

# WASHINGTON ALLOY CO.

## FLUX CORED WIRE

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## TABLE OF CONTENTS

EAGLE-ARC 719	1
PREMIUM 71T	2
BW 799	3
BW 777	4
SUPERFLOW 71T	5
SF-1A	6
CSF-71T	7
CSF-71SRM	8
PREMIUM 70C-6M	9

Washington Alloy Co. continually strives to offer the highest quality products in the welding industry.

This is especially true for our flux cored and metal cored line-up, which contains some of the most premier products on the market today. Whether it's general fabrication, specialized requirements for the oil and gas market, or any other use, we have a complete, well-rounded line-up to suit all applications.

Washington Alloy Co. has also partnered with world-renowned manufacturers Chosun Welding Co. and Nippon Steel Welding & Engineering Co. This allows us to offer products that meet ExxonMobil QML requirements.

Please contact us today to let us help you find the right flux cored product that is right for your application!

# Eagle-Arc 719

## Specification

- AWS 5.20 E71T-1C/1M-9C/9M-H8
- AWS 5.36 E71T1-C1[M21]A0[A2]-CS1-H8

## Key Features

- Non-baked Flux Cored wire designed for single or multi pass welding
- Able to be run with either Mixed Gas or 100% CO<sub>2</sub>

## Characteristics

- Exceptional slag removal, flat bead appearance, excellent out of position welding, versatility with either shielding gas, especially 100% CO<sub>2</sub>
- Vacuum sealed packaging to prevent moisture contamination

## Ordering Information

- Part#: TCC EAGLE-ARC 719 --
- Diameter (Inch) available: .035, .045, .052, 1/16
- Packaging available: 15 LB, 33 LB, 44 LB Spool  
550 LB Drum



TYPICAL WELD METAL CHEMISTRY (%)

	C	Mn	Si	P	S	Cu	Ni	Mo
CO <sub>2</sub>	0.038	1.30	0.44	0.009	0.006	0.01	0.01	0.02
MIXED	0.043	1.48	0.52	0.018	0.005	0.01	0.01	0.02

TYPICAL WELD METAL MECHANICAL PROPERTIES

	TENSILE STRENGTH	YIELD STRENGTH	ELONGATION	Impact value ft/lbs (-20 °F)
CO <sub>2</sub>	84,200 psi	73,300 psi	31%	35
MIXED	90,800 psi	80,800 psi	29%	57

# Premium 71T

## Specification

- AWS A5.20 E71T-1C/1M H8
- AWS A5.36 E71T1-C1[M21]A0[A2]-CS1-H8

## Key Features

- Titania type flux cored wire for all position welding with Mixed Gas or 100% CO<sub>2</sub>
- Low spatter, Soft arc with great stability
- Uniform slag covering with excellent removal

## Characteristics

- Great choice for shipbuilding, bridges, machineries, offshore structures and general fabrications
- Allows for efficient welding which increases deposition rate
- Offers wide range of operating procedure

## Ordering Information

- Part#: TCD 71T-1--
- Diameter (Inch) available: .045, .052, 1/16
- Packaging available: 33LB, 44LB Spool



### TYPICAL WELD METAL CHEMISTRY (%)

	C	Mn	Si	P	S
TYPICAL	0.04	1.29	0.55	0.013	0.010

### TYPICAL WELD METAL MECHANICAL PROPERTIES

	TENSILE STRENGTH	YIELD STRENGTH	ELONGATION	Impact value ft/lbs (0 °F)
TYPICAL	84,100 PSI	80,000 PSI	28%	56

# BW 799

## Specification

- AWS A5.20 E71T-1C/1M-9C/9M H8
- AWS A5.36 E71T1-C1[M21]A0[A2]-CS1-H8

## Key Features

- Baked flux cored wire designed for single or multi pass welding
- Smooth arc transfer, low spatter, flat to slightly convex bead contour
- All-position baked wire with excellent feeding and low fume generation using Mixed Gas or 100% CO<sub>2</sub>
- Baked process ensures the removal of moisture

## Characteristics

- High deposition rate and easy slag removal
- Great choice for mild steel and higher strength steel
- Offers excellent operator appeal ideal for bridge & offshore structures, ship building and all general fabrication

## Ordering Information

- Part#: TCB BW 799--
- Diameter (Inch) available: .045, .052, 1/16
- Packaging available: 33 LB, 44 LB Spool  
500 LB Drum



TYPICAL WELD METAL CHEMISTRY (%)

