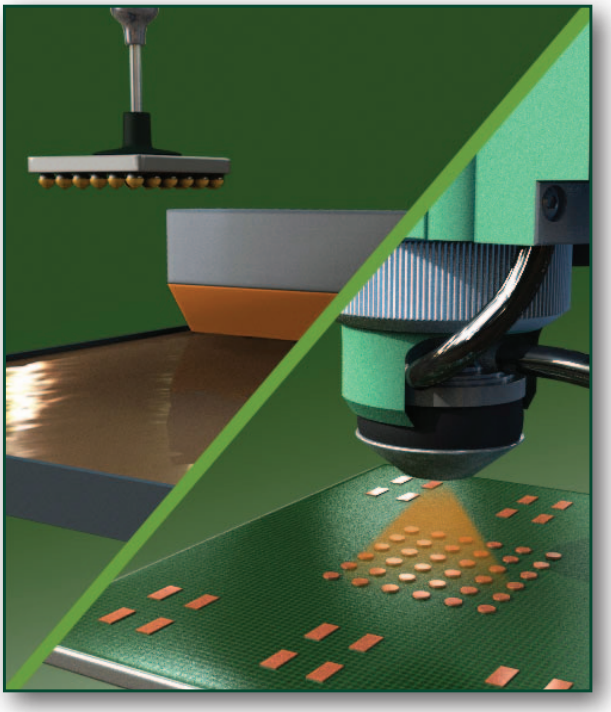
Flip-Chip Flux WS-688



Features

- Halogen-free – no intentionally added (NIA) halogens
- Designed for flip-chip dipping applications
- Designed for both Sn63 and Pb-free applications
- Excellent solderability on a variety of surfaces
- Enhances the voiding control and lowers cold joint defects
- Uniform dipping performance over extended periods
- Tackiness suitable for holding large die during assembly
- Bubble-free packaging

Introduction

Flip-Chip Flux WS-688 is a NIA halogen-free water soluble flip-chip dipping flux which has an activator system powerful enough to promote wetting on the most demanding substrate metallizations. The flux enhances voiding control and lowers cold joint defects.

Properties

Property	Value	Test Method
Flux Classification:	MO	J-STD-004 (IPC-TM-650: 2.3.32 and 2.3.33)
Typical Viscosity:	9.3 kcps	Brookfield HB DVII+-CP (5rpm)
SIR (ohms, after cleaning):	Pass (>109 after 7 days @ 85°C & 85% RH)	J-STD-004 (IPC-TM-650: 2.6.3.3 IPC-B-24)
Typical Acid Value:	95mg KOH/g	Titration
Specific Gravity:	1.13g/u	J-STD-004B
Shelf Life:	6 months (-20°C to +5°C)	Viscosity change/ microscope examination

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

Application

WS-688 is intended to be used in an air or nitrogen reflow environment of 50ppm oxygen or less. **WS-688** can be used on many surface finishes including immersion Ag, Cu, and Ni. These surfaces can be soldered with SnPb or Pb-free alloys.

Flux depth should be set to approximately 30-50% of the flip-chip solder bump height.

Cleaning

WS-688 residue 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-688 is available in 10cc and 30cc syringes.

Storage

For maximum shelf life, **WS-688** syringes and cartridges should be stored tip down. Storage temperatures should not exceed 30°C. After removing from cold storage, **WS-688** should be allowed to stand for at least 4 hours at room temperature before using.

OVER→

Form No. 98774 (A4) R1

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Technical Support

Indium Corporation sets the industry standard in providing rapid response, on-site 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.

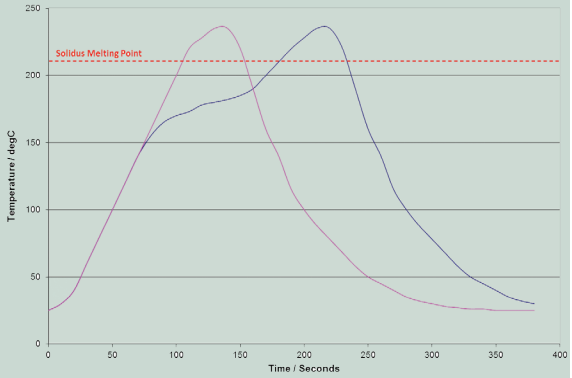
Material Safety Data Sheets

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

Reflow

Recommended Profile:

Reflow Profiles: SAC305



A short preheat (150°-160°C) for less than 45 seconds may be used to reduce voiding. The profile should ideally be a linear ramp at 1-2°C/second up to 20-30°C above solidus temperature, with a rapid cool down afterwards, and a minimum time above liquidus of 20 seconds.

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