ELANTAS
Electrical Insulation

EN

Provisionary Technical Data Sheet

Bectron®

SC 76V1-20

Electronic Silicone Thin Film 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

The coating varnish Bectron® SC 76V1-20 can be applied by brushing or spraying. A single coating ensures good dielectric insulation and complete protection against humidity.
In order to achieve satisfactory wetting and fault-free adhesion of the coating varnish it is important to ensure compatibility with the solder resist, paste and flux.

Description

Bectron® SC 76V1-20 is a transparent conformal coating based on silicone chemistry. The product Bectron® SC 76V1-20 meets the latest requirements of electronics, low pin corrosion, excellent edge coverage and fast curing at room temperature. The varnish provides superior performance in dielectric properties and moisture protection under environmental stress.

Bectron® SC 76V1-20 is lead free and satisfies the requirements of the ROHS Directive.

Key Properties:

- Outstanding thermo-shock resistance
- Outstanding surface insulation resistance
- Rapid curing at room temperature
- High volume resistivity including also in high moisture 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
- Contains UV trace pigment for inspection

Curing

Skin formation at room temperature and 50% humidity is in about 15 min. Full bond strength and physical properties will be achieved in 3-5 days. Full cure time depends on the thickness of coating applied and shape of the surface exposed to the atmosphere.

Re-work

Should an exchange of components in the assembled printed circuits boards be necessary, the coating can be removed by mechanical methods.
Isopropanol can be used for cleaning and filling parking cup for robot systems.

Storage and stability

Products 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. Products should be used prior to the expiring date marked on the label.

Handling precautions

The system 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	900 ÷ 1300	mPas

TYPICAL PRODUCT CHARACTERISTICS

Property		Value
Colour		Transparent
Spec. gravity [g/cm^3]		0,99
Tack Free Time [min]		12*
Cure Time [hours]	3mm thickness	24*
Shelf Life [months]		12

* measured at 23°C and 55% relative humidity.

TYPICAL MECHANICAL PROPERTIES OF THE CURED PRODUCT

Test		Value
Mandrel Bend Test [°]	3mm, 0.2mm film	180
Hardness [ShA]		20
Water absorption [mg]	23°C, 7 days	3,9

TYPICAL THERMAL PROPERTIES OF THE CURED PRODUCT

Test	Value
UL 94 Classification (internal test)	V0

TYPICAL DIELECTRIC PROPERTIES OF THE CURED PRODUCT

Test (20°C)	Typical Value
Dielectric Constant 50 Hz, 1000Hz, 10000Hz	2.8
Volume Resistivity [Ω • cm]	4,5 x 10^{13}
Dielectric Strength [KV/mm]	52
Tracking resistance [CTI]	600 M

Our advice given verbally or in writing is based on the present state of our technical knowledge, but is intended as information given without obligation, also with respect to any protective rights held by third parties. It does not relieve your own responsibility to check the products for their suitability to the purposes and processes intended and in accordance with the technical sheets of the products. The application usage and processing of the product are beyond our control and will completely fall into the scope of responsibility of buyers and users. Should there nevertheless be a case of liability from our side, this will be limited to any damage equivalent to the value of the merchandise delivered by us. Naturally, we assume responsibility for the unobjectionable quality of our products, as defined in our general terms and condition.