

## Technical Data Sheet

# F 352 Series Solder Paste



No-Clean, Low Odour Characteristics, Reflow under Air and Nitrogen

### 1. Description

The solder pastes of the F 352 Series are ready-to-use homogeneous mixtures with low odour characteristics, consisting of metal powder, binders, solvents, fluxes and thixotropic agents. Solder pastes of the F 352 Series does not contain any halogen activators. They leave low, clear flux residues with low ionic contamination and very high SIR. These pastes are insensitive to temperature and humidity.

F 352 flux has passed all tests for no-clean solder pastes according to –Siemens standard SN 59650 Issue from July 1994, The tests were performed at Siemens ZT in Berlin, -Bellcore standard TR-NWT-000078, part 13.1

Solder pastes of the F 352 Series have high green strength and are suitable for machines with high accelerations / decelerations. More over they have very long stencil life and can be used in printers with TCU (Temperature Control Unit – very strong ventilation). Their rheology is optimised to allow excellent printing performance with narrow openings and an excellent first print after a pause. Laboratory tests gave a perfect first print after a break of 18 h.

### Key Benefits

- Excellent printing properties → prints through narrow stencil openings and is suitable for high-speed printing.
- Insensitive to humidity and temperature → no splashing, no thickening
- Outstanding wetting capability both in nitrogen at common SMT surfaces
- Very long stencil life
- Can be used in printers with a temperature control unit → no drying caused by ventilation
- Very high adhesion → suitable for machines with very high accelerations / decelerations
- Very high SIR – high reliability

### 2. Product indication

**Indication:** F352Sn62-90.5M30

**Alloy:** Sn62/Pb36/Ag2

### 3. Physical properties:

#### Metal powder:

**Particle size:** Type 3 = 25 –45 µm (325/+500 mesh)

**Shape:** Spherical

**Melting Point:** Sn62/Pb36/Ag2 =179°C

**Composition:** Sn62/Pb36/Ag2 = F352Sn62-90.5M30

**Density:** Sn62/Pb36/Ag2 = 8,4 g/ml

#### Solder Paste:

**Metal Content:** 90% ± 0,5%

## 4. Performance Parameters

Stencil thickness:	≤ 200 µm (≤ 8mil)
Screen, mesh size	80 mesh
Minimum Pitch:	16 mil = 400 µm (Stencil thickness : 150 µm)
Minimum width of stencil apertures:	8 mil = 200 µm
Print speed:	n/a
Print after wait:	n/a

## 5. Reflow Parameters (recommendation)

- Reflow can be done under air or an inert atmosphere.

## 6. Organic vehicle

If the paste is properly stored, its composition prevent crusting and ensures the following rheological properties:

- excellent printability
- stable viscosity

## 7. Residue properties

Flux Activity:	DIN EN 29454-1	1.1.3.C
	ANSI-J-STD-004	L0
	IPC-SF-818	Type LR3N
SIR:	Siemens Norm SN 59650	pass
Silver Chromate Test Paper:	n/a	

## 8. Recommended Processing Guidelines

- The flux residues don't need to be cleaned. They may remain on the circuit. If desired, the residues can be washed with diverse Zestron and Vigon cleaning materials.
- Stir well prior to use.
- Print through a stencil or screen
- The printed solder paste remains tacky up to 24 h
- The peak temperature depends on the heat capacity of the components. Typical peak temperature >210°C.

## 9. Storage

- Store the solder paste in tightly-sealed jars / syringes and avoid exposure to sunlight and high humidity.
- Ensure that the paste has reached room temperature before opening, to prevent condensation.

In Jars:

- Max. 6 month in a refrigerator at 2-10°C
- Max. 1 month at room temperature up to 23°C

In cartridges and cassettes:

- Min. 3 month in a refrigerator at 2-10°C
- Store syringes vertically, tip down!

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The descriptions and engineering data shown here have been compiled by Heraeus using commonly-accepted procedures, in conjunction with modern testing equipment, and have been compiled as according to the latest factual knowledge in our possession. The information was up-to date on the date this document was printed (latest versions can always be supplied upon request). Although the data is considered accurate, we cannot guarantee accuracy, the results obtained from its use, or any patent infringement resulting from its use (unless this is contractually and explicitly agreed in writing, in advance). The data is supplied on the condition that the user shall conduct tests to determine materials suitability for a particular application.

Production Locations Europe	America	Asia
W. C. Heraeus GmbH Contact Materials Division Hanau, Germany Phone: +49 6181 35 5265 cmdinfo@heraeus.com	Heraeus Incorporated Contact Materials Division West Conshohocken, PA, USA Phone: +1 610 825 6050 customerservice.hcd@heraeus.com	Heraeus Ltd. Contact Materials Division On Lok Tsuen, Fanling, Hong Kong Phone: +852 2675 1200 cm.hlh@heraeus.com
W. C. Heraeus GmbH Contact Materials Division Potsdam, Germany Phone: +49 331 74616 00 juergen.schulze@heraeus.com	<a href="http://www.heraeus-cmd.com">www.heraeus-cmd.com</a>	Heraeus Materials Technology Shanghai Contact Materials Division Shanghai, P.R.C. Phone: +86 21 3357 5688 hmts@heraeus.com