

## ACC15 Silicone Conformal Coating

### Introduction

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

- UL94 V-1 certified, file number E493561
- Room temperature cure or mild heat acceleration at 60°C/140°F
- Low viscosity
- 100% solids
- Fluorescent UV aid for production QA checks
- Excellent adhesion to many substrates
- Low odour
- RoHS compliant

### Use and Cure Information

#### IMPORTANT:

The product should be thoroughly mixed before use.

It is recommended that tins should be shaken for at least 2 minutes, drums should be rolled for 1-2 hours. It is recommended that the product be allowed to stand for at least 8 hours after mixing, so that any air bubbles introduced during the process have the chance to dissipate.

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 a UV tracer to allow inspection of the board after coating to ensure complete and even coverage.

Boards should be thoroughly cleaned before coating for best adhesion and performance. Coating over non cleaned fluxes is possible as 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.

### Dip Coating

This is not recommended for large scale production. Small baths of < 5 litres are suitable but the ACC15 must not be exposed

### Property

#### Uncured Product

Property	Test Method	Value
Rheology		Liquid
Color		Pale yellow
Viscosity	Brookfield	1180 mPa.s
Tack Free Time	AMB 001	12 min
Cure to 1mm		40 min

#### Cured Product

*(after 7 days cure at 23°C +/- 2°C and 50 +/- 5% humidity on a 3mm thick test sheet)*

Property	Test Method	Value
Durometer Shore A	ASTM D 2240-95	18
Density	ASTM D70	1.02
Flash Point (Pensky Martin Closed Cup)	ASTM D93	>150°C/302°F
Solids Content		100 %
Maximum Working Temp		200°C/392°F
Minimum Working Temp		-55°C/-67°F

#### Storage

Maximum Storage Temperature	32°C/90°F
Minimum Storage Temperature	5°C/41°F
Shelf Life	12 months

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The CHT technical service department is available to offer further information and advice and should it be needed to look at modifying current products or custom formulate a new one to meet your specific requirements. Please contact the technical service department.

## Brushing

Ensure that the coating has been shaken thoroughly. The coating should be used at room temperature (above 16°C/61°F). Using a good quality brush, apply the product gently, so as to achieve a good coating and not to disturb wiring. The board should be left to cure at 16°C to 60°C (61°F to 140°F) with a relative humidity of > 40%.

## Spraying

Dispense platforms include:

Nordson SL940

Applicator SC300 monofilament spray, 0.71 mm 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% relative humidity.

Using applicator SC300 swirl coat, 0.61mm low cavity.80 – 120 mm/second and 25 psi pressure. At the maximum recommended dilution ratio of 50 parts ACC15 to 50 parts ACC34 or ACC34UV, a coating thickness can be achieved which is touch dry in 16 minutes at 25°C and 55% relative humidity.

PVA Delta 6

Applicator FCS300 ES

Without dilution, a coating thickness of 150 – 200 microns can be achieved which is touch dry in 12 minutes at 25°C and 55% relative humidity.

At the maximum recommended dilution ratio of 50 parts ACC15 to 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% relative humidity.

## Curing Times / Conditions

For brushing and manual spraying, the film will be touch dry after 12 minutes at 23°C and 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/140°F.

## Double Coating

Whilst this should not normally be required, a second coating may be applied after the first coating. The two coats will bond together.

## Storage & Shelf Life

When stored in original closed containers at 5°C to 32 °C, the shelf life is expected to be 12 months.

## Health & Safety

Safety data sheets are available on request.

## Packaging

ACC15 is available in a variety of packaging. Please contact our sales department for more information.

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