



# 904L-16 Coated Electrode

U.S. ALLOY CO.  
dba Washington Alloy  
825 Groves St.  
Lowell, NC 28098  
[www.weldingwire.com](http://www.weldingwire.com)

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



## ALLOY DESCRIPTION AND APPLICATION;

904L is a high alloy austenitic stainless steel electrode with extra low carbon content intended for use in severe corrosive conditions. Residual elements C, Si, P, S and N are kept at much lower levels in order to keep the weld metal from hot cracking and fissuring. USA 904L is designed for joining 20% Cr-25% Ni-4.5% Mo1.5% Cu stainless steels used to manufacture and repair processing equipment, tanks, vessels, and process piping handling acetic acids, sulfuric acid solutions and many chloride containing media. Other uses Include cooling units for sea water and river water purification plants and for cladding lower alloy steels when used in many corrosive media environments. USA 904L is also used for joining AISI type 317 where improved corrosive resistance in specific media is required.

## TYPICAL WELDING PROCEDURES; DCEP & AC

Diameter	Amps	Diameter	Amps
1/16"	15-40	1/8"	75-110
5/64"	30-50	5/32"	100-140
3/32"	50-75	3/16"	160-200

Arc Length = short arc, Flat use 15° angle from 90°, Vertical up & Overhead use weaving techniques within puddle

Procedures may vary with change in position, base metals, filler metals, equipment and other changes.  
When welding vertical reduce amperage 10-20%

## TYPICAL CHEMISTRY (%) & WELD METAL PROPERTIES

Carbon	0.03 max	Molybdenum	4.2-5.2
Manganese	1.00-2.5	Phosphorus	0.020 max
Silicon	0.90 max	Sulfur	0.030 max
Chromium	19.5-21.5	Nickel	24.0-26.0
Copper	1.2-2.0		

Elongation 36%  
Yield Strength (psi) 68,000  
Tensile Strength (psi) 82,500  
Iron balance and all single values are maximum percentages

**AVAILABLE SIZES:** TF904L-16 = 3/32", 1/8", 5/32", 3/16"

**SPECIFICATIONS;** ANSI/AWS A5.4 E385-16  
ASME SFA 5.4 E385-16

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