Solder Chemistry

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PRODUCT DATA SHEET

BLF04

Type ISO 9454 / 2231; J-STD REL0

Overview

SOLDER CHEMISTRY BLF04 Solder Paste is meticulously crafted for lead-free SMT applications. Leveraging modern chemical technologies, including rheology agents, resins, and advanced activator systems, this solder paste is designed to seamlessly integrate with lead-free alloys. **BLF04** exemplifies our commitment to compliance with the highest industry standards, including DIN, EN, IPC, and MIL.

Composition

BLF04 is a homogenous blend of lead-free solder powder, available in a variety of alloys and grain sizes. It incorporates an organic flux based on synthetic rosin, meeting the stringent requirements of J-STD-005 REL0 classification and RMA qualifications.

Key Features

- **Optimal Slump Performance**: Prevents the formation of solder balls and splashes.
- **Extended Workability**: Offers long processing and standing times with high-temperature stability.
- **Excellent Moisture Resistance**: Maintains very long stickiness, enhancing its utility in humid conditions.
- **Superior Joint Quality**: Forms homogeneous and void-free solder joints.
- **High-Quality Prints**: Delivers outstanding printing quality with stable viscosity over extended periods.
- **Minimal Residues**: Features only 5.8% residues at an 89% content of metal, aligning with the REL0 classification.
- **Clean Processing**: Leaves no tar residues in your reflow system.
- **Versatile Application**: Effective even on slightly corroded surfaces, ensuring broad usability.

Applications

Designed for advanced lead-free soldering, **BLF04** is suitable for a range of SMT applications, providing reliable performance under diverse manufacturing conditions.

Packaging and Availability

BLF04 is available in various packaging options to suit different production scales and requirements. Contact us for detailed specifications and to tailor your order based on your specific needs.

Form No. 100273 (A4) R0

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Physical Data

Most Common Alloys	Melting Point	Type
Sn95.5/Ag3.8/Cu0.7 Sn96.5/Ag3.0/Cu0.5 Sn96.9/Ag2.6/Cu0.5ATS Sn99.3/Cu0.7 Sn96.5/Ag3.5 Sn97.0/Cu3.0	217–219°C 217°C 217–221°C 227°C 221°C 227–300°C	Type 3: 25–45µm Type 4: 20–36µm Type 5: 10–25µm

Viscosity*	Slump According to DIN32513		Solder Balling According to IPC	Wetting According to IPC
		Immediately	20min 80°C	
Type 3: 650 Pas Type 4: 750 Pas	Class 1: Class 2:	0.2 0.3	0.2 0.3	1	1

**Measured using the Brookfield RVT-DV-II viscometer with a TF 5R spindle at 5rpm, operating at 25°C and equipped with the Helipath system for precise, consistent tracking of viscosity changes.*

Surface Resistance (SIR) and electrolytic m impact according to DIN 32513

Measured on Day 4: 3.7×10^{11}
Measured on Day 21: 2.9×10^{11}

Qualifications

SOLDER CHEMISTRY BLF04 Solder Paste is an RMA-classified paste that complies with MIL-QQ-S571e standards. It successfully passes corrosion, solderball, wetting, and slump tests in accordance with ISO, J-STD-004/005 L1 standards. Laboratory research confirms that the residues, which meet ROL0 specifications, are corrosion-free and safe to remain on the board.

Handling

Container Management: Ensure the container is tightly closed immediately after use to prevent contamination and preserve the paste's properties.

Paste Usage: To maintain optimal performance, do not mix used paste with fresh paste when storing it. It is permissible to mix fresh paste with older paste during ongoing operations to rejuvenate the mixture.

Mixing Restrictions: To ensure consistency and reliability in soldering results, do not mix different alloys or types of paste.

Squeegee Speed: Maintain a squeegee speed between 15–100mm/s for effective application. Ensure the paste is continuously rolling in front of the squeegee to optimize is applcation and performance.

Stencil Printing: For stencil printing, a paste with 90% metal content is recommended to achieve the best results.

Stencil Cleaning: Clean the stencil using an alcohol-based mixture; however, ensure that the cleaning medium does not contact the solder paste to avoid contamination. Solder Chemistry Stencil Cleaner is the recommended cleaning agent for safe and effective stencil maintenance.

Equipment Compatibility: This solder paste is compatible with all common reflow systems, providing flexibility across different soldering platforms.

Storage: Store unopened containers at room temperature (20°C/68°F) for up to 6 months. Once opened or in use at the squeegee of the printing device, the maximum working time may vary depending on environmental conditions. Refrigeration of the paste is not necessary.

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Order Example

Product: Solder Paste SC BLF04

Solder Paste	Grain Size	Alloy Composition	Flux Content	Jar Capacity
BLF04	T4	Sn96.5/Ag3.5	11%	200g

Safety Regulations:

Refer to the corresponding safety data sheet for each flux.

Contact Information for Solder Chemistry:

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About Us

Solder Chemistry is a leading provider of soldering solutions, including solder pastes, wires, bars, fluxes, cleaners and adhesives for a wide variety of SMT applications. Founded in 1994, and headquartered in Germany, Solder Chemistry has set new standards in quality, innovation, and customer satisfaction, powered by its knowledgeable R&D and technical support staff. Utilizing a robust European supply chain, and its flexible, customer-oriented structure allows it to serve large, international companies as well as small businesses in a fast, reliable manner. In 2021, Solder Chemistry became an Indium Corporation company, operating as a brand under Indium Advanced Materials GmbH, while maintaining quality service and reliable products to its customers with its own formulations and service. For more information about Solder Chemistry, visit www.solderchemistry.com.