Heraeus

Technical Data Sheet

NO-CLEAN FLUX

Product Name: Surf 139
Halide-free and VOC-reduced no clean flux

Description

Halide-free and VOC-reduced no-clean flux classified as type 2.2.3.A according to DIN-EN 29454-1 (DIN 8511, F-SW23). The Surf 139 contains a solvent mixture of alcohol and pure, deionised water, a contribution to current environmental developments. The European VOC-standards being currently valid demand a reduction of the emission of organic substances into the environment. A VOC-reduced flux should be used when a VOC-free flux is unsuitable due to the application conditions.

The changeover to the VOC-reduced Surf 139 is also possible when new lead-free production processes are to be introduced. The higher temperature in the preheat-zone and the higher temperature of the solder wave facilitate the application of a completely or partially water based liquid flux as an appropriate alternative for environmental protection. The Surf 139 fulfils all the requirements on a modern no-clean flux for the wave-soldering process.

Characteristics

Surf 139 offers the following advantages:

☐ Good wetting and through hole-filling

☐ No visible residues, no corrosion, no electromigration

☐ High surface insulation resistance

☐ Pin testable

☐ Application with spray and foam fluxers

Application

The Surf 139 has been developed for applications with foam and spray fluxers. The preheat temperature should be between 105 and 135° C measured on the component side of the printed circuit board. The increased preheat temperature is necessary due to the higher evaporation energy of the water. In addition the activation of the flux is optimised within this temperature range and the preheating of the components can be guaranteed.

Physical Properties and Data

GENERAL PROPERTIES	LIQUID Surf 139
Colour:	colourless
Density (20°C):	0.914 g/cm³
Solid Content:	2.5%
Acid Rating:	21 mg KOH/g
Halide Content:	none
Flash point (closed crucible):	24°C
Ignition temperature:	none
Thinner	generally not required with spray flux systems
Storage conditions:	optimum 10°C to max. 30°C

Shelf Life

2 years after date of delivery (provided proper storage in originally sealed container).

Health and Safety

Before using please read the material safety data sheet carefully and observe the safety precautions described.

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Notice

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The Surf 139 is manufactured by STANNOL GmbH & Co. KG
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