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SMART CHEMISTRY
WITH CHARACTER.

ACC15

Characterization

ACC15 is a low viscosity, 1-component, condensation curing silicone coating. The uncured product can be applied by pouring or brushing and is readily cured to a tough, transparent rubber. It can be used to coat printed circuit boards to prevent ingress of water and environmental contaminants.

Key Features:

-UL listed file number E493561
-Room temperature cure or mild heat acceleration at 60ºC
-Low viscosity
-100% solids
-Fluorescent UV aid for production QA checks
-Excellent adhesion to many substrates
-Low odour
-RoHS compliant

Technical Data

	ACC15		
Uncured Product	**Tested at 25°C / 55 +/- 5% Humidity**		
Colour	Translucent, pale yellow		
Rheology	Liquid		
Viscosity	1180	mPas	Brookfield
Tack free time	12	min	AMB001
Cure to 1 mm	40	Min	
Cured Elastomer	After 7 days at 25°C / 55 +/- 5% Humidity on a 3 mm thick test sheet		
CTE Volumetric	310	ppm/°C	
CTE Linear	930	ppm/°C	
Hardness Shore A	18		ASTM D 2240-95
Density @ 25°C	1.02	g/ml	ASTM D70
Flash Point	>150	°C	ASTM D93
Pensky Martin (CC) Solids	100	%	
Viscosity	250-350	mPas	Brookfield RVF
Working Temp.	-55 - +200	°C	

	Electrical properties		
Volume resistance	1.88E+15	ohm*cm	ASTM D-257
Surface Resistivity	8.59E+14	ohm	ASTM D-257
Dielectric Strength	18.5	kV/mm	ASTM D-149

Storability / Storage

With a proper storage the product will hold for approx. 12 months if stored properly below 5 - 32°C and protected from frost in a dry place in closed original containers.

The above given values are product describing data. Please consult the 'delivery specification' for binding product specifications. Further data about product properties, toxicological, ecological data as well as data relevant to safety can be found in the safety data sheet.

Application Technique

Application
The bulk product may be poured or brushed onto the circuit. Pouring or brushing will give a film thickness of 100 to 1000 microns. The product contains an UV trace to allow inspection of the board after coating to ensure complete and even coverage. Boards should be thoroughly cleaned before coating for best adhesion / performance. Coating over no clean fluxes is possible so long as other surface contaminants are not present.

Cleaning
The boards should be thoroughly cleaned before coating. This is required to ensure that satisfactory adhesion to the substrate is possible. Some flux residues must be removed, as they become corrosive if left on the PCB. ACC manufacture a range of 100% Ozone Friendly cleaning products - both solvent and water based. All clean to military standards (please contact ACC for further information).

Dip coating
This is not recommended for large scale production, small baths of < 5 litres are suitable but the ACC15 must not be exposed to the atmosphere for > 10 minutes during any coating campaign and must be returned to the original container and sealed. Please note that continual use of ACC15 by this method will reduce the life of the product and may result in poor coating quality.

Brushing
Ensure the coating has been shaken thoroughly. The coating should be used at room temperature (above 16C) using a good quality brush apply the product gently such as to achieve a good coating and not to disturb wiring. The board should be left to cure at 16 to 60°C with a relative humidity of >40%.

Spraying
Dispensing platforms include:

Nordson SL940
Applicator SC300 monofilament spray, 0.71mm low cavity. 50 to 90 mm/second and 40 psi pressure.

Without dilution a coating thickness of 400 – 500 microns can be achieved which is touch dry in 12 minutes at 25°C and 55% humidity.
Using applicator SC300 swirl coat, 0.61mm low cavity. 80 – 120 mm/second and 25 psi.
At the maximum recommended dilution ratio of:
50 parts ACC15
50 parts ACC34 or ACC34UV
a coating thickness of 150 - 200 microns can be achieved which is touch dry in 16 minutes at 25°C and 55% humidity.

PVA Delta 6:
Applicator FCS300 ES

Without dilution a coating thickness of 400 - 500 microns can be achieved which is touch dry in 12 minutes at 25°C and 55% humidity.
At the maximum recommended dilution ratio of:
50 parts ACC15
50 parts ACC34 or ACC34UV
a coating thickness of 150 - 200 microns can be achieved which is touch dry in 16 minutes at 25°C and 55% humidity.

Drying time / curing conditions

For brushing and manual spraying the film will be touch dry after 12 minutes at 23°C / 60% humidity). The full properties of the coating will be obtained after 24 hours at room temperature –curing can be accelerated by using an oven at 60°C.

Double coating

Whilst this should not be normally required, a second coating may be applied after the first coating is cured to ensure the two coats bond together.

It is absolutely important to check the compatibility in preliminary tests if unknown substrates are used.

Safety

Please observe our EC safety data sheets and the safety remarks on our container labels when handling our products. The dangerous goods regulations and the accident prevention regulations of the professional associations must be particularly observed. Keep the EC safety data sheet of the applied product at hand since it provides you with useful instructions for the safe use and disposal of the product as well as for actions to be taken in case of accidents.

We reserve the right to modify the product and technical leaflet.

Our department for applied technique is always at your service for further information and advice.

Our technical advice and recommendations given verbally, in writing or by trials are believed to be correct. They are neither binding with regard to possible rights of third parties nor do they exempt you from your task of examining the suitability of our products for the intended use. We cannot accept any responsibility for application and processing methods which are beyond our control.

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