# ALPHA® RELIACORE 15

## Type RMA Per QPI571-28-89, Passes IPC-TM-650 2.6.3.3

## DESCRIPTION

**ALPHA RELIACORE 15** is the most effective RMA rosin cored wire solder yet developed for hand soldering. The unique and powerful activation system of this core solder makes the flux exceptionally fast wetting when compared with other RMA core solders. Yet, **ALPHA RELIACORE 15** meets all the requirements of Federal Specification QQS-571E for Type RMA flux core solder.

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

## FEATURES & BENEFITS

Developed to meet the requirements of QQS-571E, ALPHA RELIACORE 15 is suitable for uses in any electronic hand soldering application requiring compliance with Military Specifications. It is also suitable for those commercial electronic operations that are modeled after Military Specifications. Some of these include; computer, aerospace, telecommunications, automotive, business machines, and entertainment industry applications.

The activator system in ALPHA RELIACORE 15 enables the flux to penetrate moderately tarnished surfaces among the following metals:

| | | |
|---|---|---|
| Silver | Solder(Paste) | Solder(Hot Dip) |
| Cadmium (Plate) | Copper | Gold |
| Tin (Hot Plate) | Tin (Plate) | |

## PRODUCT INFORMATION

| Standard | Alloy Designation | Melting or Solidus / Liquidus Temp °C | Flux Amount |
|---|---|---|---|
| Proprietary | SACX Plus 0307 | 217 to 228 | 2.2% & 3.3% |
| J-STD-006C | SAC305 (Sn96.5/Ag3.0/Cu0.5) | 217 to 221 | 2.2% & 3.3% |
| J-STD-006C | Sn96.5/Ag3.5 | 221 | 2.2% & 3.3% |
| J-STD-006C | Sn63/Pb37 | 183 | 2.2% & 3.3% |
| J-STD-006C | Sn62/Pb36/Ag2 | 179 | 2.2% & 3.3% |
| J-STD-006C | Sn60/Pb40 | 183 to 191 | 2.2% & 3.3% |
| J-STD-006C | Sn10/Pb88/Ag2 | 268 to 299 | 2.2% |

*** ALPHA RELIACORE 15** may also be available in other or special alloys and flux amounts on request.

## APPLICATION GUIDELINES

A soldered joint is formed by heating the parts to be soldered to a temperature in excess of the melting point of the alloy to be used – in hand soldering this is how a soldering iron is used. By feeding the cored wire onto the parts, the flux can flow and remove oxidized metal, while the solder creates a thin inter-metallic bond which becomes the solder joint.

Note the following tips:

- Use a soldering iron tip size and form to suit the operation: small tips for soldering large components may prevent the formation of a joint or slow the process down.
- Select a solder wire diameter to suit both the soldering iron tip and the parts/components to be soldered.
- Soldering iron systems should provide sufficient heat to satisfy the requirements of the points above.
- A typical solder tip temperature would be between 120 °C and 160 °C above the liquidus temperature of the alloy. The ideal temperature to use is dependent on how thermally demanding the assembly is.
- Cored solder wires can be provided in different grades of alloy so always ensures that you have selected the right grade for the application.
- Do not overheat as this causes an increase in the depth of the inter-metallic layer, which in turn weakens the joint.

**If you choose to use a liquid rework flux, ALPHA RMA615 Series Fluxes are recommended to maintain high electrical reliability.**

In applications requiring cleaning, ALPHA RELIACORE 15 flux residues can also be removed in conventional solvent vapor cleaning processes and aqueous saponifier ALPHA 2110.

## TECHNICAL DATA

| Properties | Typical Values |
|---|---|
| Softening Point | 71 °C (160 °F) |
| Rosin Grade | WW per Fed. Spec. LLL-R-626 |
| Water Extract Resistivity | >100,000 ohm-cm, minimum per QQS-571E |
| Corrosiveness | Passes Copper Mirror (IPC-TM-650- 2.3.32) |
| Halide Content | Passes Silver Chromate Paper Test |
| QPL Listing Number | 571-28-89 |
| Classification: | ROL1 per IPC J-STD-004<br>1.1.2 per ISO 12224 |

## 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.**

## 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**

www.macdermidalpha.com

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| **North America**<br>109 Corporate Blvd.<br>South Plainfield, NJ 07080, USA<br>1.800.367.5460 | **Europe**<br>Unit 2, Genesis Business Park<br>Albert Drive<br>Woking, Surrey, GU21 5RW, UK<br>44.01483.758400 | **Asia**<br>8/F., Paul Y. Centre<br>51 Hung To Road<br>Kwun Tong, Kowloon, Hong Kong<br>852.3190.3100 |

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

indirect, incidental or consequential, arising out of the inability to use the product. Notwithstanding the foregoing, if products are supplied in response to a customer request that specifies operating parameters beyond those stated above, or if products are used under conditions exceeding said parameters, the customer by acceptance or use thereof assumes all risk of product failure and of all direct, indirect, incidental and consequential damages that may result from use of the products under such conditions, and agrees to exonerate, indemnify, defend and hold harmless MacDermid, Incorporated and its affiliates therefrom. No suggestion for product use nor anything contained herein shall be construed as a recommendation to use any product in a manner that infringes any patent or other intellectual property rights, and seller and manufacturer assume no responsibility or liability for any such infringement.