



UNITED STATES WELDING CORPORATION

USW ALLOY DESIGNATION AND DESCRIPTION	TURBALOY[®] 316 HQ-GRADE GTAW SOLID BARE WELDING WIRE IRON BASE		ISSUED JANUARY 2007		DATA SHEET 5692 (10)	
			REVISION NO. A			
CROSS-REFERENCE CONFORMANCE SPECIFICATIONS	AMS 5692 USWC 5692 (C) UNS S31680 AWS A5.9 ER316		19Cr 12.5Ni, 2.5Mo ASTM A313 MSRR/208 (<i>Note: AMS 5690 is superseded by 5692 for filler metal.</i>)			
METALLURGICAL BACKGROUND INFORMATION	TURBALOY [®] 316 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 [®] 316 is a Molybdenum containing austenitic stainless steel which resists pitting corrosion from chloride ions. The alloy has good scaling resistance and provides exceptional toughness.					
MATERIALS TO BE WELDED AND APPLICATIONS	Molybdenum provides increased creep resistance at elevated temperatures. AMS 5649. ASTM A167, A240, A213, A249, A269, A276, A314, A479, A473.					
WIRE CHEMISTRY WT%	Carbon	-	0.08	Chromium	18.00	20.00
	Manganese	1.00	2.50	Nickel	11.00	14.00
	Silicon	0.30	0.65	Molybdenum	2.00	3.00
	Sulfur	-	0.030	Copper	-	0.75
	Phosphorus	-	0.030	Iron		Balance
WELD PROPERTIES	Melting point: 2550°F Annealed hardness: 160HV		Density: 7.9 gm/ cc			
SIZES AND FORMS AVAILABLE	STRAIGHT LENGTHS		SPOOLED WIRE			
	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.			
PACKAGING	Sealed polyethylene envelopes. (Desiccants optional)					

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