ELANTAS

Distributeur : JBG-METAFIX

EN

Preliminary Technical Data Sheet

Bectron®
SC 76V1-21

Electronic Silicone - Condensation cure
Thin Film Coating

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Description

Bectron® SC 76V1-21 is a transparent conformal coating based on silicone chemistry. The product Bectron® SC 76V1-21 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 76V1-21 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
- Contains UV trace pigment for inspection
- good edge coverage on vertical areas

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.

Areas of application

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

Processing methods

This coating varnish 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.

Curing/Post-curing

Skin formation at room temperature and 50% humidity is in about 30 min. Full bond Strength and physical properties will be achieved in 3-5 days. Full cure time depends on the tickness of coating applied and shape of the surface exposed to the atmosphere.

Storage and stability

Product should be stored in its original sealed container to avoid any potential contamination at a temperature between 5°C to 30 °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

Refer to the safety data sheet and comply with regulations relating to industrial health and waste disposal.

Sales specifications

Properties	Conditions	Test Method	Value	M/U
Viscosity	500 1/s @ 23 °C	DIN 53019 (Internal Test V18/b/c)	600 ÷ 1500	mPa·s

Typical product characteristics

Properties	Conditions	Test Method	Value	M/U
Colour		--	Transparent	
Specific Gravity	23 °C	DIN 53217	1.0	g/ml
Cure Time	3 mm - 23 °C - 55 r.H. %	--	36	hrs
Tack Free Time	23 °C - 55 %	Internal Test H22	25	min
Viscosity	1 1/s @ 23s °C	DIN 53019 (Internal Test V18/b/c)	< 5000	mPa·s
Shelf life	5°C to 30°C	Internal Test	12	months

Typical mechanical properties of the cured product

Properties	Conditions	Test Method	Value	M/U
Hardness	-- - 23 °C	DIN 53505	20	Shore A/1
Mandrel Bend Test	film thickness 0.2 mm - Mandrel 3 mm	IEC 60464-2 (Internal Test M4)	180	°

Typical dielectric properties of the cured product

Properties	Conditions	Test Method	Value	M/U
Volume resistivity	23 °C	IEC 60464 -2 (Internal Test M5)	5×10^{13}	Ω·cm
Dielectric Strength	23 °C	IEC 60464-2 (Internal Test M6)	52	kV/mm
Dielectric constant at 10.000 Hz	23 °C	IEC 60250 (Internal Test M03b)	2.8	
Dielectric dissipation at 10.000 Hz	23 °C	IEC 60250 (Internal Test M03b)	<0.01	