



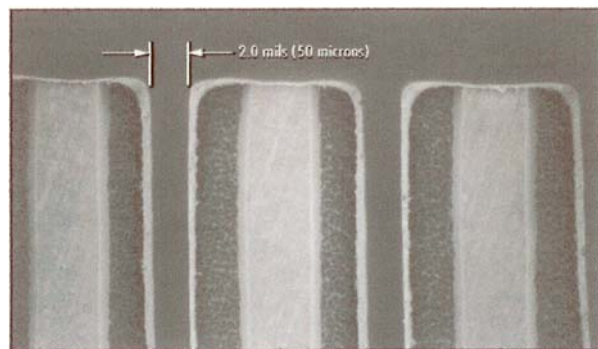
CONFORMASK[®] 2000 Series High Conformance Solder Mask

DESCRIPTION

Conformask[®] 2000 Series is the latest advance in High Conformance Solder Mask (HCSM) technology. It has been specifically formulated to be compatible with the high temperature aqueous defluxing of water soluble solder pastes and wave fluxes. ConforMask[®] 2000 HCSM is supplied in roll form. Rolls are available in as variable of widths and length.

FEATURES

- * Excellent Resolution
- * High Gloss
- * Low odor
- * Fast exposure
- * Scratch Resistance
- * Low Light bleed



Advantages

- Compatible with no clean and aqueous based fluxes and solder pastes
- Wide lamination process latitude
- High gloss, forest green finish
- Scratch resistant, flexible film for greater tented via hole integrity
- Meets or exceeds all the requirements of IPC-SM-840B Class 3 and IPC-SM-840C Class T & H , MIL-P-55110D and Bellcore
- Utilizes epoxy based chemistry for excellent physical, chemical, mechanical and electrical resistance properties

Uses

Conformask 2000 Series is designed for use as a permanent solder mask on rigid printed wiring boards using either epoxy or polyimide laminates and copper or tin/lead circuitry. The excellent physical, chemical and electrical properties of this epoxy based material provide environmental protection for printed wiring boards, both during and after assembly soldering.

Application

Solvent free and 100% solids, Conformask 2000 Series film is applied using conventional yellow room process. Processing techniques include:

- PC board surface preparation
- Vacuum lamination
- Exposure
- Development
- Curing

Conformask 2000 Series has been tested in a variety of assembly soldering operations using water soluble, RMA and no clean solder paste and wave soldering flux chemistries. If required, defluxing should be carried out utilizing either high temperature water wash, low concentration neutralizing aqueous rinse or 1,1,1-trichloroethane based solvents. Eternal does not recommend the use of high concentrations of alkaline saponifying cleaners or methylene chloride for defluxing this material.

CHARACTERISTICS:

Type	Thickness
Conformask 2515	1.5mil
Conformask 2523	2.3mil

Physical Properties-Cured Film		
Property	Value	Test Method
Appearance	Green, semigloss finish	Visual
Flammability Rating (solder at 288 ⁰ C for 20sec)		
1.5/2.3 mil coating thickness; FR-4 62mil laminate	94V-0	Underwriters Laboratories 94 Flame Class Test File #E251137
Pencil Hardness	2H-3H	IPC-SM-840B Method 2.4.27.2 (ASTM D3363-74)
Adhesion		
Non Melting Metals	Pass (Class 3) I	PC-SM-804B Method 2.4.28
Melting Metals	Pass (Class 3) I	PC-SM-804B Method 2.4.28.1
Soldering/Desoldering	Pass	IPC-SM-804B Paragraph 4.8.9.2
Chemical Resistance Properties-Cured Film		
Chemical	Value	Test Method
Isopropanol	Pass	IPC-SM840B
1.1.1-Tricholoroethane	Pass	Paragraph 4.8.6.1 (2min. immersion)
Methyl Ethyl Ketone	Pass	
1.1.1-Tricholoroethane (boiling vapor)	Pass	
96% 1.1.1-Tricholoroethane 4% Ethanol (boiling vapor)	Pass	
TSP at PH13.0	Pass	

2% Loncotergel #449 at 140F(60°C)	Pass	IPC-SM-840B Paragraph 4.8.6.2
Fluxes	Pass	IPC-SM-840B Paragraph 4.8.9.1
Solderability/Resistance to solder	Pass	
Electrical Properties Properties-Cured Film		
Property	Value	Test Method
Dielectric strength	2000V/mil	IPC-SM-840B 4.8.10.1 TM 2.6.3.1
Insulation Resistance	>1x10 ¹² ohms	IPC-SM-840B 4.8.10.2 TM 2.6.3.1
Dielectric constant	3.56	
Dissipation Factor	0.040	
Moisture/Insulation Resistance	>1x10 ⁹ ohms	IPC-SM-840B 4.8.10.3 TM 2.6.3.1
Electromigration	Pass (5x10 ¹¹ ohms)	IPC-SM-840B 4.8.10.4 TM 2.6.14
Resistance Thermal shock	Pass (>100 cycle)	IPC-SM-840B 4.8.11 TM 2.6.7.1

STORAGE:

Store in a cool, dry location; 20°C (70°F) or below is recommended. Conformask[®] is sensitive to sunlight and indirect white light. Cold or yellow fluorescent “safe lights” may be required in the immediate work area.

WARRANTY

The information contained herein is correct to the best of our knowledge. The recommendations or suggestions contained in this bulletin are made without guarantee or representation as to results. We suggest that you evaluated these recommendations and suggestions in your laboratory prior to use. Our responsibility for claims arising from defects in material or workmanship or any other breach of warranty, negligence or otherwise is limited to the purchase price of the material.