



UNITED STATES WELDING CORPORATION

<p align="center">USW ALLOY DESIGNATION AND DESCRIPTION</p>	<p align="center">TURBALOY® 410 HQ-GRADE GTAW SOLID BARE WELDING WIRE IRON BASE</p>	<p align="center">ISO 9001 AS 9100</p>	<p align="center">DATA SHEET 5776</p>																																										
<p align="center">CROSS-REFERENCE CONFORMANCE SPECIFICATIONS</p>	<p>AMS 5776 410SS MSRR 9500/205 12.5 Cr steel</p> <p align="right">UNS S410010 AWS A5.9 ER410 Available in MC-GRADE (5821)</p>																																												
<p align="center">METALLURGICAL BACKGROUND INFORMATION</p>	<p>TURBALOY® 410 undergoes a series of proprietary abrading and cleaning processes to remove all surface contaminants. These manufacturing processes ensure a consistent ultra-clean weld wire surface.</p> <p>TURBALOY® 410 is an air-hardening martensitic stainless alloy used for welding alloys of similar composition.</p>																																												
<p align="center">MATERIALS TO BE WELDED AND APPLICATIONS</p>	<p>AMS 5867, 5504, 5591, 5609, 5612, 5611, 5505. AISI 410. ASTM A176, A240, A268, A511, A314, A479, A473, A580.</p> <p>Preheat and PWHT generally required in order to obtain adequate ductility for many engineering applications.</p>																																												
<p align="center">WIRE CHEMISTRY WT%</p>	<table border="0"> <tr> <td>Carbon</td> <td>0.10</td> <td>0.15</td> <td>Molybdenum</td> <td>-</td> <td>0.50</td> </tr> <tr> <td>Manganese</td> <td>-</td> <td>1.00</td> <td>Aluminum</td> <td>-</td> <td>0.05</td> </tr> <tr> <td>Silicon</td> <td>-</td> <td>1.00</td> <td>Copper</td> <td>-</td> <td>0.50</td> </tr> <tr> <td>Sulfur</td> <td>-</td> <td>0.015</td> <td>Tin</td> <td>-</td> <td>0.05</td> </tr> <tr> <td>Phosphorus</td> <td>-</td> <td>0.025</td> <td>Nitrogen</td> <td>-</td> <td>0.08</td> </tr> <tr> <td>Chromium</td> <td>11.5</td> <td>13.50</td> <td>Iron</td> <td></td> <td>Balance</td> </tr> <tr> <td>Nickel</td> <td>-</td> <td>0.75</td> <td></td> <td></td> <td></td> </tr> </table>			Carbon	0.10	0.15	Molybdenum	-	0.50	Manganese	-	1.00	Aluminum	-	0.05	Silicon	-	1.00	Copper	-	0.50	Sulfur	-	0.015	Tin	-	0.05	Phosphorus	-	0.025	Nitrogen	-	0.08	Chromium	11.5	13.50	Iron		Balance	Nickel	-	0.75			
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<p align="center">WELD PROPERTIES</p>	<p>Response to Heat Treatment: 35-45 HRC</p> <p align="right">Density: 7.7 gm/cc</p> <p>Melting point: 2790°F</p>																																												
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<p align="center">PACKAGING</p>	<p>Sealed polyethylene envelopes. (Desiccants optional)</p>																																												
<p>DFARS Compliant</p>		<p align="right">www.usweldingcorp.com</p>																																											