

LINQALLOY SP-SAC105

SAC105 Solder Paste



- Pb-free Sn98.5–Ag1–Cu0.5 alloy
- Solder paste for surface mount technology
- RoHS compliant

LINQALLOY SP-SAC105 is a Pb-free solder paste composed of 98.5% Sn, 1% Ag, and 0.5% Cu. It has been designed for surface mount technology (SMT). **SP-SAC105** is being offered in two options: No-Clean and Water-Soluble. **No-clean solder paste** is designed for applications where post-soldering cleaning is unnecessary, providing minimal, non-conductive residues. On the other hand, the **water-soluble solder paste** is crafted with refined tin powder that allows you to clean flux residue left after the reflow process.

LINQALLOY SP-SAC105 is produced using refined Sn powder and minimal oxide content, enabling exceptional printing capabilities. Our SAC105 solder paste offers a compelling combination of properties for reliable and high performance electronics assembly.

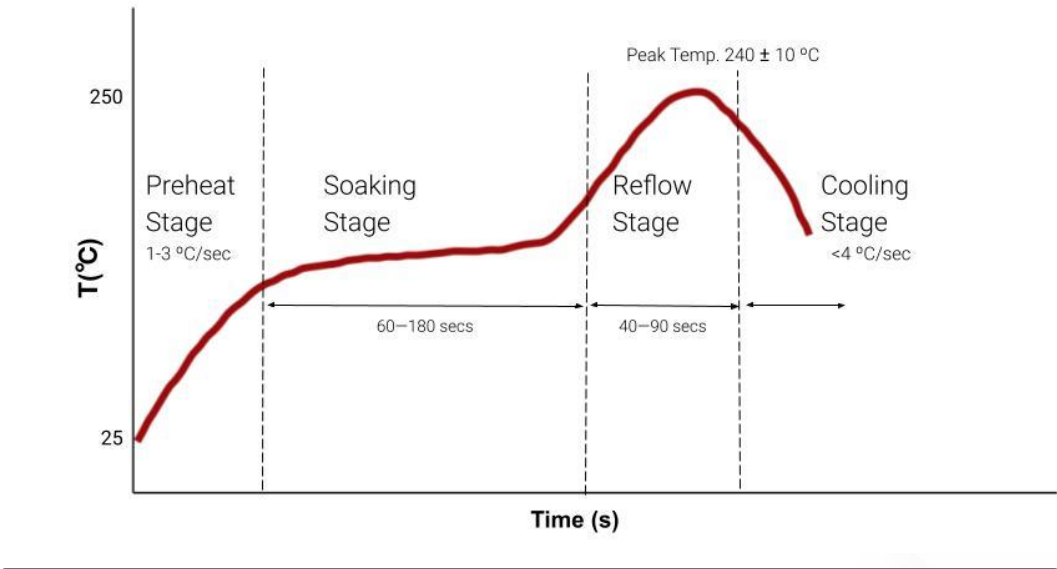
Chemical Composition

Element	Sn	Ag	Cu	Al	Fe	Zn	As	Cd	Sb	Pb
Concentration [wt%]	Balance	1±0.1	0.5	≤0.001	≤0.02	≤0.001	≤0.03	≤0.01	≤0.1	≤0.05

Recommended Reflow Process

Preheating Stage		Soaking Stage		Reflow Stage		Cooling Stage
Preheat Rate (°C/s)	Temperature (°C)	Soaking Time (s)	Temperature (°C)	Reflow Time (s)	Peak Temperature (°C)	Cooling Rate (°C/s)
1 –3	150	60–180	150–200	40–90	240±10	<4

Recommended Reflow Soldering Temperature Profile



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Industrieweg 15E,
1566JN Assendelft
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Technical Specifications

Property	Value		
	No-Clean	Water-Soluble	Standard
Alloy	SAC105		JIS-Z-3282
Melting Point [°C]	219/223 [Solidus/Liquidus]		-
Powder Type	Type 3–Type 5		IPC-TM-650 2.2.14
Metal Content [%]	90		IPC-TM-650 2.2.20
Flux Content wt [%]	10.0±0.5		JIS-Z-3197,8.1.2
Viscosity at 25 °C [Pa · s]	140–200	160–220	Malcom PCU 205
Halogen Content	ROL0/ROL1	ORL0/ORL1	IPC-J-STD-004
Copper Corrosion	PASSED		IPC-TM-650 2.6.15
Copper Mirror	PASSED		IPC-TM-650 2.3.32
Surface Insulation Resistance [Ω]	PASSED		IPC J-STD-004

Precautions for Use

1. Do not use the paste if frozen. Allow the sealed container to reach room temperature (19 to 25 °C) for 3–4 hours before opening. Avoid forced heating. Our packaging is designed to keep the paste below 35 °C for a minimum of 3 days.
2. Maintain a clean, dust-free environment while handling the paste.
3. If needed, gently mix the paste for 3 to 5 minutes before use for uniform consistency. Avoid overmixing.
4. After use, tightly reseal the container to minimize moisture absorption and oxidation.
5. Do not refrigerate the paste once opened. Store at room temperature.
6. Use the paste within its open time, usually 3 days after opening. Discard unused paste after this period.
7. Consider labeling opened containers with the date and time of opening for tracking.

Please note that the provided information is based on available data and typical conditions. For specific applications and detailed test results, refer to the actual test data and conduct appropriate certifications.

Storage and Handling

LINQALLOY SP-SAC105 is typically available in 500g bottles. Store unopened solder paste at 0 to 12 °C (32 to 54°F) to prolong shelf life. At proper storage conditions, the shelf life is 6 months from the manufacturing date. Avoid exposure to direct sunlight or extreme temperatures. Employ First-In, First-Out (FIFO) approach to usage, prioritizing older solder paste to prevent expiration. Transport solder paste in insulated containers to maintain cool temperatures. Solder paste can withstand temperatures of up to 35 °C for 7 days during transit.

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