



ESL EUROPE

SOLDER PASTES &
THICK-FILM MATERIALS

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ENVIROFLO™ SERIES Lead-free Solder Pastes



A well established product designed to meet the demands of the surface mount industry as a reliable replacement for conventional lead solders.

Based on the 95.5Sn/3.8Ag/0.7Cu (SAC387) alloy, 217°C eutectic, EnviroFlo offers superior paste performance exhibiting excellent screen life, printing characteristics, component acceptance, anti-slump and reflow properties. The resin is colophony-free and the clear benign residue may be left on the processed board or removed using commercially available cleaning solvents.

The EnviroFlo™ Series options:

EnviroFlo™ 350: Dispensing range of lead-free solder paste with a viscosity of 350 ± 25 kcps.

EnviroFlo™ & EnviroFlo™ SP: Stencil and mesh screen-printing range of lead-free solder pastes with a viscosity of 725 ± 25 kcps.

RESIDUE PERFORMANCE DATA

| Test | Specification | Result |
|--|------------------------|--------|
| Silver Chromate Paper Test: (Test for Halides) | J-STD-004 / IPC-TM-650 | Pass |
| Copper mirror Test: | J-STD-004 / IPC-TM-650 | Pass |
| Surface Insulation Resistance: | J-STD-004 / IPC-TM-650 | Pass |
| Electro-migration: | J-STD-004 / IPC-TM-650 | Pass |

Every batch of solder paste manufactured by ESL is screen-printed, populated with live components and reflowed using a 4 zone convection oven for product testing before final QA inspection.

ESL Europe EnviroFlo Series 0712-G

ESL Worldwide

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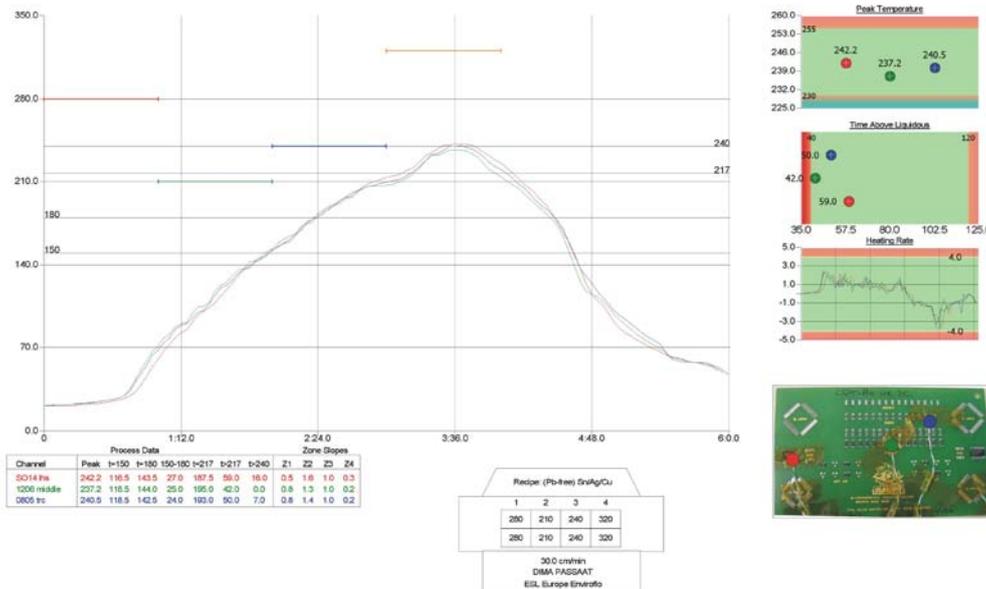
See Caution and Disclaimer on next page.

PASTE DATA: Alloy: SAC (95.5Sn / 3.8Ag / 0.7Cu) - 90% nominal solids
Particle Size: 25 - 45 microns (Type 3)
Packaging: 500g or 1000g Jars, Green Semco Cartridges and 800g ProFlow™ Cassettes
Storage: 4°C - 20°C - May be refrigerated - Paste will need to be taken out of the fridge at least 4 hours before use.
Viscosity: 725 ± 25 kcps
Shelf Life (at 20°C): 6 months

PRINTING: **Screen:** Recommended 120 microns thick, electro-formed, laser cut stencil with 5 - 15% reduction in aperture compared to pad area to eliminate mid-chip beading.
Print speed: 20 - 100 mm/sec
Screen-life: > 8 hours @ 19 - 28 °C
Tack time: > 24 hours @ 19 - 28 °C

REFLOW: A standard reflow profile is shown. This is used to test EnviroFlo™ paste. The following guidelines are used:
Ramp up: 0.5 - 2.5 °C / sec.
Liquidus: Hold above 217°C for between 40 and 120 seconds (typically 15 - 35 °C above liquidus).
Cool down: 2 - 5 °C / sec.

CLEANING: Not usually required but populated boards can be cleaned in commercially available solvents.



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CAUTION: Proper industrial safety precautions should be exercised in using these products. Use with adequate ventilation. Avoid prolonged contact with skin or inhalation of any vapours emitted during use or heating of these compositions. The use of safety eye goggles, gloves or hand protection creams is recommended. Wash hands or skin thoroughly with soap and water after using these products. Do not eat or smoke in areas where these materials are used. Refer to appropriate MSDS sheet.

DISCLAIMER: The product information and recommendations contained herein are based on data obtained by tests we believe to be accurate, but the accuracy and completeness thereof is not guaranteed. No warranty is expressed or implied regarding the accuracy of these data, the results obtained from the use hereof, or that any such use will not infringe any patent. ElectroScience assumes no liability for any injury, loss, or damage, direct or consequential, arising out of its use by others. This information is furnished upon the condition that the person receiving it shall make his own tests to determine the suitability thereof for his particular use, before using it. User assumes all risk and liability whatsoever in connection with his intended use. ElectroScience's only obligation shall be to replace such quantity of the product proved defective.