



# AFCW Sn96.5/Ag3.5 Solder



## ALUMINUM FLUX CORE WIRE SN96.5/AG3.5 SOLDER

- Aluminum Flux Core Wire (AFCW) Solder as Wire or Rod Solder
- Also effective for soldering stainless steel (SS304, SS316, and additional grades)
- Tin-Silver Based Solder For Direct Aluminum Soldering
- Strong Solder Bonds For Connecting Aluminum To Aluminum And Aluminum To Copper
- Does Not Require Plating Of Aluminum Before Soldering
- Residues From Soldering Completely Water Soluble
- Can be created from 0.010 inch (0.254 millimeter) diameter wire to a 0.3 inch (0.80 centimeter) diameter rod. Each rod is 14 Inches (35 centimeters) long.

## DESCRIPTION

**Superior AFCW Sn96.5/Ag3.5 Solder** is a cored wire or rod solder designed for direct aluminum soldering applications. This solder is also effective for soldering stainless steel. A eutectic solder formulation with an active aluminum flux core it permits direct soldering to aluminum surfaces without the need to use expensive plating techniques to prepare the aluminum surface for soldering. The specialty flux core created by Superior Flux will cut through the very tenacious oxides that are always present on aluminum alloy surfaces and will promote the spread of the solder alloy on metal surfaces.

## APPLICATIONS

**Superior AFCW Sn96.5/Ag3.5 Solder** is useful for aluminum to aluminum and aluminum to copper connections. It also can be used for soldering copper to steel connections. The solder is best used by heating the base metal with radiant heat from a constant heat source such as a soldering iron, torch, or an induction source. The cored wire solder is then placed on the hot surface where it will melt and release the internal aluminum core flux which will attack the aluminum surface oxides and permit the solder to flow. Low temperature, diffuse heat torch soldering can be used afterwards, but intense torch heat will destroy the aluminum flux within the solder core.

**Superior AFCW Sn96.5/Ag3.5 Solder** will work on Aluminum Association alloys 1XXX, 2XXX, 3XXX, 5XXX, 6XXX, and certain 8XXX and 9XXX alloys. It will not work on 4XXX or 7XXX series aluminum. AFCW is also effective for soldering stainless steel, including SS304, SS316, as well as additional grades.

*Superior manufactures quality fluxes. Our business is solving problems.*



## PHYSICAL PROPERTIES

Melting Point	221°C (430°F)
Solder Density	7.36 g/cm <sup>3</sup>
Shear Strength	31.7 MPa (4600 psi)
Recommended Part Temperature Range	250-315°C (482-600°F)
pH of 1% of Flux Core	7.20
Odor	Mild
Flash Point	None

## RESIDUE PROPERTIES AND REMOVAL

The residues from the **Superior AFCW Sn96.5/Ag3.5 Solder** are slightly basic and completely water soluble and should be removed from electronic assemblies. They are best removed by immediately washing with warm water. To remove the water, rinse the surface with an alcohol rinse then dry the surface.

## SAFETY PRECAUTIONS

This product, during handling or use, may be hazardous to health or the environment. Read the Safety Data Sheet and warning label before using this product.

The information contained herein is based on data considered to be accurate and is intended for use by persons having technical skills at their own discretion and risk. Since conditions of use are outside of Superior Flux & Mfg. Co.'s control, we cannot assume liability for results obtained or damage incurred due to misuse, nor can we assume customer liability.

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