	C	Mn	Si	P	S	Cu	Ni	Mo
CO <sub>2</sub>	0.03	1.20	0.40	0.013	0.012	0.01	0.015	0.012
MIXED	0.03	1.45	0.50	0.011	0.010	0.01	0.013	0.010

TYPICAL WELD METAL MECHANICAL PROPERTIES

	TENSILE STRENGTH	YIELD STRENGTH	ELONGATION	Impact value ft/lbs (-20 °F)
CO <sub>2</sub>	83,300 psi	76,600 psi	29.5%	35.3
MIXED	88,200 psi	81,000 psi	28.1%	39.1

# BW 777

## Specification

- AWS A5.20 E71T-1C/1M,9C/9M,12C/12M H8
- AWS A5.36 E71T1-C1[M21]A2-CS2-H8

## Key Features

- All position baked carbon steel flux cored wire designed for single or multi-pass welding of carbon and low alloy steels
- High deposition rates, nice spray transfer, low spatter/fume generation, flat to slightly convex bead contour
- Meets according to AWS T-12 allowing for great impact toughness and to meet lower manganese requirements

## Characteristics

- Slag fully covers the weld bead to help prevent crack and blowhole issues
- Typical applications include bridge/structural/general fabrication, ship building/hulls, auto, offshore structures, pressure vessels and piping

## Ordering Information

- Part#: TCB BW 777 --
- Diameter (Inch) available: .045, 1/16
- Packaging available: 33 LB Spool



TYPICAL WELD METAL CHEMISTRY (%)

	C	Mn	Si	S	P
CO2	0.03	1.25	0.45	0.01	0.012
75% AR, 25% CO2	0.03	1.53	0.55	0.009	0.011

TYPICAL WELD METAL MECHANICAL PROPERTIES

	TENSILE STRENGTH	YIELD STRENGTH	ELONGATION	Impact value ft/lbs (-20 °F)
CO2	83,000 psi	78,800 psi	29%	31.7
MIXED	85,600 psi	80,100 psi	28%	40.6

# Superflow 71T

## Specification

- AWS A5.20 E71T-1C/1M, 9C/9M H8
- AWS A5.36 E71T1-C1[M21]A0[A2]-CS1-H8

## Key Features

- Gas shielded flux cored wire for high strength steel
- Able to be run with either Mixed Gas or 100% CO<sub>2</sub> el
- Weld deposit exhibits great tie-in with self-peeling slag

## Characteristics

- All position welding property, less spatter, stable arc, thin slag
- Yields great penetration on light, medium or heavy gauge plate

## Ordering Information

- Part#: TCF 71T-1 --
- Diameter (Inch) available: .035, .045, .052, 1/16
- Packaging available: 33 LB, 44 LB Spool  
60 LB Coil  
550 LB Drum



TYPICAL WELD METAL CHEMISTRY (%)

	C	Mn	Si	Cr	Ni	Mo	P	S	V
CO2	0.045	1.15	0.40	0.02	0.01	0.01	0.013	0.005	0.01
MIXED	0.050	1.20	0.45	0.02	0.01	0.01	0.012	0.005	0.01

TYPICAL WELD METAL MECHANICAL PROPERTIES

	TENSILE STRENGTH	YIELD STRENGTH	ELONGATION	Impact value ft/lbs (0 °F)
CO2	81,200 psi	71,100 psi	22%	89
MIXED	84,800 psi	75,400 psi	28%	103

# SF-1A

NIPPON STEEL

## Specification

- AWS A5.20 E71T-1M, 9M H4
- AWS A5.36 E71T1-M21A0[A2]-CS1-H4

## Key Features

- Copper coated seamless flux cored wire for single or multi-pass welds on mild steel and higher strengths steels
- Noted for its copper and seamless sheath giving it outstanding benefits such as; Superior moisture, excellent surface rust protection, electrical arc transfer, absorption resistance
- Delivers flawless low diffusible hydrogen levels throughout the entire spool
- Designed to be used with 75-80% Argon + balance CO<sub>2</sub> mixed shield gas

## Characteristics

- Low friction wear on liners and tips
- Extremely stable arc point generation
- Excellent bead shape and appearance and easy slag removal
- Great deposit efficiency for flat & fillet welds of medium & heavy thickness plates



## Ordering Information

- Part#: TCC NSSW SF-1A --
- Diameter (Inch) available: .045, .052, 1/16
- Packaging available: 33 LB Spool

