DATA SHEET

E-Qual 381NC Flux

Description

E-Qual 381NC is a no-clean rosin flux designed for wave soldering conventional and surface mount PCB assemblies.

Benefits

- High SIR Value
- Halide Free
- Excellent wetting on protected copper and solder coated surfaces
- Non-corrosive
- Very bright, shiny joints

Application Methods

E-Qual 381NC Flux may be applied by foam, spray or wave methods. Flux deposition, density, and uniformity are critical to successful use of low solids no-clean flux. After foam or wave application, an air knife should be used to remove excess flux from the assembly. Pre-heating the assembly will partially volatize the solvents, enhance oxide removal, and promote optimum wicking and solder joint formation. The optimum pre-heat temperature range is 90°C - 110°C (194°F - 230°F) on the top side of the assembly.

Packaging & Storage

E-Qual 381NC flux is available in 5ltr containers packaged in 20ltr lots. It should be stored in a cool, dry place away from ignition sources.

Physical & Chemical Characteristics

Colour and Appearance	Light Straw Liquid
Solids Content, % (By Wt.)	3.0 – 3.6
Specific Gravity	0.805 ± 0.006
Flash Point	53°F
Surface Insulation Resistance-Ohms	J-STD-004 >1.00 x 10^9
Electromigration	Pass
Acid Number	16.2 – 19.2
Flux Classification per J-STD-004	ROL0
Copper Mirror Test	Pass (No complete breakthrough)
Silver Chromate Test	Chloride and Bromide - Pass (No discolouration)
Spot Test (Flouride)	Pass (No colour change)
Corrosion Test	Pass (No evidence of corrosion
Shelf life (un-opened)	2 years

Process Control

Control of the flux is necessary to ensure a consistent amount of flux is applied to assemblies. Due to the very low solids percentage of no-clean fluxes, specific gravity is not an accurate measure for solids content. Monitoring and controlling acid number is recommended to maintain the proper flux concentration. Titration may be accomplished with the DKL Titration Kit. Control of the flux can be achieved with E-Qual Thinners. Debris and contaminants will accumulate in the flux reservoir. Periodically, the replacement of the flux is required for consistent soldering performance, and to prevent debris build-up on the circuit assemblies. This should be performed every 35-40 hours of operation.