



CERTIFICATE of Compliance

U.S. ALLOY CO.
dba Washington Alloy
7010-G Reames Rd.
Charlotte, NC 28216
www.weldingwire.com

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

TRADE NAME: USA 320LR-16
Specification: AWS A5.4: ASME SFA 5.4
Classification: E320LR-16



Chemical Composition for Undiluted Weld Metal

	AWS Requirements	Typical
Carbon (C)	0.03 max.	0.012
Chromium (Cr)	19.00-21.00	20.30
Nickel (Ni)	32.00-36.00	34.80
Niobium (Nb) or (Cb) + Ta	8 x C min to 0.40 max	0.20
Manganese (Mn)	1.5-2.5	1.64
Silicon (Si)	0.30 max.	0.70
Phosphorus (P)	0.020 max.	
Sulfur (S)	0.015 max.	
Copper (Cu)	3.0-4.0	3.60
Molybdenum (Mo)	2.0-3.0	2.25

Mechanical Properties

	AWS Requirements	Typical
Tensile Strength	75,000 psi (min)	84,000 psi
Yield Strength	Not required	54,000 psi
Charpy V-notch Impact Average	Not required	
Elongation in 2"	30% min.	34%
Ferrite Content	Not required	

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

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Warehouse Distribution Center – Dayton, Ohio

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