ALPHA® ACCUFLUX® PREFORMS

Tape and Reel Packaging Option

DESCRIPTION

ALPHA AccuFlux Preforms are an ideal solution for applications that require both low voiding in large area solder joints and that desire a low flux residue solution appropriate for no clean manufacturing processes. Low voiding is a significant advantage that provides high manufacturing yields, superior in service performance, and a high level of product reliability. The **ALPHA AccuFlux Preforms** process is unique in that it guarantees that each preform will have the same amount of flux, within a tightly controlled range. Another key consideration is the low flux weight percent required to yield good solder wetting, the result of which is lower levels of residual flux in no-clean applications. **ALPHA AccuFlux Preforms** significantly increase productivity in processes requiring flux and that rely on reflow in air. The external flux coating is designed to become active before the complete melting of the solder preform, while providing wetting action for the substrates being soldered.

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

FEATURES AND BENEFITS

Features

- Various large-area preform sizes and thicknesses available
- Fast placement using standard pick and place equipment
- Non-tack flux formulation
- Preforms available in all standard solder paste alloys
- 13” standard EIA-481 tape and reel packaging format
- Additional packaging availability in custom trays

Benefits

- **Extremely low voids** in large surface area solder joints
- **Enhanced process stability and predictable reliability** through repeatable void distribution
- **Range of flux activity levels** enables fine tuning of flux activity, resulting in very low levels of flux residue
- **Enhanced electrochemical reliability** by producing extremely low flux residues

PRODUCT INFORMATION

Flux Type	Flux Classification (per J-STD-004)	Halogen-Free	Performance
ACF-115	ROL0	YES (Zero Halogen)	Moderate activity levels, optimized for air reflow atmosphere, low voids
ACF-225	ROL1	No	High activity for soldering to difficult surface finishes, optimized for air reflow, low voids

AccuFlux Tolerance Range: $\pm$ 50µg/cm^2 for nominal coatings ≤500ug/cm^2
$\pm$100µg/cm^2 for nominal coatings ≥500ug/cm^2

Flux selection depends on many factors, including surface finish on the solderable surfaces, reflow environment, and assembly configuration. Consult your representative to determine the appropriate flux for your application.

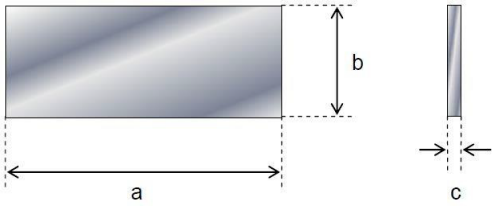
ALPHA AccuFlux Preforms are available in various coating levels, appropriate for specific application requirements. Special flux coating requirements can also be considered.

For large surface area preforms, the amount of oxide in the system is proportional to the surface area of the solder joint and is less dependent upon the thickness of the resultant solder joint. For this reason, flux amount per unit of surface area is a more relevant measure of the appropriate amount of flux for a large surface area solder joint. Alpha has defined micrograms per square centimeter (µg/cm2) as the relevant metric to define flux volume.

Each preform is guaranteed to contain the flux volume within the tolerance range specified. Contact an Alpha Assembly Solutions representative to determine the flux amount for your application.

Preforms are packaged in standard EIA-481 13-inch Tape and Reel format. Contact your Alpha representative for a list of available sizes and to discuss other packaging options.

Product Dimensions, Square & Rectangle Preforms



'a' Length	**'b' Width**	**'c' Thickness**
Min. 1.40mm (0.055")	Min. 1.40mm (0.055")	Min. 0.050mm (0.004")
Max. 57 mm (2.244")	Max. 57mm (2.244")	Max. 0.500mm (0.015")

Contact your Alpha representative for consideration of additional sizes.

TECHNICAL DATA

Standard	Alloy Designation		Melting or Solidus / Liquidus Temp °C
J-STD-006B	Pb-free High reliability & high operating temperature Sn-Pb	SAC305 / 387 / 357 / 405	217 to 221
		Innolot	212.5 to 222.5
		Sn63Pb37 / Sn62Pb36Ag2	E 180 / E 179
Proprietary	Low Silver	SACX Plus 0307	217 to 228
For a complete list of available preform alloys and their applications, contact your local representative			

Flux Reliability Data (Standard: J-STD-004-B)				Result
Test	Standard	Method	Conditions	ACF-xxx
SIR- Surface Insulation Resistance	IPC-TM-650	2.6.3.3	85 °C / 85%RH – 7 days	PASS
SIR- Surface Insulation Resistance	IPC-TM-650	2.6.3.7	40 °C / 90%RH – 7 days	PASS
ECM- Electrical Chemical Migration	IPC-TM-650	2.6.14.1	85 °/ 85%RH – 500 hours	PASS
ECM- Electrical Chemical Migration	IPC-TM-650	2.6.14.1	65 °C / 85%RH – 500 hours	PASS
Copper Corrosion	IPC-TM-650	9 days	40 °C / 93%RH	PASS
Copper Mirror	IPC-TM-650	2.6.3.7	25 °C / 50%RH – 24 hours	PASS

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.

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.**

STORAGE

To promote maximum shelf life and void performance, the ALPHA AccuFlux Preform is shipped in vacuum sealed bags. It is recommended to store the packaging in normal warehouse conditions (typically 55% RH or less and at temperatures less than 30 °C (86 °F). Allow the containers to reach ambient temperature before opening to avoid condensation of humid air from the environment. A FIFO, first in first out, policy is always desirable when using solder preforms.

Packaging is already optimized to minimize handling and thus exposure to air. It is recommended not to open more packages as they will be used in a typical work shift. It is critical to store all open preform packaging types in a nitrogen cabinet after use or if usage will extend beyond a 24-hour period.

When properly stored in a nitrogen cabinet a shelf life of 12 months from date of manufacture can be assured. Be sure to contact Alpha for the most up-to-date information and version of this technical bulletin.

CONTACT INFORMATION

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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