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

<table>
<thead>
<tr>
<th>Flux Type Classification</th>
<th>Value</th>
<th>Test Method</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M0</td>
<td>J-STD-004 (IPC-TM-650: 2.3.32 and 2.3.33)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Typical Viscosity</th>
<th>95cst</th>
<th>Cannon-Fenske</th>
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<tr>
<th>SIR (Ohms, post cleaning)</th>
<th>Pass (&gt;10^8 after 7 days @ 85°C and 85% RH)</th>
<th>J-STD-004 (IPC-TM-650: 2.6.3.3 IPC-B-24)</th>
</tr>
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<tr>
<th>Color</th>
<th>Deep amber to yellow</th>
<th>Visual</th>
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<tr>
<th>Shelf Life</th>
<th>6 months at 0 to 25°C</th>
<th>Viscosity change/microscope examination</th>
</tr>
</thead>
</table>

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®
PRODUCT DATA SHEET
WS-3555 Flip-Chip Flux

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.

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.

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

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