

Product Data Sheet

# Wafer Flux WS-3543-A

## Features

- Semiconductor-grade
- Water-soluble
- Viscosity suitable for 150-300mm wafers
- No residue
- Halogen-free
- Promotes uniform solder bump formation
- Suitable for Sn/Pb and Pb-Free solder applications

## Introduction

**Wafer Flux WS-3543-A** is a low viscosity semiconductor-grade flux, specifically optimized for uniform, oxide-free solder bump formation across wafers up to 300mm (12inch) in diameter, without solder thieving. **WS-3543-A** washes off easily and leaves zero residues, even after repeated application/reflow/cleaning cycles.

## Properties

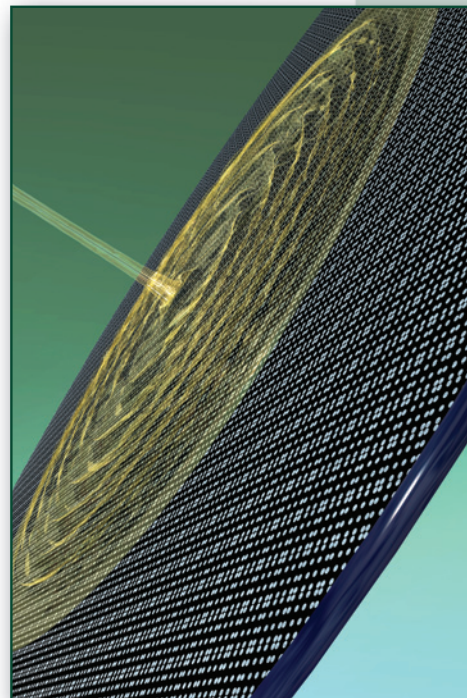
| Property                   | Value  | Test Method              |
|----------------------------|--|--------------------------|
| Flux Type Classification:  | ORMO   | J-STD-004 (IPC-TM-650)   |
| Typical Viscosity:         | 95cSt  | Cannon-Fenske viscometer |
| SIR (ohms, post cleaning): | Pass (>10 <sup>9</sup> after 7 days @ 85°C & 85% RH) | IPC-B-24 2.6.3.3         |
| Typical Acid Value:        | 60mg KOH/g   | Titration                |
| Color:                     | Amber to Yellow                                      | Visual                   |
| Shelf Life:                | 6 months   | 0°C to +25°C             |

*All information is for reference only. Not to be used as incoming product specifications.*

## Application

**WS-3543-A** can be applied by standard spray and spin technique. The recommended initial flux amount is 500-750 micrograms/mm<sup>2</sup>.

For spin coating applications, an initial rotation speed should be used to spread this liquid flux uniformly onto the wafer. Next, a high velocity rotation (~2000 rpm) should be used to thin the flux and remove excess flux from the wafer surface. For spray applications, the equipment flux storage tank should hold enough flux for one 8-hour shift. Additional flux remaining in tank may expire (pot life >8 hours at room temperature) if left for a prolonged amount of time. Spray equipment should also be cleaned frequently to ensure the highest level of purity with this or any other flux.



## Cleaning

**WS-3543-A** is designed to be readily cleanable with DI water, or water with an added cleaner. Ideal conditions for spray cleaning are 25°C or higher for >1 minute at >60psi.

## Packaging

**Wafer Flux WS-3543-A** is available in containers from 100g to 3.7kg (approximately 1 gallon). Other packaging can be provided to meet specific requirements.



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## Wafer Flux WS-3543-A

### Storage

Storage temperatures for **WS-3543-A** should not exceed 25°C for more than 4 days, and should never exceed 30°C. If **WS-3543-A** is stored at less than ambient temperature, it should be allowed to stand for at least 4 hours at room temperature before use.

### Technical Support

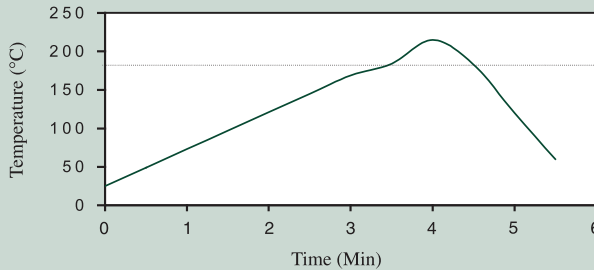
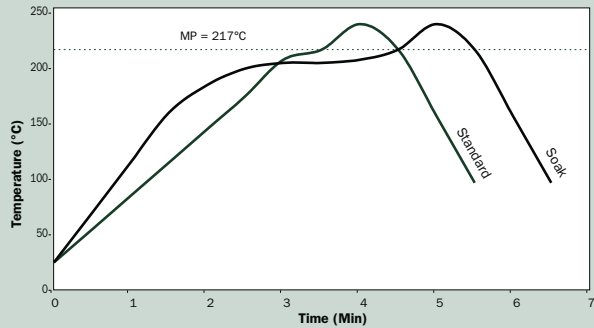
Indium Corporation sets the industry standard in providing rapid response, on-site technical support for our customers worldwide. Indium's team of Technical Support Engineers can provide expertise in all aspects of Materials Science and Semiconductor Packaging process applications.

### Material Safety Data Sheets

The MSDS for this product can be found online at <http://www.indium.com/techlibrary/msds.php>

### Reflow

#### Recommended Profile:



Peak reflow temperature should be <340°C in either nitrogen (<25ppmO<sub>2</sub>) or low-dewpoint forming gas (4%H<sub>2</sub>/N<sub>2</sub>). The profile should be a linear ramp up to 30°C above liquidus temperature.

This product data sheet is provided for general information only. It is not intended, and shall not be construed, to warrant or guarantee the performance of the products

described which are sold subject exclusively to written warranties and limitations thereon included in product packaging and invoices.

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