



# UNITED STATES WELDING CORPORATION

<p align="center"><b>USW ALLOY DESIGNATION AND DESCRIPTION</b></p>	<p align="center"><b>TURBALOY® 515</b>  <b>HQ-GRADE</b>  <b>GTAW SOLID BARE WELDING WIRE</b>  <b>IRON BASE</b></p>	<p align="center">ISO 9001 AS 9100</p>	<p align="center"><b>DATA SHEET</b>  <b>1407</b></p>																																																
<p align="center"><b>CROSS-REFERENCE CONFORMANCE SPECIFICATIONS</b></p>	<p>USW 1407 Available in Commercial Grade          UNS K20900          1 1/4 Cr .5 Mo .10 C          AWS A5.28 (ER80S-B2)</p>																																																		
<p align="center"><b>METALLURGICAL BACKGROUND INFORMATION</b></p>	<p>TURBALOY® 515 undergoes a series of proprietary abrading and cleaning processes to remove all surface contamination. These manufacturing processes ensure a consistent ultra-clean weld wire surface.</p>																																																		
<p align="center"><b>MATERIALS TO BE WELDED AND APPLICATIONS</b></p>	<p>TURBALOY® 515 is used to weld 1/2 Cr - 1/2 Mo, 1 Cr - 1 Mo, 1 1/4 Cr - 1/2 Mo steels for elevated temperatures and corrosive service. It is also used for joining dissimilar combinations of Cr / Mo and carbon steels.</p> <p>Careful control of preheat, interpass temperatures, and postheat is essential to avoid cracking.</p>																																																		
<p align="center"><b>WIRE CHEMISTRY WT%</b></p>	<table border="0"> <tr> <td>Carbon</td> <td>0.07</td> <td>0.12</td> <td>Copper</td> <td>-</td> <td>0.35</td> </tr> <tr> <td>Manganese</td> <td>0.40</td> <td>0.70</td> <td>(OET)</td> <td>-</td> <td>0.50</td> </tr> <tr> <td>Silicon</td> <td>0.40</td> <td>0.70</td> <td>Iron</td> <td></td> <td>Balance</td> </tr> <tr> <td>Sulfur</td> <td>-</td> <td>0.025</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Phosphorus</td> <td>-</td> <td>0.025</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Chromium</td> <td>1.20</td> <td>1.50</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Molybdenum</td> <td>0.40</td> <td>0.65</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Nickel</td> <td>-</td> <td>0.20</td> <td></td> <td></td> <td></td> </tr> </table>			Carbon	0.07	0.12	Copper	-	0.35	Manganese	0.40	0.70	(OET)	-	0.50	Silicon	0.40	0.70	Iron		Balance	Sulfur	-	0.025				Phosphorus	-	0.025				Chromium	1.20	1.50				Molybdenum	0.40	0.65				Nickel	-	0.20			
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<p align="center"><b>PACKAGING</b></p>	<p>Sealed polyethylene envelopes. (Desiccants optional)</p>																																																		

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