



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

# EAGLE ARC 799 Carbon Steel Flux-Cored Wire

U.S. ALLOY CO.  
dba Washington Alloy  
7010-G Reames Rd.  
Charlotte, NC 28216  
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### ALLOY DESCRIPTION AND APPLICATION:

EAGLE ARC 799 is a baked flux cored wire designed for single or multi pass welding having a smooth arc transfer, low spatter, flat to slightly convex bead contour, with a high deposition rate and easily removal slag. This all-position baked wire has excellent feeding and low fume generation using 100% CO<sub>2</sub> or mixed gas making it a good choice for mild steel and higher strengths steels. The baked process ensures the removal of moisture and may reduce operating temperature along with less wear and drag in the feeding systems. Bridge & offshore structures, ship building, earth moving and all general fabrication requirement with excellent operator appeal. ***AWS D1.8 certified***

### TYPICAL FCAW WELDING PROCEDURES; DCEP OPTIMUM IN BOLD (FLAT)

Wire Diameter	Wire Speed (ipm)	Amps	Volts	Electrical Stickout	CO <sub>2</sub> (cfh)
0.045	145- <b>280</b> -425	125- <b>205</b> -265	22- <b>29</b> -33	1/2-1"	35-45
0.052	150- <b>400</b> -600	140- <b>275</b> -390	19- <b>28</b> -35	1/2-1"	40-50
1/16"	150- <b>330</b> -490	150- <b>330</b> -475	23- <b>30</b> -38	1/2-1"	40-50

Approximate Deposition Rates (lbs/hr) .045" = 3.8-9.2 **idea 7.8lbs** ; .052" = 3.8-14.1 **idea 8.9lbs** ; 1/16" = 5.1-17.8 **idea 9.7lbs**

Procedures may vary with change in position, base metals, filler metals, equipment and other changes.  
1-2 VOLTS LOWER USED WITH MIXED GAS

### TYPICAL WELD METAL CHEMISTRY (%) AND WELD METAL PROPERTIES;

	AWS Spec.	799	BASED ON 100% CO <sub>2</sub> /	MIX 75/25 IN BOLD	AWS Spec	799
Carbon	0.12 max	0.03/ <b>0.03</b>	Tensile Strength (psi)	70-95,000	83,343 / <b>88,194</b>	
Manganese	1.75 max	1.20/ <b>1.45</b>	Yield Strength (psi)	58,000 min.	76,610 / <b>80,986</b>	
Silicon	0.90 max	0.40/ <b>0.50</b>	Elongation in 2"	22 % min.	29.5% / <b>28.1 %</b>	
Phosphorus	0.030 max.	0.013/ <b>0.011</b>	Charpy V-notch at -20°F	20 ft·lbs min.	35.3 / <b>39.1</b> ft·lbs	
Sulfur	0.030 max.	0.012/ <b>0.010</b>	Charpy V-notch at -0°F	20 ft·lbs min.	51.6 / <b>62.7</b> ft·lbs	
Copper	0.35 max.	0.01/ <b>0.01</b>	Chromium	0.20 max.	0.04/ <b>0.04</b>	
Nickel	0.50 max.	0.015/ <b>0.013</b>	Vanadium	0.08 max.	0.01/ <b>0.01</b>	
Molybdenum	0.30 max.	0.012/ <b>0.010</b>				

Hydrogen test with 100 CO<sub>2</sub> was @ 4.6(ml/100gl) and 75% Ar + 25% CO<sub>2</sub> was @ 5.9

**AVAILABLE SIZES:** TCB EAGLE-ARC 799= Spools of .045, .052, 1/16"

### SPECIFICATIONS; AWS A5.20

E71T-1C/1M-9C/9M H8

ASME SFA 5.20

E71T-1C/1M -9C/9M H8

AWS A5.36

E71T1-C1[M21]A0[A2]-CS1-H8

ASME SFA 5.36

E71T1-C1[M21]A0[A2]-CS1-H8

(Formerly classified as E71T-1/-9)

Meets Requirements of  
**AWS D1.8**  
Structural Welding  
Code - Seismic



**Made in the USA**

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