



# UNITED STATES WELDING CORPORATION

<b>USW ALLOY DESIGNATION AND DESCRIPTION</b>	<b>TURBALOY® 410</b> HQ-GRADE GTAW SOLID BARE WELDING WIRE IRON BASE		<b>ISSUED</b> JANUARY 2007		<b>DATA SHEET</b>  <b>5776</b> (15)	
			<b>REVISION NO.</b> A			
<b>CROSS-REFERENCE CONFORMANCE SPECIFICATIONS</b>	AMS 5776 410SS MSRR 9500/205 12.5 Cr steel		USWC 5776 (A) UNS S410010 AWS A5.9 ER410 Available in MC-GRADE (5821)			
<b>METALLURGICAL BACKGROUND INFORMATION</b>	TURBALOY® 410 undergoes a series of proprietary abrading and cleaning processes to remove all surface contaminants. These manufacturing processes ensure a consistent ultra-clean weld wire surface.  TURBALOY® 410 is an air-hardening martensitic stainless alloy used for welding alloys of similar composition.					
<b>MATERIALS TO BE WELDED AND APPLICATIONS</b>	AMS 5867, 5504, 5591, 5609, 5612, 5611, 5505. AISI 410. ASTM A176, A240, A268, A511, A314, A479, A473, A580.  Preheat and PWHT generally required in order to obtain adequate ductility for many engineering applications.					
<b>WIRE CHEMISTRY WT%</b>	Carbon	0.10	0.15	Molybdenum	-	0.50
	Manganese	-	1.00	Aluminum	-	0.05
	Silicon	-	1.00	Copper	-	0.50
	Sulfur	-	0.015	Tin	-	0.05
	Phosphorus	-	0.025	Nitrogen	-	0.08
	Chromium	11.5	13.50	Iron		Balance
	Nickel	-	0.75			
<b>WELD PROPERTIES</b>	Response to Heat Treatment: 35-45 HRC		Density: 7.7 gm/cc			
	Melting point: 2790°F					
<b>SIZES AND FORMS AVAILABLE</b>	<b>STRAIGHT LENGTHS</b>			<b>SPOOLED WIRE</b>		
	5 lb. (2.2kg) packs 36" (914mm) lengths Flag tagged for traceability. (Double tagging and other lengths on request) Wide range of diameters.			Precision layer wound, with controlled cast and helix 12" (300mm) diameter spools standard 8" (200mm), 4" (100mm) and proprietary spool sizes on request. Wide range of diameters and spool weights.		
<b>PACKAGING</b>	Sealed polyethylene envelopes. (Desiccants optional)					

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3579 HIGHWAY 50 EAST # 104 □ CARSON CITY, NEVADA 89701-2826  
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