



UNITED STATES WELDING CORPORATION

USW ALLOY DESIGNATION AND DESCRIPTION	4009 (C355) GTAW and GMAW SOLID WELDING WIRE ALUMINUM BASE	ISO 9001 AS 9100	DATA SHEET 4245																																				
CROSS-REFERENCE CONFORMANCE SPECIFICATIONS	<table border="0"> <tr> <td>C355</td> <td>ER 4009</td> </tr> <tr> <td>AMS 4245</td> <td>R 4009</td> </tr> <tr> <td>R 355</td> <td>USWC 4245 (C)</td> </tr> <tr> <td>AMS 4215</td> <td>UNS A03550</td> </tr> </table>			C355	ER 4009	AMS 4245	R 4009	R 355	USWC 4245 (C)	AMS 4215	UNS A03550																												
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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 border="0"> <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>0.10</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	-	0.10			
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WELD PROPERTIES	Melting range 983° - 1149° F Density 2.72gm/cc Hardness80 - 100 HV																																						
SIZES AND FORMS AVAILABLE	<table border="0"> <tr> <td style="text-align: center;">STRAIGHT LENGTHS</td> <td style="text-align: center;">SPOOLED WIRE</td> </tr> <tr> <td>2.2 kg (5 lb) packs.</td> <td>Precision layer wound & with controlled cast & helix.</td> </tr> <tr> <td>914 mm (36") lengths.</td> <td>300 mm (12") diameter spools standard.</td> </tr> <tr> <td>Flag tagged for traceability.</td> <td>200 mm, 100 mm and proprietary spool sizes on request</td> </tr> <tr> <td>(Double tagging and other lengths on request).</td> <td>Wide range of diameters and spool weights.</td> </tr> <tr> <td>Wide range of diameters.</td> <td></td> </tr> </table>			STRAIGHT LENGTHS	SPOOLED WIRE	2.2 kg (5 lb) packs.	Precision layer wound & with controlled cast & helix.	914 mm (36") lengths.	300 mm (12") diameter spools standard.	Flag tagged for traceability.	200 mm, 100 mm and proprietary spool sizes on request	(Double tagging and other lengths on request).	Wide range of diameters and spool weights.	Wide range of diameters.																									
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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																																					