

Technical Product Information

ELFLUX 2001V NC / 2001V1 NC / Thinner 201

General Description

ELSOLD fluxes 2001V NC and 2001V1 NC are solvent-based, no clean fluxes for use in wave soldering. ELFLUX 2001V NC and 2001V1 NC have a reduced solid content suitable for lead-free soldering and are classified as ORLO. ELFLUX 2001V NC and 2001V1 NC are low in solids and free from halides and contain a small amount of rosin which makes residues much safer than with other resin free fluxes.

ELFLUX 2001V1 is a slightly higher active version of 2001V for boards more difficult to solder.

Thinner 201 is used as solvent to control the density of ELFLUX 2001V NC and 2001V1 NC.

ELFLUX 2001V NC provides improved wetting and leaves extremely few, non-tacky residues on the printed circuit board. The residues are non-conductive and non-corrosive. Electrical in-circuit testing is possible without any problem. Since the solder joints show only very few residues, cleaning in general is not required. ELFLUX 2001V / 2001V1 NC contain a corrosion inhibitor so that no corrosion occurs on copper surfaces under the influence of humidity.

ELFLUX 2001V NC and even more 2001V1 NC improve the soldering results due to the optimised flux chemistry. The risk of solder bridges and shorts is extremely reduced.

Areas of Use

ELFLUX 2001V NC and 2001V1 NC have been developed especially for the processing of lead-free solders in wave soldering processes. It is equally suitable for all standard printed board surface finishes. The flux can be used for telecom and automotive electronic applications.

Classification

ELFLUX 2001V NC and 2001V1 NC are classified as ORLO per DIN EN 61190-1-1 and per IPC ANSI/J-STD-004.

Technical Specification

	ELFLUX 2001V NC	ELFLUX 2001V1 NC	Thinner 201
Appearance	Clear, nearly transparent liquid	Clear, nearly transparent liquid	Clear, transparent liquid
Smell	Mild alcoholic	Mild alcoholic	Mild alcoholic
Density [g/cm ³] (20 °C)	0.796 ± 0.003	0.798 ± 0.003	0.787 ± 0.003
Solid content [%] (per IPC-TM-650 2.3.34)	3.0	3.4	None
VOC content [%]	> 95, Solvent-based	> 95, Solvent-based	100, Solvent
Acid number [mg KOH/gFlux]	22 ± 2	24 ± 2	< 1
Halides [%]	None	None	None
Flash point [°C]	12	12	12
Ignition temperature [°C]	399	399	399
Recommended thinner	Thinner 201	Thinner 201	

Application

ELFLUX 2001 V NC and 2001 V1 NC can be applied by foaming, spraying or dipping. The flux will provide a uniform head of foam with small air bubbles. The optimum preheat temperature for the lead-free soldering of most circuit board assemblies is 110 – 140 °C as measured on the top side of the circuit board. The activator package used for this flux can tolerate these process temperatures which are clearly higher than in conventional soldering processes without major impact on its performance.

Process Control

No special control is required in case of closed flux control systems. In case of open systems the monitoring and control of the flux during use is very important to assure a consistent and uniform flux distribution on the circuit boards. This can best be done by using chemical titration. Automatic density control equipment is not accurate due to water absorption.

Cleaning

Cleaning of the boards: ELFLUX 2001V / 2001V1 NC are no clean fluxes. Cleaning is not required generally. If cleaning is desired / specified any commercially available cleaning agent for the removal of flux residues can be used.

General Safety Precautions

ELFLUX 2001V / 2001V1 NC should be used according to industrial standards of practice. For safety advice please refer to the material safety data sheet.

Packing Sizes

The fluxes – as well as Thinner 201 - are available in 10 L and 20 L containers.

Storage

ELFLUX 2001V / 2001V1 NC are flammable. Store away from sources of ignition. Observe a temperature range of 5 – 20 °C.

Shelf Life

Under adequate conditions ELFLUX 2001V / 2001V1 NC can be stored in original unopened containers for a maximum 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.