

ELFLUX 2000 NC

General Description

ELFLUX 2000 NC is a solvent-based, no clean flux for use in automatic wave soldering. ELFLUX 2000 NC is low in solids and is free from halides and contains a small amount of rosin which makes residues much safer than with other resin free fluxes.

Thinner 200 is used as solvent to control the density of ELFLUX 2000 NC.

The residues on the printed circuit board are not tacky. Electronic in-circuit testing is possible without any problems. The solder joints have low residues, cleaning is in general not necessary. ELFLUX 2000 NC contains a corrosion inhibitor reducing the danger of corrosion of copper surfaces under humid conditions.

ELFLUX 2000 NC improves the soldering result and minimizes the formation of solder bridges and shorts. The non-corrosive and non-conductive residues meet the requirements of Bellcore TR-NWT-000078.

Areas of Use

ELFLUX 2000 NC has been developed especially for OSP surfaces, but also shows very good soldering results on chemical tin surfaces. ELFLUX 2000 NC can be used for automotive and telecom electronics and in many other standard electronic applications.

Classification

ELFLUX 2000 NC is classified as ORLO per DIN EN 61190-1-1 and per IPC ANSI/J-STD-004.

Technical Specification

	ELFLUX 2000 NC	Thinner 200
Appearance	Clear, transparent liquid	Clear, transparent liquid
Smell	Mild alcoholic	Mild alcoholic
Density [g/cm ³] (20 °C)	0.797 ± 0.003	0.785 ± 0.003
Solids content [%] (per IPC-TM-650 2.3.34)	2.9	None
VOC content [%]	> 90, Solvent-based	100, Solvent
Acid number [mgKOH/gFlux]	22 ± 2.0	< 1
Halides [%]	None	None
pH value (20°C)	3.5 – 4.5	Neutral
Flash point [°C]	12	12
Ignition temperature [°C]	399	399
Recommended thinner	Thinner 200	

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Application

ELFLUX 2000 NC can be applied by foam flux equipment but can be sprayed as well. The flux will provide a uniform head of foam with small air bubbles. The optimum preheat temperature for many circuit board assemblies is 90 – 115 °C as measured on the top side of the circuit board. For lead-free solder processes the preheat temperature can be increased by 20 – 30 °C without damaging flux activators.

Process Control

The control of the flux during use is necessary to assure a consistent flux distribution on the circuit boards. This can best be done by chemical titration. Manual density control or by automatic density control might not be precise enough due to water absorption of the flux.

Corrosion and Electrical Tests

Test condition	
Overall Result	Pass
Climate	35 °C/85 % humidity
Bias	45 – 50 V
Comb pattern	IPC-B-25, pattern E
Insulation Resistance Value (11 days)	
Pattern Up	4.5 x 10 ¹¹ Ω
Pattern Down	5.0 x 10 ¹¹ Ω
Control	7.0 x 10 ¹¹ Ω

SIR per IPC-TM-650 2.6.3.3	Result
Flux	1.1 x 10 ¹⁰ Ω
Control	1.3 x 10 ¹⁰ Ω

ELFLUX 2000 NC has been tested at and approved by the CT Labs of Siemens in Berlin. The test certificate can be downloaded from www.tamura-elsold.de

Cleaning

Cleaning of the boards: ELFLUX 2000 NC is a no clean flux. Generally, cleaning is not required.

General Safety Precautions

ELFLUX 2000 NC should be used according to industrial standards of practice. For safety advice please refer to the material safety data sheet.

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Packing Sizes

ELFLUX 2000 NC and Thinner 200 are available in containers of 10 L or 20 L.

Storage

ELFLUX 2000 NC is flammable. Store away from sources of ignition. Storage temperature: 5 – 25 °C.

Shelf Life

Under adequate conditions ELFLUX 2000 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.