

ELFLUX 3003 NC

General Description

ELFLUX 3003 NC is a water-based, organic no clean flux for use in wave soldering under normal and inert gas atmosphere. It is low in solid content and halide-free and can be used for both tin-lead and lead-free soldering processes. ELFLUX 3003 NC is a further development of the ELFLUX 3000 series with the objective to further reduce the flux residues after soldering. The few remaining residues on the boards are not tacky and cause no problem during electrical in-circuit testing. Cleaning of the boards to remove the residues from the solder joints is in general not required.

Areas of Use

ELFLUX 3003 NC is effective in case of OSP-treated copper as well as for chemical Sn or electrolytic nickel or silver surfaces. The flux is best applied by spraying (dipping or brushing is possible as well).

ELFLUX 3003 NC yields excellent soldering results for tin-lead solders, like Sn63Pb37 and lead-free solders of the tin/copper, tin/silver, or tin/silver/copper groups or similar materials.

ELFLUX 3003 NC is suitable for all applications of the electrical and electronic industry, especially also in the automotive and telecommunication sectors.

Classification

ELFLUX 3003 NC has been classified as ORL0 per DIN EN 61190-1-1 and IPC ANSI/J-STD-004 and as 2131 per DIN EN ISO 9454-1.

Technical Specification

ELFLUX 3003 NC	
Appearance	Clear, transparent liquid
Smell	Mild, nearly odourless
Density [g/cm ³] (20 °C)	1.007 ± 0.003
Solids content [%] (per IPC-TM-650 2.3.34)	2.9
VOC content [%]	None
Acid number [mg KOH/gFlux]	23 ± 2
Halides [%]	None
pH value (20 °C)	3 ± 1
Flash point [°C]	None
Ignition temperature [°C]	None

Application

In automatic soldering processes it is recommended to apply ELFLUX 3003 NC only by spraying. Dipping and brush

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application are possible for simple soldering operations. The optimum preheat temperature range is 110 to 140 °C measured on the top side of the board. The use of convection heating systems is recommended. It is advisable to increase the flow of nitrogen in closed system in order to remove water vapour. Please refer to the equipment makers for detailed settings.

Lead-free solders:

ELFLUX 3003 NC is also suitable for higher preheat temperatures which might be required by lead-free soldering processes.

Cleaning

Removal of the flux residues: if desired, residues of ELFLUX 3003 NC can be removed by rinsing with hot water.

General Safety Precautions

ELFLUX 3003 NC should be used according to industrial standards of practice. For safety advice please refer to the material safety data sheet.

Packing Sizes

ELFLUX 3003 NC is available in containers of 10 L or 20 L.

Storage

ELFLUX 3003 NC is not flammable and is therefore not subject to any restrictions regarding the stored quantity, not even near the soldering machine. The product does not have to be stored in dangerous goods stores. ELFLUX 3003 NC is water-based and should not be stored under 3 °C.

Shelf Life

Under adequate conditions ELFLUX 3003 NC can be stored in original unopened containers for a minimum of 12 months.

The information contained herein is based on technical data that we believe to be reliable and is intended for use by persons having technical skill, at their own risk. Users of our products should make their own tests to determine the suitability of each product for their particular process. TAMURA ELSOLD will assume no liability for results obtained or damages incurred through the application of the data presented.