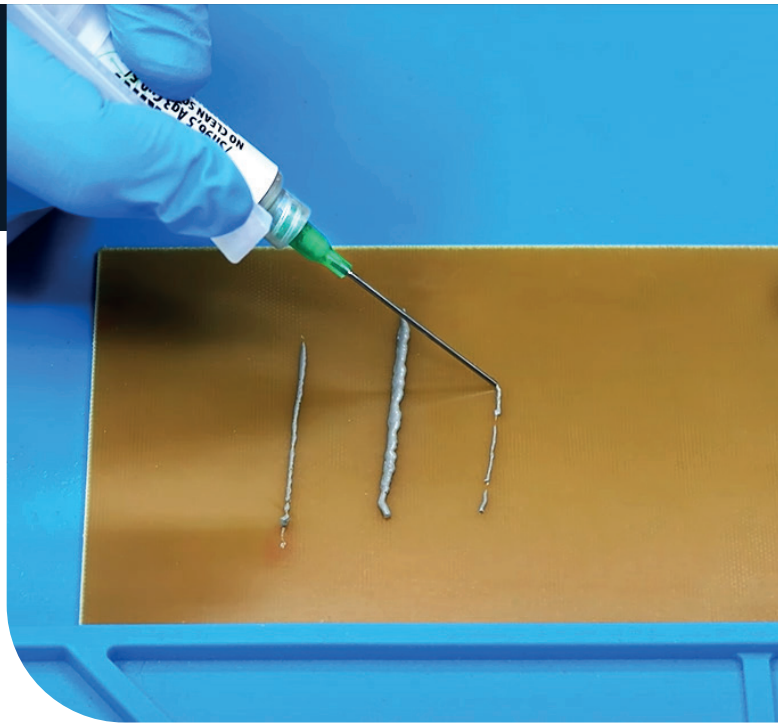
TermoPasty®

TECHNICAL DATA SHEET

Easy Print /Sn96.5Ag3Cu0.5/



The Solder Paste Easy Print /Sn96.5Ag3Cu0.5/ is the perfect choice for soldering SMD components using leaded technology. Its composition of 96.5% tin, 3% silver, and 0.5% copper ensures durable and reliable connections, making it ideal for both professional and hobbyist applications. The product complies with ISO 9454 1223 and J-STD-004 REM-1 standards, guaranteeing high quality and safe usage.

Product features:

- composition: 96.5% tin, 3% silver, 0.5% copper,
- printing speed up to 150 mm/s with a squeegee,
- resistance to solder balling (Mid Chip Solderballing),
- high precision with excellent detail reproduction (Fine Pitch),
- extended usability with stencil definition maintained for up to 8 hours of continuous printing,
- strong adhesion ensuring attachment of components for over 24 hours,
- compliance with ISO 9454 1223 and J-STD-004 REM-1 standards,
- No Clean — eliminating the need for cleaning after soldering.

Applications:

- soldering SMD components,
- reflow soldering in both normal atmospheric and nitrogen environments,
- stencil printing using laser-cut or electroformed stencils.

Physicochemical properties	
Appearance	Gray paste
Odour	None
Density	~4.6 g/cm³
Particle Size	15 -25 /25-45 µm*
Viscosity	1.0 G/mm² after 24 h
Printability	Over 8 hours
Alloy Composition	Sn96.5Ag3Cu0.5
Flux Classification	REL - 0
Chromatographic Test for Chlorides (IPC TM 650)	Passes (REL - 0)
Surface Insulation Resistance (85°C, 85%)	>2.6*10¹⁰ Ω (after 7 days)
Shelf life	6 months

*15–25 µm – capacities 20, 40 g / 25–40 µm – capacities 6, 250, 500 g

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Compatibility:

The Solder Paste Easy Print /Sn96.5Ag3Cu0.5/ is chemically neutral to most materials, ensuring safe use across various devices. It is compatible with different reflow soldering methods, both in normal atmospheric and nitrogen environments, making it suitable for diverse production conditions.

