

UNITED STATES WELDING CORPORATION

USW ALLOY DESIGNATION AND DESCRIPTION	TURBALOY® 41 HQ-GRADE GTAW SOLID BARE WELDING WIRE NICKEL BASE	ISO 9001 AS 9100 Revision A DATA SHEET 5800
CROSS-REFERENCE CONFORMANCE SPECIFICATIONS	USWC 5800 (A) 54Ni 19Cr 11Co 10Mo 3.2Ti 1.5Al 0.006B AMS 5800 Alloy R41 UNS N07041 Rene 41 Available in MC-GRADE	
METALLURGICAL BACKGROUND INFORMATION	TURBALOY® 41 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® 41 is a Ni-Cr-Co-Mo precipitation hardening alloy used for joining similar composition base material. High temperature oxidation resistance and creep strength.	
MATERIALS TO BE WELDED AND APPLICATIONS	AMS 5172, 5713, 5545, 5399. GE B50 T44; T59; T94; TF75; TF110. Gas turbine, high temperature components, afterburner parts. Use pure argon gas shielding and ultra clean welding conditions.	
WIRE CHEMISTRY WT%	Manganese - 0.10 0.50 Silicon - 0.50 0.50 Sulfur - 0.015 0.015 Chromium 18.00 20.00 0.00	Molybdenum 9.0 10.50 Cobalt 10.00 12.00 Titanium 3.00 3.30 Aluminum 1.40 1.60 Boron 0.003 0.010 Iron - 5.00 Nickel Balance
WELD PROPERTIES	Soft condition: 32 HRC Aged condition: 40 HRC	Density: 8.24 gm/cc
SIZES AND FORMS AVAILABLE PACKAGING	STRAIGHT LENGTHS 5 lb. (2.2kg) packs 36" (914mm) lengths Flag tagged for traceability. (Double tagging and other lengths on request) Wide range of diameters. Sealed polyethylene envelopes. (Desiccants optic	SPOOLED WIRE 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.
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