ELANTAS
Electrical Insulation

EN

Technical Data Sheet

# Bectron®

# SC 75V1-16

## Electronic Silicone Conformal Coating


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## Area of application

Coating of electronics such as PCB's used in transportation, hybrids, SMD devices and other discrete components.

## Processing methods

Bectron® SC 75V1-16 can be applied by brushing or spraying. The recommended viscosity for spraying it about 800 mPas at 25°C (DIN 58001).
For application, temperature could be increased up to 40°C to obtain the recommended viscosity. A single coating ensures good dielectric insulation and complete protection against humidity.
In order to achieve satisfactory wetting and fault-free adhesion of the conformal coating it is important to ensure compatibility with the soldering paste and flux.
Curing:

| | |
|---|---|
| at 90°C: | 30-40 minutes |
| at 100°C: | 15-20 minutes |
| at 110°C: | 7-10 minute |

Exact Timing depends on oven design and ventilation

## Description

Bectron® SC 75V1-16 is a transparent silicone conformal coating. Bectron® SC 75V1-16 meets the latest requirements of the electronic industry with low pin corrosion, excellent edge coverage and fast curing at low temperature. It provides superior dielectric properties and moisture protection under environmental stress.

Key Properties:

- Rapid cure at 90°C or more
- High volume resistivity including high humidity conditions
- Good dielectric properties
- Resistant to moisture and dust contamination
- Withstands weak acids & alkalis
- Good adhesion under thermal cycling
- Temperature resistance up to 200°C
- Possible inspection of the coated area by UV light
- Good edge coverage due to thixotropic behavior
- Minimum curing temperature 70°C
- Maximum thickness approx. 200 µ

## Storage and stability

Product should be stored in its original sealed container to avoid any potential contamination at a temperature below 35°C. Store accordingly to any specific instruction listed on the product label. Product should be used prior to the expiring date marked on the label.

## Handling precautions

The product is RoHS compliant. Refer to the safety data sheet and comply with local regulations relating to industrial health and waste disposal.

## SYSTEM SPECIFICATIONS

| Property | Conditions | Method | Value | Units |
|---|---|---|---|---|
| Viscosity | 25°C | V18 | 400 ÷ 800 | mPas |

## TYPICAL PRODUCT CHARACTERISTICS

| Property | Value |
|---|---|
| Colour | Transparent |
| Spec. gravity 20°C [g/cm$^3$] | 0.98 |
| Shelf Life | 6 months |

## TYPICAL MECHANICAL PROPERTIES OF THE CURED PRODUCT

| Test | | Value |
|---|---|---|
| Mandrel Bend Test | | 180 |
| Cross Cut Test | | GT 0-1 |
| Water absorption, [mg] | 23° C, 24 hours | 1.5 |

## TYPICAL DIELECTRIC PROPERTIES OF THE CURED PRODUCT

| Test | | | | Value |
|---|---|---|---|---|
| Dielectric Constant 50 Hz, 1000Hz, 10000Hz | | | 23°C | 2.9 |
| Dielectric Dissipation Factor 10 KHz | | | 23°C | 0.001 |
| Volume Resistivity [Ω • cm] | | | 23°C | 3 x $10^{15}$ |
| [Ω • cm] | 23°C | After 7 days in water immersion | | 5 x $10^{15}$ |
| Dielectric Strength [KV/mm] | | | 23°C | 49 |
| [KV/mm] | 23°C | After 7 days in water immersion | | 49 |