

Product Data Sheet

Ball Attach Flux NC-506

Features

- Suitable for Pin-Grid Array and standard Ball Grid Array applications
- Airless Packaging
- Excellent solderability to all common surface metallizations
- No-clean residue
- Can be used for printing, dipping, and pin transfer deposition
- Offers high yields in BGA bumping process
- Suitable for both Pb-Free or Sn/Pb applications

Introduction

Ball Attach Flux NC-506 is a low viscosity thixotropic no-clean flux designed for use in ball attachment to substrates (BGA manufacturing). It is especially useful in applications requiring soldering to surface finishes with tenacious oxides, such as nickel. It can also be used wherever a no-clean ball attach flux is needed, and is suitable for a variety of different deposition methods.



Properties

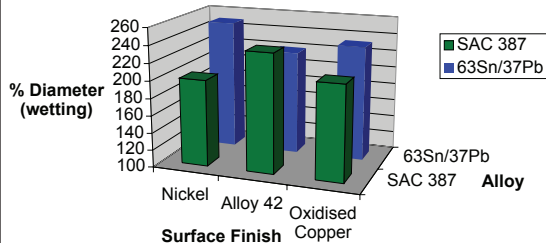
| | Value | Test Method |
|----------------------------------|--|---|
| Flux type Classification: | ROL1 | J-STD-004 (IPC-TM-650: 2.3.32 and 2.3.33) |
| Typical Viscosity: | 320kcps | Brookfield HB DVII-CP (5rpm) |
| SIR (ohms): | Pass (>10 ⁹ after 7 days @ 85°C & 85% RH) | J-STD-004 (IPC-TM-650: 2.6.3.3 IPC-B-24) |
| Typical Acid Value: | 103mg KOH/g | Titration |
| Typical Tack Strength: | 250g | J-STD-005 (IPC-TM-650: 2.4.44) |
| Shelf Life: | 1 year (0°C to ≤30°C) | Viscosity change/microscope examination |
| Post Reflow Flux Residue | 45% | ICA Test Method |
| Thixotropic Index | -0.55 | SSF |

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

Application

Pin transfer volumes can be optimized by changing equipment parameters. Key variables of pin transfer include pin shape, pin diameter, shear speed, dwell and depth of immersion.

Solder Wetting Test



Cleaning

NC-506 is designed for no-clean applications. If necessary, the flux can be removed by using a commercially available flux cleaner. Please contact an Indium Corporation Technical Service Engineer for recommendations of cleaners to suit your process needs.

Packaging

NC-506 is available in 30cc syringes. Other packaging can be provided to meet specific requirements.



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Form No. 98212 R6

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Storage

NC-506 syringes and cartridges should be stored tip down at 0°C to ≤30°C for maximum shelf life. After removing from cold storage, **NC-506** should be allowed to stand for a minimum of 4 hours at room temperature before using.

Technical Support

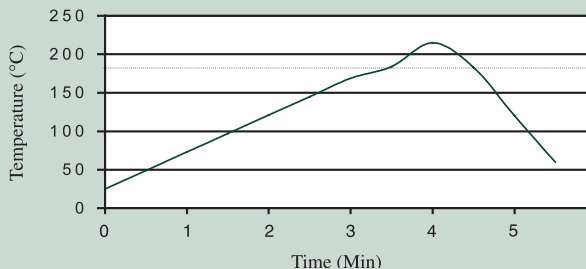
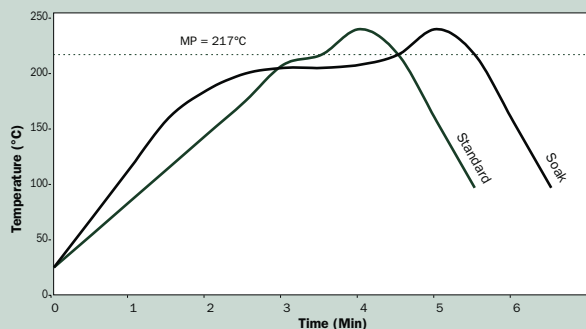
Indium Corporation sets the industry standard in providing rapid response, on-site technical support for our customers worldwide. Indium's team of Technical Support Engineers can provide expertise in all aspects of Materials Science and Semiconductor Packaging process applications.

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 <260°C in an air or nitrogen atmosphere (<500ppm 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.

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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