



**WA. ALLOY CO.**

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

# PREMIUM 70C-6M Carbon Steel Metal Cored Welding Wire

U.S. ALLOY CO.  
dba Washington Alloy  
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**American Welding Society**  
Sustaining Company Member

## ALLOY DESCRIPTION AND APPLICATION:

PREMIUM 70C-6M is a metal cored wire designed for single or multi pass which will improve production on all welding of mild steels having a smooth stable arc transfer, spatter free, excellent bead contour, with a high deposition rate and nearly free of slag weld bead. This wire is formulated to weld flat and horizontal which has deoxidizers that helps where mill scale may be present yet yielding will very low smoke or clean up. This metal cored wire may be used on many fabrications and is also found often in robotic applications. Premium 70C-6M will promote the best operator appeal while given the ultimate performance in every aspect of your welding needs on a never-ending means.

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

| Wire Diameter | Wire Speed (ipm)     | Amps                 | Volts             | Electrical Stickout | Ar/CO <sub>2</sub> (cfh) |
|---------------|----------------------|----------------------|-------------------|---------------------|--------------------------|
| 0.035         | 350- <b>525</b> -700 | 180- <b>200</b> -315 | 29- <b>30</b> -35 | 3/8-3/4"            | 35-40                    |
| 0.045         | 220- <b>400</b> -600 | 175- <b>250</b> -345 | 27- <b>30</b> -33 | 1/2-1"              | 35-45                    |
| 0.052         | 220- <b>375</b> -625 | 210- <b>300</b> -360 | 25- <b>30</b> -35 | 1/2-1"              | 40-50                    |
| 1/16"         | 150- <b>330</b> -490 | 210- <b>365</b> -440 | 26- <b>31</b> -38 | 1/2-1.25"           | 40-50                    |

Procedures may vary with change in position, base metals, filler metals, equipment and other changes.

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

|            | AWS Spec | PREMIUM 70C-6M |                         | BASED ON 80% Argon 20% CO <sub>2</sub> |                |
|------------|----------|----------------|-------------------------|--|----------------|
| Carbon     | 0.12     | 0.048          |                         | AWS Spec                               | PREMIUM 70C-6M |
| Manganese  | 1.75     | 1.502          | Tensile Strength (psi)  | 70,000 min.                            | 86,050         |
| Silicon    | 0.90     | 0.651          | Yield Strength (psi)    | 58,000 min.                            | 77,400         |
| Phosphorus | 0.03     | 0.005          | Elongation in 2"        | 22 % min.                              | 27%            |
| Sulfur     | 0.03     | 0.004          | Charpy V-notch at -20°F | 20 ft-lbs min.                         | 67 ft-lbs      |

TYPICAL Diffusible Hydrogen: AWS H4 Spec is max. of 4 (ml/100g weld); Heat # M23A9C with 80% Ar + 20% CO<sub>2</sub> was @ 2.25 (ml/100g weld)

**AVAILABLE SIZES:** TCD 70C-6M= Spools and Drums of .045

Other sizes may be available – please inquire

**SPECIFICATIONS; ANSI/AWS A5.18 E70C-6M**

**ASME SFA A5.18 E70C-6M**

All single values on AWS composition are maximum percentages & Total others elements 0.50

**Ask for and Experience all the PREMIUM branded fillers**

**Washington Alloys has to offer !!**

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**WA. ALLOY CO.**

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