



UNITED STATES WELDING CORPORATION

USW ALLOY DESIGNATION AND DESCRIPTION	4043 GTAW and GMAW SOLID WELDING WIRE ALUMINUM BASE	ISO 9001 AS 9100	DATA SHEET 4190																								
CROSS-REFERENCE CONFORMANCE SPECIFICATIONS	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none; vertical-align: top;"> MSRR 9500/32 AMS 4190 USWC 4190 (C) N21 (NG21) MSRR 8065 </td> <td style="width: 50%; border: none; vertical-align: top;"> UNS A 9 4043 OMAT 310A Fed-QQ-R-556 Class 4043 Alloy 4043 A (BS 2901 PT4) ER4043, R4043 (AWS A5.10) </td> </tr> </table>			MSRR 9500/32 AMS 4190 USWC 4190 (C) N21 (NG21) MSRR 8065	UNS A 9 4043 OMAT 310A Fed-QQ-R-556 Class 4043 Alloy 4043 A (BS 2901 PT4) ER4043, R4043 (AWS A5.10)																						
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METALLURGICAL BACKGROUND INFORMATION	<p>ALLOY 4043 is a solid welding wire produced conventionally and then surface cleaned to remove standard metal working lubricants.</p> <p>ALLOY 4043 is an Al-5% Si alloy, <i>non-heat treatable</i>.</p> <p>ALLOY 4043 has a lower melting range than the base metals for which it is commonly used and relieves contraction during weldment cooling.</p>																										
MATERIALS TO BE WELDED AND APPLICATIONS	<p>1xxx, 3xxx, 6xxx series alloys. 2014, 2219, 5005, 5050, 5052, 7005, 7039, N21. Al-Si, Al-Si-Mg casting alloys and combinations of above materials. Al - Lithium alloys. DTD372B, LM4, LM2, LM6, LM9, LM20, LM25, LM27.</p>																										
WIRE CHEMISTRY WT%	<table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">Silicon</td> <td style="width: 33%;">4.5 - 6.0</td> <td style="width: 33%;">Magnesium</td> <td style="width: 33%;">0.05</td> </tr> <tr> <td>Iron</td> <td>- 0.80</td> <td>Beryllium</td> <td>0.0008 (8ppm)</td> </tr> <tr> <td>Copper</td> <td>- 0.30</td> <td>Other impurities</td> <td>0.05 each max</td> </tr> <tr> <td>Titanium</td> <td>- 0.20</td> <td>Other elements</td> <td>0.15 total max</td> </tr> <tr> <td>Zinc</td> <td>- 0.10</td> <td>Aluminum</td> <td>Balance</td> </tr> <tr> <td>Manganese</td> <td>- 0.05</td> <td></td> <td></td> </tr> </table>			Silicon	4.5 - 6.0	Magnesium	0.05	Iron	- 0.80	Beryllium	0.0008 (8ppm)	Copper	- 0.30	Other impurities	0.05 each max	Titanium	- 0.20	Other elements	0.15 total max	Zinc	- 0.10	Aluminum	Balance	Manganese	- 0.05		
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WELD PROPERTIES	Melting range 1063° - 1170°F Density 2.69gm/cc																										
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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																									