



UNITED STATES WELDING CORPORATION

USW ALLOY DESIGNATION AND DESCRIPTION	4009 (C355) GTAW and GMAW SOLID WELDING WIRE ALUMINUM BASE	ISSUED JANUARY 2007	DATA SHEET 4245 (7)																																				
		REVISION NO. A																																					
CROSS-REFERENCE CONFORMANCE SPECIFICATIONS	C355 AMS 4245 R 355 AMS 4215	ER 4009 R 4009 USWC 4245 (C) UNS A03550																																					
METALLURGICAL BACKGROUND INFORMATION	<p>ALLOY 4009 is a solid welding wire produced conventionally and then surface cleaned to remove standard metal working lubricants.</p> <p>ALLOY 4009 is an Al-Cu-Si alloy for welding casting alloys of similar composition (heat-treatable). Low Fe filler metal for improved deposit ductility.</p>																																						
MATERIALS TO BE WELDED AND APPLICATIONS	A355, 355 castings - repair, refurbishment, reclaim. AMS 4210, 4212, 4214, 4215 Mil - A - 21180 Fed - QQ - A601 - 355 LM16, LM78, (BS1490) SAE 322																																						
WIRE CHEMISTRY WT%	<table> <tr> <td>Silicon</td> <td>4.5</td> <td>5.5</td> <td>Titanium</td> <td>-</td> <td>0.20</td> </tr> <tr> <td>Iron</td> <td>-</td> <td>0.20</td> <td>Other impurities</td> <td>-</td> <td>0.05 each</td> </tr> <tr> <td>Copper</td> <td>1.0</td> <td>1.5</td> <td>Other impurities</td> <td>-</td> <td>0.15 total</td> </tr> <tr> <td>Manganese</td> <td>-</td> <td>0.10</td> <td>Aluminium</td> <td></td> <td>Balance</td> </tr> <tr> <td>Magnesium</td> <td>0.40</td> <td>0.60</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Zinc</td> <td>-</td> <td>1.10</td> <td></td> <td></td> <td></td> </tr> </table>			Silicon	4.5	5.5	Titanium	-	0.20	Iron	-	0.20	Other impurities	-	0.05 each	Copper	1.0	1.5	Other impurities	-	0.15 total	Manganese	-	0.10	Aluminium		Balance	Magnesium	0.40	0.60				Zinc	-	1.10			
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WELD PROPERTIES	Melting range 983° - 1149° F Density 2.72gm/cc Hardness80 - 100 HV																																						
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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.																																						

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