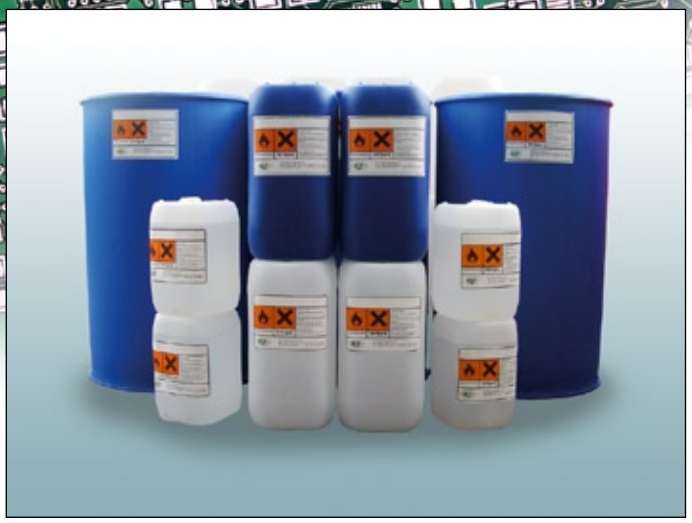
RoHS COMPLIANT

BLT 35-41-22

Low rosin, No Clean, sustained activity flux for Lead Free and Tin Lead

Inhibited to reduce thermal degradation of composite pallets



PHYSICAL PROPERTIES

Colour	● Pale Straw
SG @ 20ºC	● 0.815
Acid value	● 22
Rosin content	● 0.1%
Solids content	● 3.1%
Flash point	● 12ºC
Silver chromate paper test	● Pass
Copper mirror test	● Pass

DESCRIPTION

BLT 35-41-22 incorporates the latest developments in flux activation technology for Lead Free and Tin Lead soldering applications without requiring post-cleaning. BLT 35-41-22 is a halide free, low rosin product and has been formulated to provide rapid wetting, excellent top-side hole fill and minimal solder ball generation. The proprietry organic flux activators and wetters in BLT 35-41-22 are compatible with the higher temperatures required for Lead Free soldering. Formulated to protect composite pallets from thermal degradation.

PROCESS CONTROL

Maintain S.G. at 0.810 by the addition of 16-3000 thinner. Change the flux if the acid value falls below 22.

APPLICATION

BLT 35-41-22 should be applied by spray, foaming or dipping and is supplied ready for use. Following are guidelines for spray applications.

Parameters	Recommendations
Spray nozzle	Medium
Top side pre-heat	90 - 150ºC
Conveyor speed	0.8 - 1.6m/minute
Conveyor angle	7°
Solder contact time	2-3 seconds
Solder bath temperature	Lead Free 260 - 280ºC Tin/Lead 63/37 240 - 250ºC

BENEFITS

- Halide Free
- Foam or Spray application
- Lead Free recommended
- Dual Wave compatible
- J-STD004 ROLO classification
- Excellent wetting and advanced sustained synthetic activity
- Reduction of solder balls caused by porous solder resists
- Wide operating and heat activation window
- Suitable for Ni/Au, Ag, Sn, OSP and HASL boards
- Class 1, 2 and 3 manufacture
- Can be cleaned using semi aqueous solutions
- Twelve months shelf life
- Drastic reduction to pallet damage

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CORROSION AND ELECTRICAL TESTING - SUMMARY

Test	Method	Required	Results
Surface insulation resistance	ANSI-IPC-J-STD004A IPC-TM-650 2.6.3.3	Cleaned and uncleaned >100Mohms	Cleaned and uncleaned >100Mohms See detailed results
Copper mirror	IPC-TM-650 2.3.32	No breakthrough	No breakthrough
Qualitative halide	IPC-TM-650 2.3.33	No discolouration	No discolouration
Corrosion	IPC-TM-650 2.6.15	No corrosion	No corrosion
Electromigration resistance	IPC-TM-650 2.6.14.1	Cleaned and uncleaned <1 decade drop	Uncleaned <1 decade drop See detailed results

CORROSION AND ELECTRICAL TESTING - DETAILED

Surface Insulation Resistance. ANSI-IPC-J-STD004A. IPC-TM-650. 2.6.3.3

	Conditions	Required	24 hours	96 hours	168 hours
Pattern down uncleaned	85ºC/85% RH	1.0×10^{8} min	3.84×10^{11}	1.52×10^{10}	3.96×10^{9}
Pattern up uncleaned	85ºC/85% RH	1.0×10^{8} min	8.42×10^{10}	5.62×10^{10}	1.70×10^{9}
Control board	85ºC/85% RH	2.0×10^{8} min	1.83×10^{12}	3.92×10^{11}	1.74×10^{11}

IPC ELECTROMIGRATION RESISTANCE

Electromigration Test ANSI-IPC-J-STD004A. IPC-TM-650. 2.6.14.1

	Conditions	Required	Initial reading - 96 hrs	Final reading - 596 hrs
Pattern down	65ºC/85% RH 596 hours	Less than 1 decade drop	6.85×10^{10}	4.98×10^{10}
Control	65ºC/85% RH	Less than 1 decade drop	1.01×10^{11}	8.61×10^{10}

All readings are in ohms. No dendriatic growth observed.

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PROBLEM SOLVING

Symptoms	Cause and solution
Bridging	Too high conveyor speed, insufficient flux, excessive pre-heat or solder contamination
White residue	Excessive flux, under cured solder mask, solder contamination
Solder balls	Excessive flux, insufficient pre-heat
Discoloured joints	Contamination from board or components, excessive heat, solder contamination
Incomplete soldering	Uneven flux coverage, solder wave not level or jig problem

HANDLING PRECAUTIONS

BLT 35-41-22 contains Isopropyl Alcohol and Rosin, and is highly flammable.
Use in a well ventilated area and keep away from heat and naked flames. Take precautions to avoid static build up and discharge.
Refer to seperate Health and safety sheet.

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