Application method	
Syringe	Yes
Cartridge	Yes
Reflow soldering	Yes
Stencil printing	Yes

Usage instructions:

Restricted to professional users. Read safety data sheet carefully prior to use.

Solder Paste Easy Print /Sn96.5Ag3Cu0.5/ is ideal for soldering SMD components in leaded technology. For optimal results, follow the instructions below.

Application and Soldering:

Preparing the paste:
Bring the paste to room temperature before application to prevent moisture condensation. Do not mix used paste with fresh paste to avoid changes in soldering properties.

Applying the paste:
The optimal temperature for paste application is 23–26°C, with a maximum temperature of 28°C.

Application:
Apply the paste to the soldering elements using a suitable applicator or stencil.

Reflow soldering:

The paste is suitable for reflow soldering based on the provided soldering profile. Depending on the equipment (Oven/HotAir), it may be necessary to increase the soldering temperature by 10–20°C compared to the recommended profile.

Stencil Printing:

Stencils:
Use laser-cut or electroformed stencils. Recommended stencil thickness: 100 µm for pitches up to 0.4 mm and 150 µm for pitches over 0.5 mm.

Squeegee:
Use metal squeegees. Squeegee speed should range from 25–150 mm/s, with a pressure of 1.5–3 N per cm of length.

Amount of paste on stencil:
The paste should form a rolling bead 15–20 mm thick in front of the squeegee.

Cleaning:

Easy Print Solder Paste is classified as "No Clean", meaning cleaning after soldering is not usually required. If cleaning is necessary, use Alcohol PCB Cleaner to effectively remove paste residues without risking damage to components.

Package	
Syringe	6 g (ART.AGT-028) - 5 pcs.*
Cartridge	20 g (ART.AGT-029) - 1 pc.* 40 g (ART.AGT-030) - 1 pc.*
Metal can (with 0.7 ml flux)	250 g (ART.AGT-026) - 1 pc.* 500 g (ART.AGT-032) - 1 pc.*

*Quantity of pcs. in a bulk packag

Storage:

Store at a temperature of 3–7°C for no longer than 6 months. The paste should be kept in tightly sealed containers to prevent contamination. Before opening, allow the paste to reach room temperature to avoid moisture condensation and ensure proper paste quality. Avoid mixing used paste with fresh paste to maintain its soldering properties.

