



290S Low Solids Flux Coating External Flux for Preforms



Product Description

Kester 290S allows manufacturing soldering operations to be accomplished without the use of additional liquid fluxing agents. This reduces throughput time and increases process yield by delivering precisely the right amount of flux to solder surfaces together. After soldering has been completed, the flux residues can be left on the assembly without affecting reliability of the product.



RoHS Compliance

Kester does not determine any applicable Restriction of Hazardous Substances (RoHS) exemptions for our lead containing products at the user level.



Reliability Properties

Copper Mirror Test: Low
Tested to IPC-TM-650, Method 2.3.32

Copper Corrosion: Low
Tested to IPC-TM-650, Method 2.6.15

Silver Chromate: Pass
Tested to IPC-TM-650, Method 2.3.33

Fluorides by Spot Test: Pass
Tested to IPC-TM-650, Method 2.3.28

Surface Insulation Resistance (SIR):
Pass
Tested to J-STD-004B, IPC-TM-650, Method 2.6.3.7

Surface Insulation Resistance (SIR):
Pass
Tested on B-24 Coupons, per IPC-TM-650 Method 2.6.3.3 @ 85°C, 85% RH for 7 Days

| | at 24 hours | at 96 hours | at 168 hours |
|-------------------------|-----------------------|-----------------------|------------------------|
| Control Coupon, ohms | 8.9*10 ⁹ Ω | 6.2*10 ⁹ Ω | 5.16*10 ⁹ Ω |
| Pro-cessed Coupon, ohms | 1.2*10 ⁸ Ω | 6.5*10 ⁸ Ω | 9.3*10 ⁸ Ω |

Availability

Kester Preforms are available in a wide variety of shapes, sizes and alloys and are offered with and without flux. Preforms can be coated in a variety of weight percents with typical flux ranges available from 0.75-2.5% by weight. Consult the alloy temperature chart on Kester's website for a comprehensive alloy list. The amount of flux on the preform dictates the ease of soldering for an application. Preforms are typically packaged in bulk containers, but can be placed in specialty packaging to accommodate a variety of applications.

Process Considerations

Preforms are placed into position between the surfaces to be soldered. The preform area can then be heated locally with a soldering iron, torch, hot air tool or the whole assembly passed through a suitable oven. The assembly should be heated above the liquidus temperature of the solder alloy being used. Optimum temperatures and times for reflow and intermetallic formation are dependent on assembly, process and alloy used. Preforms allow manufacturing soldering operations to be accomplished without the use of additional liquid fluxing agents. This reduces throughput time and increases process yield by delivering precisely the right amount of flux to solder surfaces together. After soldering has been completed, the flux residues can be left on the assembly without affecting reliability of the product.

Cleaning

Residues from preforms are non-conductive, non-corrosive and do not require removal in most applications. If residue removal is required, contact Kester Technical Support.

Storage and Shelf Life

Solid solder preforms have an indefinite shelf life given the following conditions when stored in a dry, non-corrosive environment. The surface may lose its shine and appear a dull shade of gray. This is a surface phenomenon and is not detrimental to product functionality.

Preforms that contain flux have a limited shelf life determined by the alloy used in the preform. Alloys containing more than 70% lead have a 2 year shelf life from the date of manufacture. All other alloys have a shelf life of 3 years from the date of manufacture.

Health and Safety

This product, during handling or use, may be hazardous to your health or the environment. Read the Safety Data Sheet (SDS) and warning label before using this product.