UNITED STATES WELDING CORPORATION

USW ALLOY DESIGNATION AND DESCRIPTION	**TURBALOY® 450** **MC-GRADE** **GTAW SOLID BARE WELDING WIRE** **IRON BASE**	**ISSUED** JANUARY 2007 REVISION NO. A	**DATA SHEET** 5763 (12)

CROSS-REFERENCE CONFORMANCE SPECIFICATIONS

AMS 5763
UNS S45000
USWC 5763 (V)

15Cr 6.5Ni 0.75Mo 0.5Cb 1.5Cu
XM - 25

METALLURGICAL BACKGROUND INFORMATION

TURBALOY® 450 wire is manufactured by special lubricant-free, roller-die forming and surface abrasion and cleaning processes.
These manufacturing processes ensure integrity of the alloy and surface physical purity of the welding wire.
TURBALOY® 450 is a martensitic age-hardening stainless engineering alloy with a strength three times greater than 304SS and comparable corrosion resistance.
TURBALOY® 450 is used to weld alloys of similar base composition.
The MC-GRADE weld wire produces excellent ductility and lower yield stress values.

MATERIALS TO BE WELDED AND APPLICATIONS

AMS 5859, 5863, 5617, 5860, 5578, 5773, 5763.
UNS S45000. (Substitutes for 17-4PH, 15-5PH, 410, 420, 431.)
ASTM 564, 705, 693 (as XM - 25)
ASM 5348, 5347, 5862.
UNS J92110.
(*Note:* AMS 5825 filler metal is sometimes used to substitute for AMS 5763.)
Although martensitic, generally no PH is required.

WIRE CHEMISTRY WT%

Carbon	-	0.05	Nickel	6.00	7.00
Manganese	-	1.00	Molybdenum	0.50	1.00
Silicon	-	1.00	Columbium	8xC	0.75
Sulfur	-	0.03	Copper	1.25	1.75
Phosphorus	-	0.03	Iron		Balance
Chromium	14.00	16.00			

WELD PROPERTIES

Hardness annealed: 28 HRC
Maximum hardness: 42 HRC
Density: 7.93 gm/cc
Excellent weldability
Often used AS WELDED

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, air-evacuated, argon purged Vapor Barrier e nvelopes with desiccants ensure full protection from atmospheric contamination and prolonged shelf-life.

DISTRIBUTED BY:

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