Technical Bulletin

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TSC NR-205 Rework Flux

DESCRIPTION

TSC NR-205 Rework Flux is a halide-free, rosin / resin free, low solids, no-clean flux. Particularly well suited to touch up / rework applications can be supplied in a sealed flux applicator pen or in one litre containers for refilling reusable dispensers. The flux produces a tack-free surface with high surface insulation resistance and very little residue to interfere with electrical testing.

TSC NR-205 fully conforms to the stringent requirements of Bellcore Spec.TRNWT-000078. The flux has been specifically formulated to resist degradation in surface insulation resistance and electro-migration, even in situations where the flux does not fully experience soldering temperatures and when heavy levels of flux may have been accidentally applied. The residues are non-corrosive and will not cause "greening" when in contact with copper or copper-bearing alloys.

TSC NR-205 Flux is particularly well-suited for touch-up / rework when supplied as a sealed flux pen giving precise control in difficult or hard to access areas.

FEATURES AND BENEFITS

- Designed specifically for touch-up / rework applications.
- Excellent solderability.
- Meets Bellcore requirements & other critical SIR tests.
- Non-corrosive residues.
- High Reliability, even when the flux does not experience soldering temperatures
- Will not cause "greening" on exposed copper/copper alloys,
- Supplied in either flux applicator pens or 1 litre containers.

APPLICATION

For application via the flux pen, the nib should be lightly wiped on and around the solder joint to be reworked. Once a suitable amount of flux has been applied the manual soldering operation can be performed.

TECHNICAL DATA

	Specifications
Flux Classification	ORL0
Appearance	Clear, Colourless Liquid
Solids Content (wt/wt)	2.15
Specific Gravity @ 25°C (77°F)	0.797 ± 0.002
Acid Number (mg KOH/g)	16.5 ± 1.0
Copper Mirror	Pass
Corrosion	Pass
Halides	Pass
Bellcore SIR	Pass
Flash Point (T.C.C.)	13°C (56°F)
Shelf Life (from Date of Mfg.)	540 Days
Packaging Size	1L Containers / Flux Pen

CORROSION/ELECTRICAL TESTING

CORROSION TESTING

Test	Requirement	Results
IPC/Bellcore Copper Mirror Test	No complete removal of copper	Passes
Halide-silver chromate paper method	No detection of halide	Passes
IPC-SF-818 10-day Copper Corrosion Test	No evidence of corrosion	Passes as Type "L"

SURFACE INSULATION RESISTANCE (All Values in Ohms)

Method	Conditions	Requirement	Result
IPC-SF-818,	85°C/85% RH	$1.0x10^8$ min.	$5.6x10^9$
Class 3, Not Cleaned	7 Days		

BELLCORE-TR-NWT-000078, Issue 3

Comb Pattern "Up" (uncleaned)	35°C/85% RH (4 days with bias voltage)	1.0×11^{11} min.	1.3×10^{12}
Comb Pattern "Down" (uncleaned)	35°C/85% RH (4 days with bias voltage)	1.0×10^{11} min.	1.9×10^{12}
Control Boards	35°C/85% RH (4 days with bias voltage)	2.0×10^{11} min.	3.3×10^{12}

ELECTROMIGRATION (Per Bellcore TR-NWT-000078, Issue 3, All Values in ohms)

Method	Conditions	SIR (Init.)*	SIR (Final)*	Visual
Comb Pattern "Up"	85°C/85% RH 500 Hrs. / 10 V. bias	1.2×10^9	5.0×10^9	No dendrites or corrosion
Comb Pattern "Down"	85°C/85% RH 500 Hrs. / 10 V bias	5.4×10^9	3.4×10^9	No dendrites or corrosion

* For passing electromigration, SIR (Init.) / SIR (Final) <10

SAFETY

Use with adequate ventilation and proper personal protective equipment. Flammable, keep away from sparks and open flames. Empty containers can still be a flammable hazard from residual vapours. Remove skin splashes by immediate washing with soap and water. Refer to the accompanying Safety Data Sheet for any specific emergency information. Do not dispose of any hazardous materials in non-approved containers.