

# ALPHA<sup>®</sup> ENERGIZED PLUS RA WIRE SOLDER

Type RA Per QPL-571-28-89, Passes IPC-TM-650 2.6.3.3

## DESCRIPTION

**ALPHA Energized Plus** is the most effective RA MIL-SPEC rosin core solder yet developed for hand soldering. Similar in design to ALPHA Energized core solder, **ALPHA Energized Plus** is more active still. It meets the full requirements of QPL listing for Federal Specification QPL-571-28-89 for Type RA flux cored solder.

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

## APPLICATION GUIDELINE

ALPHA Energized Plus is suitable for use in any electronic hand-soldering application requiring compliance with Military Specifications for RA class fluxes. It is also suitable for those commercial electronic operations modeled after Military Specifications. Some of these include computer, aerospace, telecommunications, automotive and entertainment industry applications.

The unique activator system of ALPHA Energized Plus enables the flux to penetrate even heavily tarnished surfaces among the following metals:

Beryllium Copper	Lead	Terne (Plate)
Brass	Nickel (Plate)	Tin (Hot Dip)
Bronze	Silver	Tin (Plate)
Cadmium	Solder (Plate)	
Copper	Solder (Hot Dip)	

## Residue Removal

In applications requiring cleaning, ALPHA Energized Plus flux residues can be readily removed using an aqueous saponifier cleaning process with ALPHA 2110.

**TECHNICAL DATA**

Physical Properties	Typical Values
Softening Point	71 °C (160 °F)
Rosin Grade	WW per Fed. Spec. LLL-R-626
Water Extract Resistivity	> 50,000 ohm-cm., per QQS-571F
Plasticizer	Very high boiling solvent; creates low smoke and older properties
Wetting Balance Test	Fastest recorded wetting time of all RA; MIL-SPEC core solders
QPL Listing Number	571-27-89
J-STD-004	ROM1
ISO 12224	1.1.2

**AVAILABILITY**

Alloy Description	Flux Loading	Wire Diameter
63Sn/37Pb	P2 and P3 (2.2% and 3.3% nominal)	.010 to .125" (Spool Weight 1, 5, 20 lbs.)
60Sn/40Pb	P2 and P3 (2.2% and 3.3% nominal)	.010 to .125" (Spool Weight 1, 5, 20 lbs.)
40Sn/60Pb	P2 and P3 (2.2% and 3.3% nominal)	.010 to .125" (Spool Weight 1, 5, 20 lbs.)
10Sn/88Pb/2Ag	P2 (2.2% nominal)	.010 to .125" (Spool Weight 1, 5, 20 lbs.)
5Sn/93.5Pb/1.5Ag	P2 (2.2% nominal)	.010 to .125" (Spool Weight 1, 5, 20 lbs.)
Vaculoy SACX0307 *	P2 and P3 (2.2% and 3.3% nominal)	.010 to .125" (Spool Weight 1, 5, 20 lbs.)
SAC305 (Sn 96.5/Ag 3.0/Cu 0.5)	P2 and P3 (2.2% and 3.3% nominal)	.020 to .187" (Spool Weight 1, 4, 20 lbs.)

\* Lead-Free Alloy

This material can also be made available in an alloy that is nominally 95% Sn and 5% Sb. Please contact your local MacDermid Alpha Assembly Solutions representative to discuss flux, loading, diameter, and minimum order quantities for this alloy.

ALPHA Energized-Plus is available in ESD approved plastic spooling per the DOD 2000 specification.

**RECYCLING SERVICES**

We provide safe and efficient recycling services to help companies meet their environmental and legislative requirements and at the same time, maximize the value of their waste streams.

Our service collects solder dross, solder scrap, and various forms of solder paste waste. Please contact your local sales representative for recycling capabilities in your area or [link here](#).



**SAFETY & WARNING**

It is recommended that the company/operator read and review the Safety Data Sheets for the appropriate health and safety warnings before use. **Safety Data Sheets are available at [MacdermidAlpha.com/assembly-solutions/knowledge-base](http://MacdermidAlpha.com/assembly-solutions/knowledge-base).**

**STORAGE**

ALPHA Cored Solder Wires should be stored in dry conditions and within a temperature range of 0 to 40 °C. Alpha guarantees the product shelf life for three years from the date of manufacture when stored in the recommended conditions.

**CONTACT INFORMATION**

**To confirm this document is the most recent version, please contact [Assembly@MacDermidAlpha.com](mailto:Assembly@MacDermidAlpha.com)**

[www.macdermidalpha.com](http://www.macdermidalpha.com)

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Also read carefully warning and safety information on the Safety Data Sheet. This data sheet contains technical information required for safe and economical operation of this product. READ IT THOROUGHLY PRIOR TO PRODUCT USE . Emergency safety directory assistance: US 1 202 464 2554, Europe + 44 1235 239 670, Asia + 65 3158 1074, Brazil 0800 707 7022 and 0800 172 020, Mexico 01800 002 1400 and (55) 5559 1588

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