



UNITED STATES WELDING CORPORATION

USW ALLOY DESIGNATION AND DESCRIPTION	357 GTAW and GMAW SOLID WELDING WIRE ALUMINUM BASE	ISO 9001 AS 9100	DATA SHEET 4246																									
CROSS-REFERENCE CONFORMANCE SPECIFICATIONS	<table style="width: 100%; border: none;"> <tr> <td style="width: 33%; border: none;">AMS 4246 DRU 1438 USWC 4246 (C) UNS A03570</td> <td style="width: 33%; border: none;">357.0 AWS A5.10 R357 R.357.0</td> <td style="width: 33%; border: none;"></td> </tr> </table>			AMS 4246 DRU 1438 USWC 4246 (C) UNS A03570	357.0 AWS A5.10 R357 R.357.0																							
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METALLURGICAL BACKGROUND INFORMATION	<p>ALLOY 357 is a solid welding wire produced conventionally and then surface cleaned to remove standard metal working lubricants.</p> <p>ALLOY 357 is an Al-Si-Mg welding alloy for use on casting alloys of similar composition. It is Be-free.</p>																											
MATERIALS TO BE WELDED AND APPLICATIONS	AMS 4219 A 357, 357.0, 357.2 BSL169																											
WIRE CHEMISTRY WT%	<table style="width: 100%; border: none;"> <tr> <td style="width: 33%; border: none;">Silicon</td> <td style="width: 10%; border: none;">6.5</td> <td style="width: 10%; border: none;">7.5</td> <td style="width: 33%; border: none;">Copper</td> <td style="width: 14%; border: none;">0.05</td> </tr> <tr> <td style="border: none;">Magnesium</td> <td style="border: none;">0.45</td> <td style="border: none;">0.60</td> <td style="border: none;">Manganese</td> <td style="border: none;">0.03</td> </tr> <tr> <td style="border: none;">Titanium</td> <td style="border: none;">-</td> <td style="border: none;">0.20</td> <td style="border: none;">Other impurities</td> <td style="border: none;">0.05 each max</td> </tr> <tr> <td style="border: none;">Iron</td> <td style="border: none;">-</td> <td style="border: none;">0.15</td> <td style="border: none;">Other elements</td> <td style="border: none;">0.15 total max</td> </tr> <tr> <td style="border: none;">Zinc</td> <td style="border: none;">-</td> <td style="border: none;">0.05</td> <td style="border: none;">Aluminum</td> <td style="border: none;">Balance</td> </tr> </table> <p>Beryllium-free version of AMS 4219</p>			Silicon	6.5	7.5	Copper	0.05	Magnesium	0.45	0.60	Manganese	0.03	Titanium	-	0.20	Other impurities	0.05 each max	Iron	-	0.15	Other elements	0.15 total max	Zinc	-	0.05	Aluminum	Balance
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WELD PROPERTIES	Melting range 1029° - 1135°F Density 2.69gm/cc																											
SIZES AND FORMS AVAILABLE	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"> STRAIGHT LENGTHS 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. </td> <td style="width: 50%; border: none;"> SPOOLED WIRE 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. </td> </tr> </table>			STRAIGHT LENGTHS 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.	SPOOLED WIRE 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.																							
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PACKAGING	Sealed, air-evacuated, argon purged Vapor Barrier envelopes with desiccants ensure full protection from atmospheric contamination and prolonged shelf-life.																											
DFARS Compliant		www.usweldingcorp.com																										