



Quality Management System  
in accordance with  
**ISO 9001:2000**  
Cert # 05-R0925

# CERTIFICATE of Compliance

**TRADE NAME: USA 8018-C3**  
Specification: AWS A 5.5 : ASME SFA 5.5  
Classification: E8018-C3

**U.S. ALLOY CO.**  
dba Washington Alloy  
7010-G Reames Rd.  
Charlotte, NC 28216  
[www.weldingwire.com](http://www.weldingwire.com)



## Chemical Composition for Weld Metal

	AWS Requirements	Typical
<b>Carbon (C)</b>	<b>0.12 max.</b>	<b>0.070</b>
<b>Manganese (Mn)</b>	<b>0.40-1.25</b>	<b>0.910</b>
<b>Silicon (Si)</b>	<b>0.80 max.</b>	<b>0.450</b>
<b>Phosphorus (P)</b>	<b>0.03 max.</b>	<b>0.013</b>
<b>Sulfur (S)</b>	<b>0.03 max.</b>	<b>0.014</b>
<b>Chromium (Cr)</b>	<b>0.15 max.</b>	
<b>Molybdenum (Mo)</b>	<b>0.35 max.</b>	<b>0.22</b>
<b>Copper (Cu)</b>		
<b>Nickel (Ni)</b>	<b>0.80-1.10</b>	<b>1.030</b>
<b>Vanadium (V)</b>	<b>0.05 max.</b>	

## Mechanical Properties for Weld Metal

	AWS Requirements	Typical <sup>1)</sup>
<b>Tensile Strength</b>	<b>80,000 psi min.</b>	<b>87,000 psi</b>
<b>Yield Strength</b>	<b>68,000-80,000 psi <sup>2)</sup></b>	<b>73,000 psi</b>
<b>Elongation in 2"</b>	<b>24 % min.</b>	<b>31 %</b>
<b>Charpy V-notch Impact Average</b>	<b>20 ft · lbs at -40°F min.</b>	<b>44 ft · lbs at -40°F</b>

*This certification is provided by Washington Alloy Co. with the expressed understanding that if the product supplied fails to conform the stated specifications, there shall be no personal liability of any kind on the undersigned and the obligation and liability of Washington Alloy Co., with respect to such non-conformance or specification failure, shall be limited to a) an obligation to furnish the purchaser, at no additional charge, material that meets the specifications and conformances or b) to refund to the purchaser the full amount of money paid to Washington Alloy Co. for the return of the product in full. In no event shall Washington Alloy Co. be liable for consequential damage.*

**This certifies that the product supplied will meet the requirements of the noted classification and data above. Products supplied in accordance to the Quality Management System of Washington Alloy Company.**

  
Certification Administrator

<sup>1)</sup> As Welded, <sup>2)</sup> 3/32" electrodes yield 68-85,000 psi

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