

ALPHA[®] External Flux Coating

For Exactalloy[®] Solder Preforms

DESCRIPTION

Flux coated Exactalloy preforms offer a significant increase in productivity in processes requiring flux. Rosin based formulas are available in a full range of activity levels (see flux overview and classification chart). With Alpha's unique glazing process, flux coatings can be fused into a clear, continuous surface, highly resistant to flaking and flux loss during storage and handling. The external flux coating is designed to become active prior to the complete melting of the solder preform. It flows to cover the solder preform during its transformation from solid to liquid, while providing wetting action for the substrates being soldered.

Compared to flux filled preforms, by the very nature that the flux is already available at the place of need, the flux coated preforms provide the flux earlier in the soldering process to the area where it is designed to do its work. Highly specialized flux formulas are also available that feature clear, colorless residues and flexible coatings, enabling bending or folding of the fabricated preform after the flux has been applied. Another key consideration is the low flux weight percent required to yield good solder wetting. Flux percentages ranging from .25% to 1.5% are sufficient for most preform applications. The result is lower levels of residual flux in no clean applications versus solder paste applications.

FEATURES & BENEFITS

- Low flux-percentage (0.25% to 1.5% by weight) with good results
- Very low levels of flux residue
- Superior wetting vs. internally fluxed preforms
- Color addition possible for easy part identification
- Temperature sensitive color indicators available to confirm minimum reflow temperature history
- Broad range of activity levels for highly sensitive electronic through hard to wet industrial applications

SAFETY

Handling of the solder preforms with flux coating should be done wearing gloves. Fumes from the soldering process may be hazardous to health, therefore apply local exhaust ventilation to prevent breathing fumes. For more (specific) details please refer to the product safety data sheet.

REFLOW DETAILS

The Exactalloy solder preform flux coating has very low solvent contents. Therefore a pre-heat period is not required. Excessive heat should be avoided as charring may occur. Direct flame heating is not advised as both the flux and the residue are flammable.

(continued on next page)

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an Alent plc Company

ALPHA Global Headquarters
300 Atrium Drive, Somerset, NJ 08873 USA • 1-800-367-5460 • www.alpha.alent.com

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TECHNICAL DATA

Flux overview and classification

Flux Overview			Flux Classification		Historical Flux Classification		
Flux Type	Acid Value [mg KOH/g]	Halide [by wt%]	EN 29454	J-STD-004	DIN 8511	IPC-SF-818	QQS 571
RS 1	155 - 170	< 0,005	1.1.3	ROL0	F-SW-32	L3CN	R
RS 2	160 - 175	< 0,005	1.1.3	ROL0	F-SW-32	L3CN	RMA
RS 2.1	160 - 175	0,05 - 0,10	1.1.2	ROL1	F-SW-26	M3CN	RMA
RS 2.2	160 - 175	0,10 - 0,14	1.1.2	ROL1	F-SW-26	M3CN	RMA
RS 3	165 - 180	0,40 - 0,50	1.1.2	ROL1	F-SW-26	L2CN	RA
RS 4	165 - 180	0,60 - 0,75	1.1.2	ROM1	F-SW-26	M3CN	RA
RS 6	165 - 180	0,90 - 1,10	1.1.2	ROH1	F-SW-26	M3CN	RSA
RS 7	175 - 195	1,40 - 1,75	1.1.2	ROH1	F-SW-26	M3CN	RSA

Corrosion & SIR testing details

Flux Type	J-STD-004 Test Result
RS 2	L
RS 2.1	L
RS 2.2	L
RS 4	M
RS 7	H