

PRODUCT DATA SHEET

WS-3555

Flip-Chip Flux

Introduction

Flip-Chip Flux WS-3555 is a liquid flux specifically designed to meet process needs for direct chip attach of fine-pitch flip-chips (<0.4mm). **WS-3555** eliminates compatibility issues with underfills by having a completely water-cleanable residue.

Features

- Water-soluble
- Halogen-free: no intentionally added halogens
- Suitable for spray or dipping
- Suitable for Sn/Pb, Pb-free, and high-Pb alloy applications
- Non-corrosive to underbump metallization

Properties

	Value	Test Method
Flux Type Classification	M0	J-STD-004 (IPC-TM-650: 2.3.32 and 2.3.33)
Typical Viscosity	95cst	Cannon-Fenske
SIR (Ohms, post cleaning)	Pass (>10 ⁸ after 7 days @ 85°C and 85% RH)	J-STD-004 (IPC-TM-650: 2.6.3.3 IPC-B-24)
Color	Deep amber to yellow	Visual
Shelf Life	6 months at 0 to 25°C	Viscosity change/ microscope examination

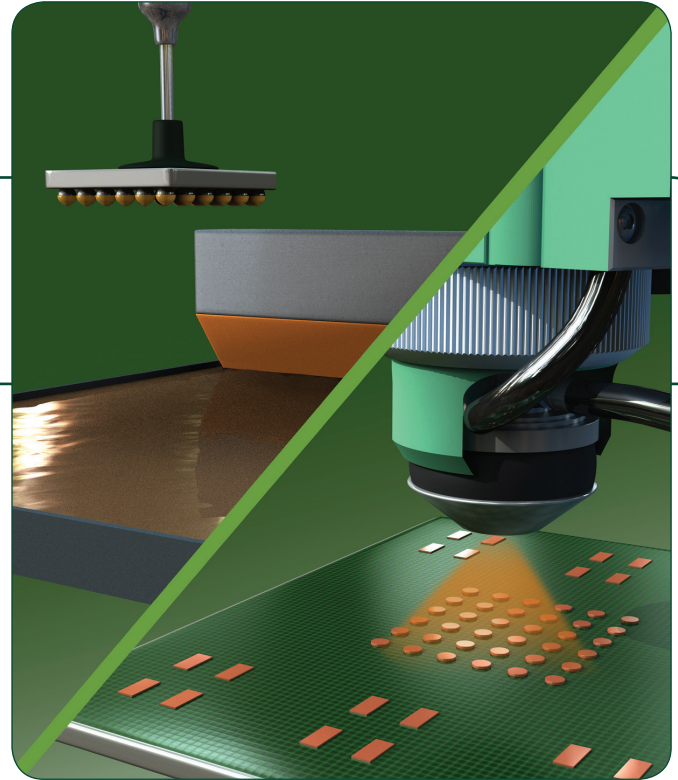
All information is for reference only.

Not to be used as incoming product specifications.

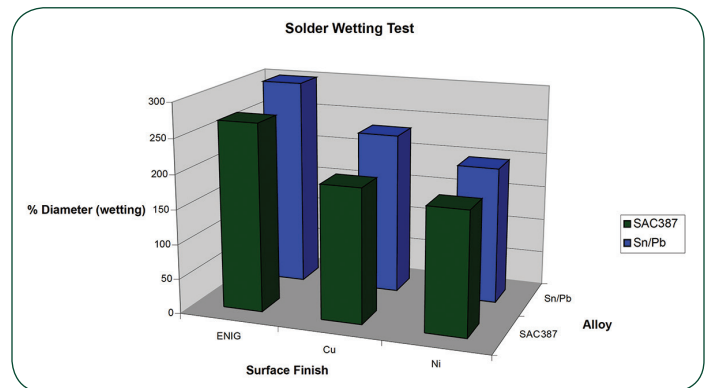
Application

Recommended flux amount: 500–1,500 micrograms/mm², depending on the solder bump alloy, substrate metallizations, and pitch.

For spray applications, the flux storage tank should hold enough flux for one 8-hour shift. Additional flux remaining in tank may expire (pot life <10 hours at room temperature) if left for a prolonged amount of time. Spray equipment should also be cleaned frequently to ensure uniform spray deposition and flux homogeneity.



Comparative Solder Wetting Capability



Cleaning

The material can be cleaned with DI water, or water with an added cleaner. Ideal conditions for spray-cleaning: 25°C (room temperature) or higher for >1 minute at >60psi.

Packaging

WS-3555 is available in 100 to 500g containers. Other packaging can be provided to meet specific requirements.

From One Engineer To Another®



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Storage

Storage temperatures should not exceed 25°C for more than 4 days, and should never exceed 30°C. After removing from cold storage, **WS-3555** should be allowed to stand for at least 4 hours at room temperature before using.

Technical Support

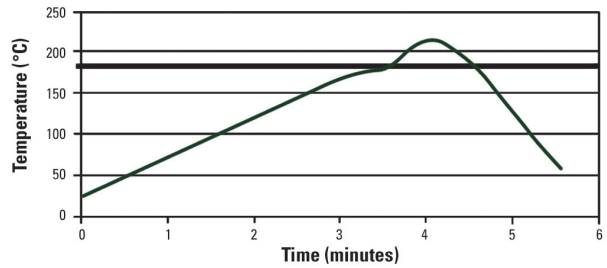
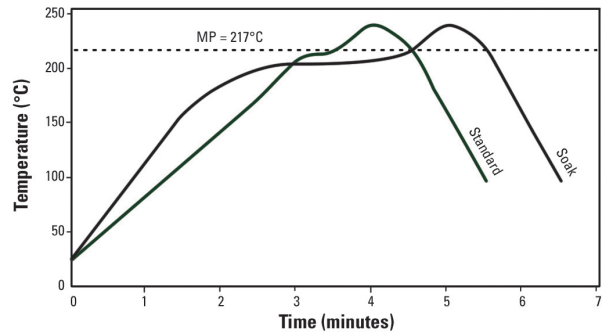
Indium Corporation sets the industry standard in providing rapid response, onsite technical support for our customers worldwide. Indium Corporation's team of Technical Support Engineers can provide expertise in all aspects of Materials Science and Semiconductor Packaging process applications.

Safety Data Sheets

The SDS for this product can be found online at <http://www.indium.com/sds>

Reflow

Recommended Profile:



Peak reflow temperature should be <340°C in a nitrogen atmosphere (<100ppm O₂), with a linear ramp up to 30°C above liquidus temperature. These profiles are recommended to the user as starting points, and should be optimized by the user to meet their individual process needs.

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