### TYPICAL WELD METAL CHEMISTRY (%)

	C	Mn	Si	P	S	Cu	Ni	Mo
TYPICAL	0.12 MAX	1.75 MAX	0.90 MAX	0.03 MAX	0.03 MAX	0.35 MAX	0.50 MAX	0.30 MAX

### TYPICAL WELD METAL MECHANICAL PROPERTIES

	TENSILE STRENGTH	YIELD STRENGTH	ELONGATION	Impact value ft/lbs (-20 °F)
TYPICAL	86,100 PSI	78,000 PSI	26%	56



# CSF-71T

CHOSUN WELDING

## Specification

- AWS A5.20 E71T-1C/1M H8
- AWS A5.36 E71T1-C1[M21]A0-CS1-H8

## Key Features

- Available as baked or non-baked flux cored wire designed for single or multi pass welding
- Smooth arc transfer, low spatter, flat to slightly convex bead contour
- All-position baked wire with excellent feeding and low fume generation using Mixed Gas or 100% CO<sub>2</sub>
- Non-baked formula listed and approved by ExxonMobil® Qualified Manufacturer List (QML)

## Characteristics

- Excellent choice for vertical down welding
- Able to be run at high feed speeds allowing for increased deposition rate



## Ordering Information

- Part#: CSF-71T --
- Diameter (Inch) available: .045, .052, 1/16
- Packaging available: 33 LB, 44 LB Spool  
550 LB Drum

### TYPICAL WELD METAL CHEMISTRY (%)

	C	Mn	Si	P	S	Cu	Ni	Mo
CO <sub>2</sub>	0.06	1.34	0.58	0.014	0.006	0.02	0.01	0.01
MIXED	0.06	1.41	0.64	0.015	0.005	0.02	0.01	0.01

### TYPICAL WELD METAL MECHANICAL PROPERTIES

	TENSILE STRENGTH	YIELD STRENGTH	ELONGATION	Impact value ft/lbs (0 °F)
CO <sub>2</sub>	85,400 psi	73,200 psi	31%	35.3
MIXED	91,500 psi	83,300 psi	29%	57.3

# CSF-71SRM

CHOSUN WELDING

## Specification

- AWS A5.20 E71T-12MJ H8
- AWS A5.36 E71T12-M21P4-CS2-H8

## Key Features

- Baked flux cored wire designed for single or multi pass welding
- Smooth arc transfer, low spatter, flat to slightly convex bead contour
- All-position baked wire with excellent feeding and low fume generation using mixed gas
- Listed and approved by ExxonMobil® Qualified Manufacturer List (QML)

## Characteristics

- Excellent impact toughness values at low temperatures
- Charpy V-notch at -60°F: 62 ft/lbs

## Ordering Information

- Part#: CW 71T-12MJ --
- Diameter (Inch) available: .045, 1/16
- Packaging available: 33 LB Spool



### TYPICAL WELD METAL CHEMISTRY (%)

	C	Mn	Si	P	S
TYPICAL	0.12 MAX	1.75 MAX	0.90 MAX	0.030 MAX	0.030 MAX

### TYPICAL WELD METAL MECHANICAL PROPERTIES

	TENSILE STRENGTH	YIELD STRENGTH	ELONGATION	Impact value ft/lbs (-40 °F)
TYPICAL	80,000 PSI	74,400 PSI	34%	95

# Premium 70C-6M

## Specification

- AWS A5.18 E70C-6M H4

## Key Features

- Metal cored wire designed for single or multi pass
- Formulated to weld flat and horizontal which has deoxidizers helping where mill scale may be present
- Yields very low smoke and minimal clean up
- Flat & H\_Fillet efficient welding with Ar+20-25% CO<sub>2</sub> shielding gas

## Characteristics

- Smooth stable arc transfer, spatter free, excellent bead contour
- High deposition rate and nearly free of slag weld bead
- Excellent replacement to Hobart 86R

## Ordering Information

- Part#: TCD 70C-6M --
- Diameter (Inch) available: .045, .052, 1/16
- Packaging available: 33LB Spool  
550LB Drum



TYPICAL WELD METAL CHEMISTRY (%)

	C	Mn	Si	P	S
TYPICAL	0.048	1.502	0.651	0.005	0.004

TYPICAL WELD METAL MECHANICAL PROPERTIES

	TENSILE STRENGTH	YIELD STRENGTH	ELONGATION	Impact value ft/lbs (-20 °F)
TYPICAL	86,100 PSI	77,400 PSI	27%	67



WASHINGTON ALLOY CO.

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