PRODUCT DATA SHEET

WS-575-C

Ball-Attach Flux

Introduction

Ball-Attach Flux WS-575-C is a NIA halogen-free water-soluble ball-attach flux designed for use in pin transfer applications for ball attachment to substrates (BGA manufacturing). Its rheology is specifically designed for use with even the smallest gravity-fed spheres. **WS-575-C** has an activator system powerful enough to promote wetting on the most demanding substrate metallizations. **WS-575-C** is cleanable with just DI water only.

Features

- Halogen-free – no intentionally added (NIA) halogens
- Flux rheology applicable for all sphere sizes
- Suitable for Pb-free applications
- Uniform pin transfer over extended periods
- Low-voiding
- No “missing ball”
- Excellent solderability on a wide range of surfaces
- Cleanable with DI water only

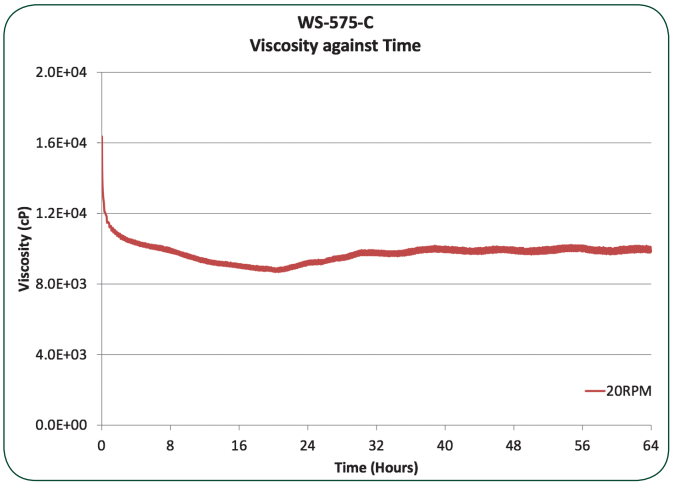
Properties

	Value	Test Method
Flux Type Classification	ORH0	J-STD-004 (IPC-TM-650:2.3.32 and 2.3.33)
Typical Viscosity	14kcps (peak) 13kcps (5min)	Brookfield HB DVII ±CP (5rpm)
SIR (Ohms, after cleaning)	Pass >10^8 after 7 days @ 85°C and 85% RH)	J-STD-004 (IPC-TM-650: 2.6.33 IPC-B-24)
Typical Acid Number	95mg KOH/g	Titration
Typical Tack Strength	330g	J-STD-005 (IPC-TM-650:2.4.44)
Shelf Life	-20 to +5°C for 6 months	Viscosity change/ microscope examination

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

Application

The amount of **WS-575-C** flux deposited on the substrate can be optimized by changing equipment parameters. Key variables include pin shape, pin diameter, shear speed, dwell, and depth of immersion. The flux rheology can be optimized for desired application by shearing to achieve the desired viscosity.



Cleaning

WS-575-C residue can be cleaned with DI water or water with an added cleaner. Ideal conditions for spray-cleaning: 20–30°C for >1 minute at >60psi.

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WS-575-C Ball-Attach Flux

Packaging

Ball-Attach Flux WS-575-C is available in jars and in 6 ounce and 12 ounce cartridges.

Storage

For maximum shelf life, **WS-575-C** cartridges should be stored tip down at -20 to +5°C. Storage temperatures should not exceed 25°C for more than 4 days, and should never exceed 30°C. After removing from cold storage, **WS-575-C** should be allowed to stand for at least 4 hours at room temperature before using.

Technical Support

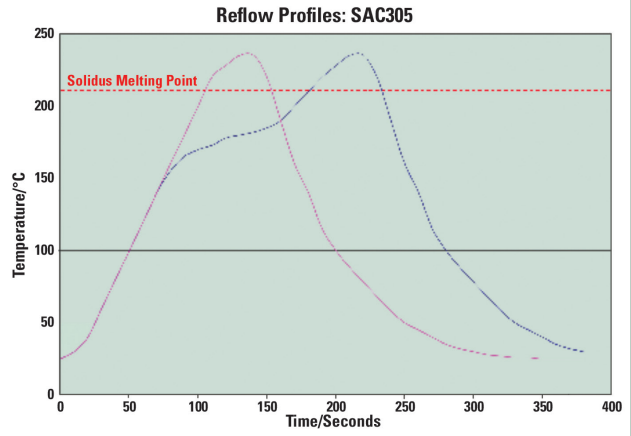
Indium Corporation sets the industry standard in providing rapid response, on-site technical support for our customers worldwide. Indium Corporation's team of Technical Support Engineers can provide expertise in all aspects of materials science and semiconductor packaging process applications.

Safety Data Sheets

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

Reflow

Recommended Profile:



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 afterward, and a minimum time above liquidus of 20 seconds.

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