

### General Description

ELFLUX 2003 NC is a solvent-based no clean flux for use in automatic wave soldering. ELFLUX 2003 NC is halide-free. ELFLUX 2003 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 2003 NC.

ELFLUX 2003 NC improves the soldering result and minimizes the formation of bridges and shorts. The slightly increased solid content of ELFLUX 2003 NC guarantees good soldering results also on surfaces which are difficult to solder.

The residues on the PCB are not tacky. Electrical in-circuit testing is possible without problems. The solder joints show very few residues and do not need to be cleaned.

### Classification

ELFLUX 2003 NC is classified as ORLO per DIN EN 61190-1-1 and per IPC ANSI/J-STD-004.

### Technical Specification

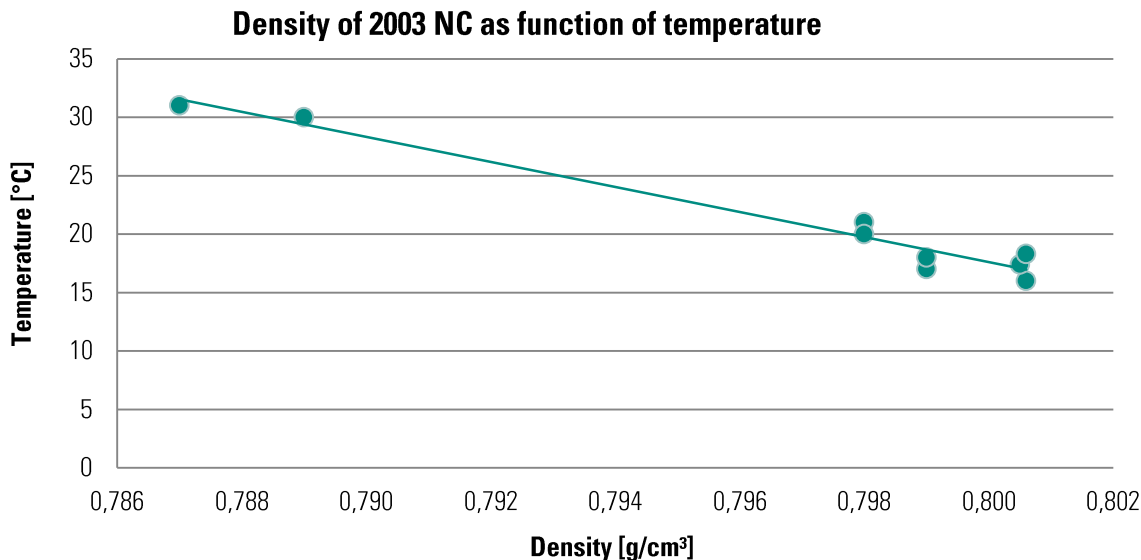
	ELFLUX 2003 NC	Thinner 200
Appearance	Clear liquid	Clear, transparent liquid
Smell	Mild alcoholic	Mild alcoholic
Density [g/cm <sup>3</sup> ] (20 °C)	0.798 ± 0.003	0.785 ± 0.003
Solids content [%] (per IPC-TM-650 2.3.34)	5.2	None
VOC content [%]	> 90, Solvent-based	100, Solvent
Acid number [mg KOH/gFlux]	24.5 ± 1.5	None
Halides [%]	None	None
Flash point [°C]	12	12
Ignition temperature [°C]	399	399
Recommended thinner	Thinner 200	

### Application

ELFLUX 2003 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. Consistently good results are achieved with ELFLUX 2003 NC with conventional lead-bearing solders as well as with lead-free solders, both under air and nitrogen atmosphere. Please respect the recommendations of the equipment maker and the assembly requirements when selecting the appropriate machine parameters. The optimum preheat temperature for many circuit board assemblies is 90 – 115 °C as measured on the top side of the circuit board. Due to the good thermal stability of the activators used for ELFLUX 2003 NC the preheat temperature can be increased by 20 – 30 °C for lead-free process without affecting flux performance.

### Process Control

Monitoring the flux is very important to achieve consistently good soldering results. This can be done by chemical titration. Automatic density control equipment might cause failure due to water absorption of the flux.



### Cleaning

Cleaning of the boards: ELFLUX 2003 NC is a no clean flux. Generally, cleaning is not required.

### General Safety Precautions

ELFLUX 2003 NC should be used according to industrial standards of practice. For safety advice please refer to the material safety data sheet.

### Packing Sizes

ELFLUX 2003 NC and Thinner 200 are available in containers of 10 L or 20 L.

### Storage

ELFLUX 2003 NC is flammable. Store away from sources of ignition. Storage temperature: 5 – 25 °C.

### Shelf Life

Under adequate conditions ELFLUX 2003 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.