



UNITED STATES WELDING CORPORATION

<p align="center">USW ALLOY DESIGNATION AND DESCRIPTION</p>	<p align="center">TURBALOY[®] 300 M MC-GRADE GTAW SOLID BARE WELDING WIRE IRON BASE</p>	<p align="center">ISO 9001 AS 9100</p>	<p align="center">DATA SHEET 6419</p>																																				
<p align="center">CROSS-REFERENCE CONFORMANCE SPECIFICATIONS</p>	<p>AMS 6419 UNS K44220 300M USWC 6419(V)</p> <p align="right">MIL-S-8844 1.6Si 0.82Cr 1.8Ni 0.4Mo 0.08V (0.40 - 0.45C)</p>																																						
<p align="center">METALLURGICAL BACKGROUND INFORMATION</p>	<p>TURBALOY[®] 300M is produced by vacuum induction melting and remelting techniques. The final wire is manufactured by special lubricant-free, roller-die forming followed by surface abrasion and cleaning processes.</p> <p>These manufacturing processes ensure consistent metallurgical integrity of the alloy with regard to control of trace elements and physical purity of the welding wire surface.</p> <p>TURBALOY[®] 300M is a high strength, low alloy steel filler material for use for welding similar composition materials.</p>																																						
<p align="center">MATERIALS TO BE WELDED AND APPLICATIONS</p>	<p>UNS K44315, K44220. AMS 6416, 6417, 6419. MIL-S-8844 Class B MS - 7 -26 CPS - 4911</p>																																						
<p align="center">WIRE CHEMISTRY WT%</p>	<table border="0"> <tr> <td>Carbon</td> <td>0.40</td> <td>0.45</td> <td>Nickel</td> <td>1.65</td> <td>2.00</td> </tr> <tr> <td>Manganese</td> <td>0.60</td> <td>0.90</td> <td>Molybdenum</td> <td>0.30</td> <td>0.50</td> </tr> <tr> <td>Silicon</td> <td>1.45</td> <td>1.80</td> <td>Vanadium</td> <td>0.05</td> <td>0.10</td> </tr> <tr> <td>Sulfur</td> <td>-</td> <td>0.010</td> <td>Copper</td> <td>-</td> <td>0.35</td> </tr> <tr> <td>Phosphorus</td> <td>-</td> <td>0.010</td> <td>Iron</td> <td></td> <td>Balance</td> </tr> <tr> <td>Chromium</td> <td>0.70</td> <td>0.95</td> <td></td> <td></td> <td></td> </tr> </table>			Carbon	0.40	0.45	Nickel	1.65	2.00	Manganese	0.60	0.90	Molybdenum	0.30	0.50	Silicon	1.45	1.80	Vanadium	0.05	0.10	Sulfur	-	0.010	Copper	-	0.35	Phosphorus	-	0.010	Iron		Balance	Chromium	0.70	0.95			
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<p align="center">WELD PROPERTIES</p>	<p>Melting Point: 2740°F Hardness, aged 600°F :56 HRC</p> <p align="right">Density: 7.84 gm/cc</p>																																						
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<p align="center">PACKAGING</p>	<p>Sealed, air-evacuated, argon purged Vapor Barrier envelopes with desiccants ensure full protection from atmospheric contamination and prolonged shelf-life.</p>																																						
<p>DFARS Compliant</p>		<p align="right">www.usweldingcorp.com</p>																																					