 91730
Tel (888) 522-8296	Tel (877) 711-9274	Tel (800) 830-9033
Fax (704) 598-6673	Fax (281) 313-6332	Fax (909) 291-4586



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Warehouse Distribution Center – Dayton, Ohio

Head Office – Puyallup, Washington

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