



# UNITED STATES WELDING CORPORATION

<b>USW ALLOY DESIGNATION AND DESCRIPTION</b>	<b>4008 (A356)</b>		<b>ISSUED</b> JANUARY 2007	<b>DATA SHEET</b>  <b>4181</b>  (1)
	<b>GTAW SOLID WELDING WIRE ALUMINUM BASE</b>		<b>REVISION NO.</b> A	
<b>CROSS-REFERENCE CONFORMANCE SPECIFICATIONS</b>	AMS 4181 (Premium) ALLOY R-4008 UNS A 94008 ALLOY A356	USWC 4181 (C) AMS 4188/4 AMS 4218 A356, R356	MSRR 8011 MSRR 9500/46 ER4008 (Premium) ER4010	
<b>METALLURGICAL BACKGROUND INFORMATION</b>	<p>ALLOY 4008 is a solid welding wire produced conventionally and then surface cleaned to remove standard metal working lubricants.</p> <p>ALLOY 4008 is an Al-Si-Mg-Ti welding alloy used with base alloys of similar composition. It is a more tightly controlled chemistry version of R4010.</p>			
<b>MATERIALS TO BE WELDED AND APPLICATIONS</b>	<p>Casting refurbishment, repair, attachments, machining faults.</p> <p>LM8, LM25, 2L99, A356, 356, BSL173. AMS 4217, 4284, A356 is a tighter specification than 356 with improved ductility. SAE 336, 323, B135, SG70B. MSRR 8011, DTD716, 722, 727. MSRR 8081.</p>			
<b>WIRE CHEMISTRY WT%</b>	Silicon                    6.5 - 7.5 Magnesium                0.30 0.45 Titanium                    0.40 0.15 Iron                            - 0.09 Copper                      - 0.05 Zinc                            - 0.05	Manganese                0.05 Beryllium                  0.0008 (8ppm) Other impurities         0.05 each max Other elements            0.15 total max Aluminum                 Balance		
<b>WELD PROPERTIES</b>	Melting range 1022° - 1139°F                    Density 2.66gm/cc Hardness 60-105 HV			
<b>SIZES AND FORMS AVAILABLE</b>	<b>STRAIGHT LENGTHS</b>		<b>SPOOLED WIRE</b>	
	2.2 kg ( 5 lb) packs. 914 mm (36") lengths. Flag tagged for traceability. (Double tagging and other lengths on request). Wide range of diameters.		Precision layer wound & with controlled cast & helix. 300 mm (12") diameter spools standard. 200 mm, 100 mm and proprietary spool sizes on request Wide range of diameters and spool weights.	
<b>PACKAGING</b>	Sealed, air-evacuated, argon purged Vapor Barrier envelopes with desiccants ensure full protection from atmospheric contamination and prolonged shelf-life.			
<b>DISTRIBUTED BY:</b>				