



UNITED STATES WELDING CORPORATION

USW ALLOY DESIGNATION AND DESCRIPTION	TURBALOY® 8020 HQ-GRADE GTAW SOLID BARE WELDING WIRE NICKEL BASE		ISSUED JANUARY 2012	DATA SHEET 8020 (16)		
			REVISION NO. A			
CROSS-REFERENCE CONFORMANCE SPECIFICATIONS	MSRR 9500/3 NC 80/20 BS 2901 PT5 1993 NA 34 NIMONIC 75	80Cr 20Ni OMAT 305B	UNS N06003 W No 2.4639 DIN 1736-SNi Cr 20			
METALLURGICAL BACKGROUND INFORMATION	<p>TURBALOY® 8020 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.</p> <p>Selected low iron content grade.</p>					
MATERIALS TO BE WELDED AND APPLICATIONS	<p>TURBALOY® 8020 weld material is released to MSRR9000/3. TURBALOY® 8020 is used to fabricate Nimonic 75 material in aircraft gas-turbine components requiring oxidation and scaling resistance and structural strength at high operating temperatures. Dissimilar joining applications. MSRR 7004, 7006, 7008, 7104, 7045, 7046, BS: HR5, HR203, HR403.</p>					
WIRE CHEMISTRY WT%	Carbon	-	0.26	Chromium	18.00	21.00
	Manganese	-	1.20	Cobalt	-	1.00
	Silicon	-	0.50	Copper	-	0.20
	Sulfur	-	0.015	Iron	-	0.50
	Phosphorus	-	0.030	Nickel		Balance
WELD PROPERTIES	<p>Hardness: 86 HRB</p> <p>Typical tensile strength: 108-121 ksi with 35-40% elongation</p>					
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 standards 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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