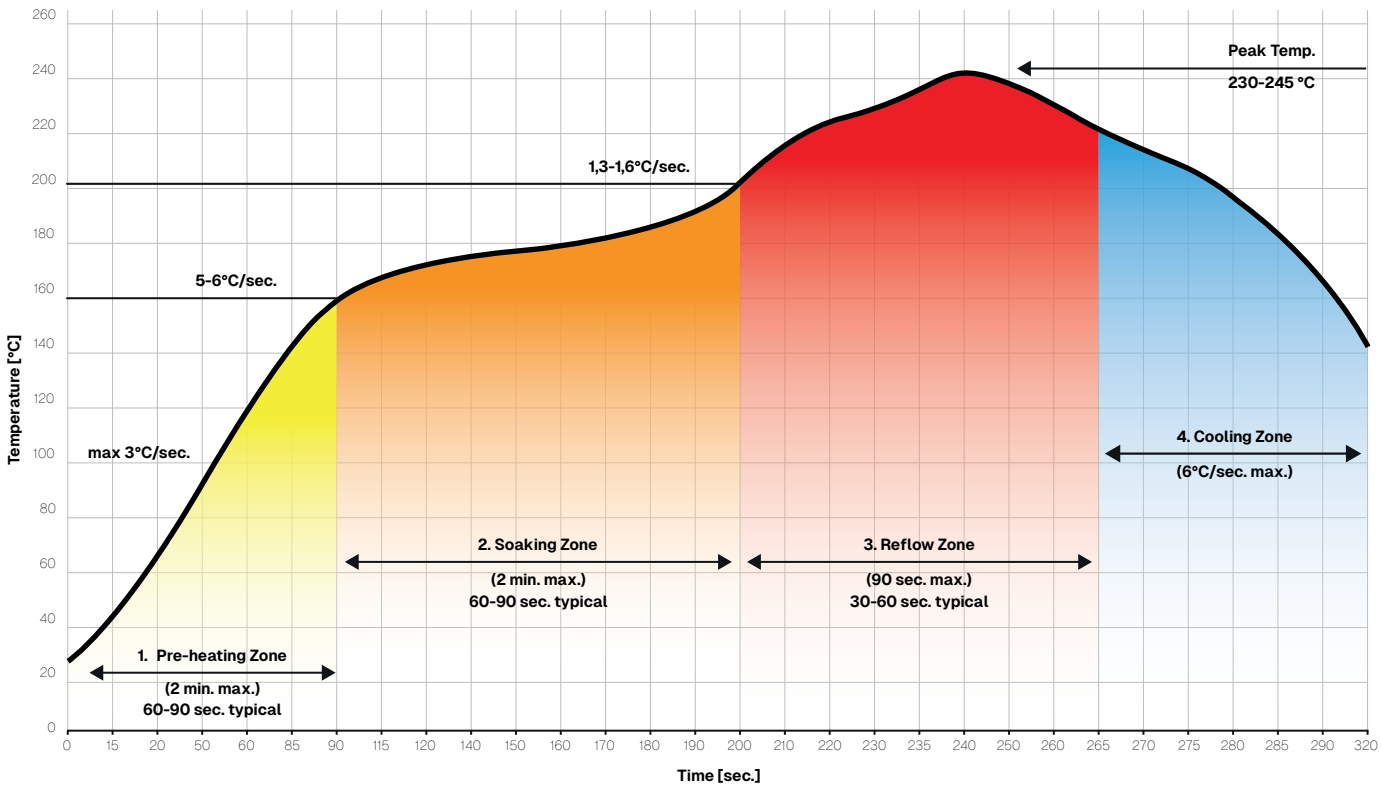
Technical support:

AG TermoPasty provides technical support, answering questions about the technical specifications and applications of our products. Please contact us via email at info@termopasty.pl.

Note:

The data presented in this document reflect our current state of knowledge and describe the typical properties and applications of the product. However, the responsibility for determining the suitability of this product for specific applications lies with the user. AG TermoPasty is not liable for the results of the product's use, as the conditions of its application are beyond our control.

EXAMPLE SOLDERING PROFILE



Reflow Profile Phases for Solder Paste EASY PRINT /Sn96.5Ag3Cu0.5/:

1. **Pre-heating Zone (max. 2 minutes):** In this phase, the PCB with applied solder paste is gradually heated to temperatures below the paste's melting point. This process typically lasts 60 to 120 seconds and aims to evenly prepare components and the board for soldering while minimizing the risk of thermal stress. If the temperature rises too quickly during pre-heating, the solder paste may spatter, leading to solder ball formation. To prevent thermal shock for sensitive components, such as ceramic resistors, the maximum heating rate should be controlled at less than 3°C per second. Temperature Range: From ambient temperature to 130–150°C.
2. **Soaking Zone (max. 2 minutes):** During the soaking phase, lasting up to 2 minutes, the temperature is maintained close to the solder paste's melting point. The goal of this phase is to allow the solder paste to achieve uniform temperature across the entire board, preparing it for the actual reflow process. The temperature increase in this zone is very gradual, nearly flat, as it approaches the melting point of the solder paste (219°C). The soaking temperatures range from 160°C to 200°C and are maintained for 60 to 90 seconds with a heating rate of 1.3°C to 1.6°C per second.
3. **Reflow Zone (90 seconds max):** In this zone, the temperature is maintained above the solder's melting point for approximately 30 to 60 seconds. The peak temperature in this zone must be sufficiently high to ensure proper flux activation and good wetting. A peak temperature range of 230–245°C is typical for lead-free alloys.
4. **Cooling Zone (max. 6°C/sec):** After the reflow process, controlled cooling is performed at a maximum rate of 6°C per second. This cooling rate is crucial to ensure proper solder joint structure and to prevent stress or defects, such as cracks. Cooling must be done in a controlled manner to guarantee high quality and reliability of the finished solder joints.