PC88

March 2013

Hysol

PRODUCT DESCRIPTION

PC88 provides the following product characteristics:

Technology	Acrylic	
Appearance	Clear liquid	
Cure	Hot air drying	
Product Benefits	Toluene-free	
	 Single component 	
	 Fluorescent under UV light 	
	 Superior toughness and abrasion 	
	resistance	
Operating Temperature -	-40 to 125°C	
Continuous		
Application	Conformal coating	
Dried Film Thickness	25 to 100µm	
Typical Assembly	Printed circuit board coating	
Applications		

PC88 is a one component solvent based Acrylic conformal coating, designed to provide environmental and mechanical protection to printed circuit boards.

Components and joints may be repaired by heating the coating with a soldering iron for easy removal, or the entire coating may be removed with a suitable solvent. When fully dried, the material has superior toughness and abrasion resistance. Even after long environmental exposure, the coating retains its very light color. PC88 one component conformal coating is designed to provide environmental and mechanical protection to printed circuit boards used in automotive, military and other electronic applications.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Solids Content, %	24	
Specific Gravity @ 25°C	0.902	
Viscosity, Brookfield - LV, 25 °C, mPa·s (cP):		
Spindle 1, speed 30 rpm	65	
Shelf Life @ 25°C, days	183	
Flash Point ISO 13736:1997, BS 2000 Part 170:1995, Abel Cup, °C	7.75	

TYPICAL DRYING PERFORMANCE

Recommended Drying Conditions 45 minutes @ 75 °C

Alternative Drying Conditions 24 hours @ 25 °C

Tack Free Time

For a 120 μm wet film, @ 25°C / 35% RH, on glass plate, <10 minutes

Drying of the coating is contingent on solvent evaporation. Drying at temperatures higher than that recommended could cause formulation of bubbles if bulk solvent is not allowed to evaporate before oven placement.

Optimization of the drying schedule is possible to reduce the time listed above. Drying times will depend on film thickness and circuit board design.

For optimum performance, boards should be air dried at least 30 minutes @ 25°C to remove solvents before final oven drying (or before applying additional coats).

Deaeration is not suggested.

The above cure profile is a guideline recommendation. Cure rate and ultimate depth of cure depend on light intensity, spectral distribution of light source, exposure time and the light transmittance of the substrate.

TYPICAL PROPERTIES OF CURED MATERIAL Electrical Properties

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Insulation Resistance , 25	5 to 75 µm film:	
Initial	25°C/50% R.H.	2.8×10 ¹²
Cycle 4	65°C/95% R.H.	9.7×10 ¹⁰
Cycle 7	65°C/95% R.H.	9.9×10 ¹⁰
Cycle 10	65°C/95% R.H.	1.2×10 ¹¹
24hours after Cycle 10	25°C/50% R.H.	2.7×10 ¹²
Dielectric Strength , AST	M D149, volts/mil	1,500
Dielectric Constant / Diss	ipation Factor:	
@ 100Hz:		
@ 25°C		2.56/0.067
@ 60°C		2.87/0.045
@ 90°C		3.01/0.011
@ 110°C		3.21/0.033
@ 10kHz:		
@ 25°C		2.41/0.033
@ 60°C		2.56/0.056
@ 90°C		2.89/0.034
@ 110°C		3.02/0.024
@ 100kHz:		
@ 25°C		2.19/0.018
@ 60°C		2.45/0.063
@ 90°C		2.76/0.056
@ 100°C		2.89/0.016

GENERAL INFORMATION

For safe handling information on this product, consult the Material Safety Data Sheet, (MSDS).



Not for product specifications

The technical data contained herein are intended as reference only. Please contact your local quality department for assistance and recommendations on specifications for this product.

DIRECTIONS FOR USE

- 1. Any tank should be pressurized with dry nitrogen..
- 2. Ideally applied via non-atomised selective film coater.
- 3. Do not use hand gun spray tool as this will lead to clogging of the nozzle.
- 4. Substrate cleanliness is paramount in promoting adhesion and preventing underfilm corrosion of copper conductors.
- 5. Furthermore compatibility with solder paste and flux etc should always be verified.
- 6. Removal of liquid or dried PC88 can be achieved with Xylene or a Ketone (e.g. MEK).

Storage

Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.

Optimal Storage: 25°C. Storage below 5°C or above 30°C can adversely affect product properties.

Once opened, containers should be purged with dry nitrogen.

Material removed from containers may be contaminated during use. Do not return product to the original container. Henkel Corporation cannot assume responsibility for product which has been contaminated or stored under conditions other than those previously indicated. If additional information is required, please contact your local Technical Service Center or Customer Service Representative.

Conversions

 $(^{\circ}C \ge 1.8) + 32 = ^{\circ}F$ kV/mm x 25.4 = V/mil mm / 25.4 = inches N x 0.225 = lb N/mm x 5.71 = lb/in N/mm² x 145 = psi MPa x 145 = psi N·m x 8.851 = lb·in N·m x 0.738 = lb·ft N·mm x 0.142 = oz·in mPa·s = cP

Disclaimer

Note:

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Reference N/A