UNITED STATES WELDING CORPORATION

USW ALLOY DESIGNATION AND DESCRIPTION	TURBALOY® 310 HQ-GRADE GTAW SOLID BARE WELDING WIRE IRON BASE	ISSUED JANUARY 2007 REVISION NO. A	DATA SHEET 5694 (11)

CROSS-REFERENCE CONFORMANCE SPECIFICATIONS

AMS 5694
UNS S31080
310 LC SS
USWC 5694 (A)

27Cr 21.5Ni
AWS A5.9 ER310
BS 2901, Part 2 310S94

METALLURGICAL BACKGROUND INFORMATION

TURBALOY® 310 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® 310 is a fully austenitic stainless alloy with excellent oxidation resistance up to 2000°F continuous service; used for fabricating alloys of similar composition. This is a zero ferrite alloy and is therefore suitable for thermal cycling application.

NOTE; There is no high carbon grade of 310SS in the form of an AMS release.

MATERIALS TO BE WELDED AND APPLICATIONS

UNS S31000: ASTM A167, 213, 249, 312, 276, 314, 473.
CK-20 castings.

Dissimilar metal joints between stainless steels, e.g..310 and 330SS.
Apply stringer beads with minimum heat input and use ultra clean weldment conditions.
Fill craters and minimize residual stress.

WIRE CHEMISTRY WT%

Carbon	-	0.15	Chromium	26.00	28.00
Manganese	1.25	2.50	Nickel	20.50	22.50
Silicon	0.25	0.60	Molybdenum	-	0.75
Sulfur	-	0.025	Copper	-	0.75
Phosphorus	-	0.030	Iron		Balance

WELD PROPERTIES

Density: 7.9gm/cc

Melting Point: 2650°F
Hardness annealed sheet: 85 HRB

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)

DISTRIBUTED BY:

3579 HIGHWAY 50 EAST #104 □ CARSON CITY, NEVADA 89701-2826
775/883-7878 □ 800/423-5964 □ FAX: 775/883-7776