

UNITED STATES WELDING CORPORATION

USW ALLOY DESIGNATION AND DESCRIPTION	TURBALOY® 420 HQ-GRADE GTAW SOLID BARE WELDING WIRE IRON BASE	ISO 9001 AS 9100 Revision A DATA SHEET 5621
CROSS-REFERENCE CONFORMANCE SPECIFICATIONS	AMS 5621 13Cr (0.30 - 0.40C) UNS \$42000 AWS A5.9 ER420 Fed QQ-S-763 Comp 420-A Alloy 51420	
METALLURGICAL BACKGROUND INFORMATION	TURBALOY® 420 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® 420 is a hardened martensitic stainless engineering alloy used for welding base alloys of similar composition and for depositing hard, wear resisting repair patches.	
MATERIALS TO BE WELDED AND APPLICATIONS	AMS 5621, 5506, 420SS, tool and die repair Preheat 302-410°F,maintain interpass, immediate PWHT at 1350 - 1460°F for 6-8 hours, air cool. For non-critical repairs welds, ER309 filler can be used.	
WIRE CHEMISTRY WT%	Manganese	ickel - 0.50 Iolybdenum - 0.50 opper - 0.50 luminum - 0.05 in - 0.05 on Balance
WELD PROPERTIES	Soft condition hardness: 87 HRB Process annealed: 91 HRB Max temperature hardness: 53 HRC	Density: 7.7gm/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 option	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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