

ALPHA[®] RADSOL 2002 SF

Heat Exchange Manufacturing Flux

DESCRIPTION

ALPHA Radsol 2002 SF is a flux that was developed to enable heat exchange manufacturers to comply with anti-pollution laws. **ALPHA Radsol 2002 SF** is part of the Radsol 2000 series, which are non-chelating, offer superior performance and lower health and safety hazards. They are non-charring and do not leave corrosive residues.

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

FEATURES & BENEFITS

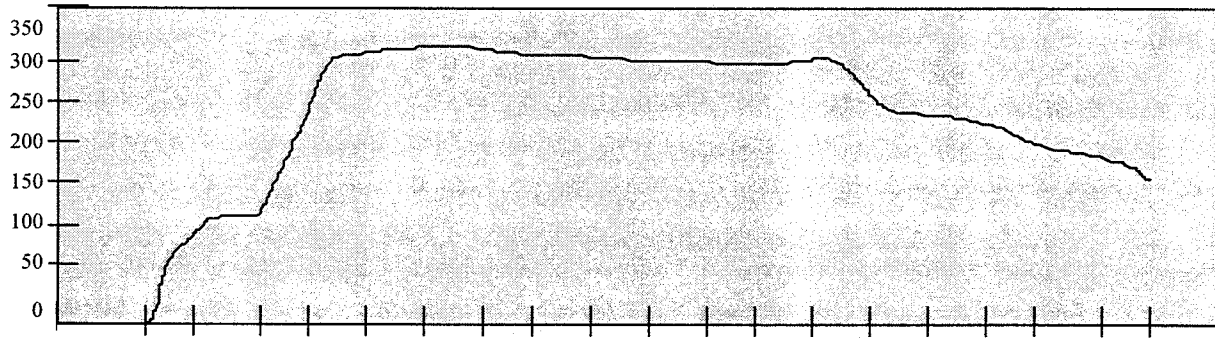
- High Activity – Excellent solder spread and bond
- Non-Chelating – Reduces heavy metal discharge
- Environmentally Friendly – Safe to use (low smoke and odor)
- Non-Corrosive Residues – No post solder cleaning required
- High Temperature Stability – Stable up to 800°F
- High Dilution – Cost effective
- Low Metal Retention – Easily treated
- Low Foam – Compatible with spray or waterfall systems

APPLICATION GUIDELINES

Flux Application: ALPHA Radsol 2002 SF is specially formulated for oven bake, tube to header dip and hand solder applications. It is a low foaming flux which enables it to be applied by either spray, dip or waterfall techniques. Product applications are Automotive and Industrial heat exchangers.

Core Bake: The properties of ALPHA Radsol 2002 SF flux are shown to its best advantage in this process. Cores baked using ALPHA Radsol 2002 SF do not corrode or show "greening" and do not need washing. The ALPHA Radsol 2002 SF flux, however, has limited life at soldering temperature. It is imperative for the baking process to heat the cores to the soldering temperature quickly, so that the flux does not "dry off" before solder reflow occurs. The characteristics of the baking oven should produce a heating pattern in the core as shown in the following graph. In general, the faster the temperature rise to the soldering temperature, the better the result. Obviously, overheating should be avoided at all costs. Dilutions ratios of 10:1 to 20:1 are common.

**Figure 1: Graph of Ideal Temperature Profile for Core Baking
(Time to Reach Solder Temperature 5 Minutes Maximum)**



Tube to Header Attachment: Applicable for all dip operations at temperatures up to 800 °F. Dilution ratios of 2:1 to 4:1 are typical.

Hand Solder: Dilution ratios of 1:1 to 3:1 are typical

Note: ALPHA Radsol 2002SF is not compatible for non-Lead solder applications. Use with these fluxes will cause the bath to turn milky.

TECHNICAL DATA

Item	Typical Values	Item	Typical Values
Appearance	Clear, colorless to pale yellow liquid	Flash Point (T.C.C.)	None
Specific Gravity @ 25 °C (77 °F)	1.209	Shelf Life (from Date of Mfg.)	1.5 Years
pH	< 1.00	Packaging Size	1, 5 and 55 Gallons

Figure 2: Specific Gravity @ 25 °C for ALPHA Radsol 2002 SF at Different Dilution Ratios

DI Water : Flux by Volume	Specific Gravity
Straight (no dilution)	1.209
1 : 1	1.104
2 : 1	1.070
3 : 1	1.052
4 : 1	1.042
5 : 1	1.035
6 : 1	1.030
7 : 1	1.026
8 : 1	1.023
9 : 1	1.021
10 : 1	1.019
11 : 1	1.017
12 : 1	1.016
13 : 1	1.015
14 : 1	1.014
15 : 1	1.013

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**

CONTACT INFORMATION

To confirm this document is the most recent version, please contact
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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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