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ALUMINUM MIG & TIG WIRES

WASHINGTON ALLOY 4043
AWS/SFA 5.10 ER4043

DESCRIPTION AND APPLICATION

Washington Alloy 4043 (commonly referred to as AlSi5) is a 5% silicon aluminum filler metal that is available in spools or cut lengths for MIG or TIG processes. This alloy is recommended for welding 3003, 3004, 5052, 6061, 6063 and casting alloys 43, 355, 356 and 214. Washington Alloy 4043 has a melting range of 1065°-1170°F and a density of .097 lbs./cu. in. The post-anodizing color tint is gray. Tensile strength is 27,000 psi minimum.

TYPICAL WELD METAL CHEMISTRY (%)

Si	4.5-6.0
Fe	0.80 max.
Cu	0.30 max.
Mn	0.05 max.
Mg	0.05 max.
Zn	0.10 max.
Ti	0.20 max.
Al	95.00 max.
Others*	0.15 total max.

*Be shall not exceed 0.0008 percent.

WASHINGTON ALLOY 5356
AWS/SFA 5.10 ER5356

DESCRIPTION AND APPLICATION

Washington Alloy 5356 (commonly referred to as AlMg5) is a 5% magnesium aluminum filler metal that is available for MIG or TIG welding processes. The weld deposit of Washington Alloy 5356 offers much better corrosion resistance when exposed to salt water. Common applications would be base metals 5050, 5052, 5083, 5356, 5454 and 5456. The post-anodizing color tint is white. Tensile strength is 42,000 psi minimum.

TYPICAL WELD METAL CHEMISTRY (%)

Si	0.25 max.
Fe	0.40 max.
Cu	0.10 max.
Mn	.05-.20
Mg	4.5-5.5
Cr	.05-.20
Zn	.10 max.
Ti	.06-.20
Al	94.0
Others*	0.15 total max.

*Be shall not exceed 0.0008 percent.

WASHINGTON ALLOY 1100
AWS/SFA 5.10 ER1100

DESCRIPTION AND APPLICATION

.Washington Alloy 1100 (commonly referred to as Al 99.5) is a 99% aluminum filler metal that is available in spools or cut lengths for MIG or TIG welding processes. Washington Alloy 1100 is commonly used for architectural and decorative applications, furniture, piping, deep drawing applications and spun hollow ware. Common applications would include base metals 1100, 3003, Aic. 3003 to similar base metals or to 1060, 1070, 1080 and 1350. Slight golden color after anodizing. Average tensile strength as welded is 16,000 psi.

TYPICAL WELD METAL CHEMISTRY (%)

Si & Fe	0.95 max.
Cu	0.05-0.20
Mn	0.05 max.
Zn	0.10 max.
Al	99.0 min.
Others*	0.15 total max.

*Be shall not exceed 0.0008 percent.

WASHINGTON ALLOY 5556
AWS/SFA 5.10 ER5556

DESCRIPTION AND APPLICATION

Washington Alloy 5556 is an aluminum filler metal that contains more manganese and zinc with slightly more magnesium than Washington Alloy 5356. This gives Washington Alloy 5556 good ductility and improved crack resistance. This alloy may be used for MIG or TIG welding processes. Commonly used on base metals 5154, 5254, 5454 and 5456. The approximate melting range is 1065°-1175°F and the post-anodizing color tint will be white. The ultimate tensile strength will be approximately 46,000 psi.

TYPICAL WELD METAL CHEMISTRY (%)

Si	0.25 max.
Fe	0.40 max.
Cu	0.10 max.
Mn	0.50-1.00
Mg	4.70-5.50
Cr	0.05-0.20
Zn	0.25 max.
Ti	0.05-0.20
Al	Balance
Others*	0.15 total max.

* Be shall not exceed 0.0008 percent.

WASHINGTON ALLOY 4047 (718)
AWS/SFA 5.10 ER4047
AWS 5.8 BAlSi-4

DESCRIPTION AND APPLICATION

Washington Alloy 4047 (commonly referred to as "718 aluminum" or AlSi12) is an aluminum filler metal which contains approximately 12% silicon. This alloy is commonly used not only in MIG or TIG applications, but also as a general purpose brazing alloy providing a free-flowing filler metal and good corrosion resistance. Washington Alloy 4047 is recommended for welding or brazing aluminum alloys: 1060,1350, 3003, 3004, 3005, 5005, 5050, 6053, 6061, 6951 7005 and cast alloys 710.0 and 711.0. Washington Alloy 4047 has an approximate melting range of 1070°-1 080°F and the post anodizing color tint is grayish-black.

TYPICAL WELD METAL CHEMISTRY (%)

Si	11.0-13.0.
Fe	0.80 max.
Cu	0.30 max.
Mn	0.15 max.
Mg	0.10 max.
Zn	0.20 max.
Al	Balance
Others*	0.15 total max.

* Be shall not exceed 0.0008 percent.

WASHINGTON ALLOY 5183
AWS/SFA 5.10 ER5183

DESCRIPTION AND APPLICATION

Washington Alloy 5183 (commonly referred to as AlMg 4.5 Mn) aluminum filler metal contains alloying elements 4.3-5.0% magnesium, 0.5-1.0% manganese as well as chromium and titanium. Available in spools or cut lengths for MIG or TIG processes, this alloy is commonly used on marine components, drilling rigs, cryogenics, railroad cars, storage tanks and unfired pressure vessels. Base metals commonly welded include 5083, 5086 and 5456 to similar base metals or to 5052, 5652 and 5056. The post-anodizing color tint is white. The approximate melting range is 1075°-1180°F and the average tensile strength as welded is 43,000 psi.

TYPICAL WELD METAL CHEMISTRY (%)

Si	0.40 max.
Fe	0.40 max.
Cu	0.10 max.
Mn	0.5-1.0
Mg	4.3-5.2
Cr	0.05-0.25
Zn	0.25 max.
Ti	0.15 max.
Al	Balance
Others*	0.15 total max.

* Be shall not exceed 0.0008%.

DID YOUR TIG ROD GET MIXED UP?
AN EASY WAY TO IDENTIFY 40XX SERIES ALUMINUM FROM THE OTHER ALUMINUM TIG ALLOYS IS TO DROP THEM. 40XX MAKES A THUD SOUND (BECAUSE OF THE HIGH SILICONE LEVEL) THE OTHERS MAKE A HIGH PING.