

**EN Technical Data Sheet**

**Bectron®**

**SG 75V1-15 / SG 79V1-15**

**1:1**

**Electronic Silicone Gel**

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## Area of application

Bectron® SG 75V1-15 cross-linked with Bectron® SG 79V1-15 is specifically designed for protection of electronic components against mechanical stress and vibration.

Thanks to its high thermal resistance and a low ions content Bectron® SG 75V1-15 system is particularly suited for potting semiconductors in power modules.

## Processing methods

**Pre-treatment:** parts and components to be potted should be clean, dry and free from grease. Compatibility between Bectron® SG 75V1-15 system and all materials to be in contact with should be checked prior to use.

All vessels, pipes and equipment used must be thoroughly cleaned because the Pt catalyst of this system may be easily poisoned by traces of sulphur compounds, amines or tin salts. This would seriously inhibit the cross-linking reaction.

**Mixing:** Bectron® SG 75V1-15 and cross-linker Bectron® SG 79V1-15 should be mixed at the ratio specified and stirred thoroughly immediately prior to processing. During stirring some air may be introduced in the system. Evacuation under vacuum may be needed to obtain a bubble free gel.

To obtain a softer and tacky gel a mixing ratio of 1.5 : 1 up to 2:1 can be used.

**Application:** Working time is about 1 hours; viscosity will start to build up after mixing. It is recommended to prepare only the quantity of product that can be applied in this timeframe.

Cure will be completed at room temperature in about 24 hours.

Recommended curing conditions:

- 12 hours at Room Temperature
- 30 minutes at 100°C
- 10 minutes at 150°C

For applications where dimensional precision is important it is recommended to cure at room temperature.

## Description

Bectron® SG 75V1-15 when mixed with Bectron® SG 79V1-15 will cure at room temperature to form a transparent gel in about 24 hours.

Elasticity and dielectric properties of the final gel remain largely stable in a wide range of temperatures, between -45°C and +200°C.

A 1:1 mixing ratio allows easy and safe processing of the system.

When required, by changing the mixing ratio, a soft and tacky (self-healing) gel can be obtained.

Key Properties:

- Addition cure system
- Curing at room temperature
- Cure can be accelerated with heat
- Long term thermal resistance
- Transparency and Elasticity
- Low Hardness and self repair

## 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	Bectron® SG 75V1-15	Bectron® SG 79V1-15	Units
Viscosity	25°C	V 18	2700 ÷ 3700	2300 ÷ 3300	mPas
Specific Gravity	20°C	H 18	0.94 ÷ 1.00	0.94 ÷ 1.00	g/ml

## TYPICAL PRODUCTS CHARACTERISTICS

Property	Bectron® SG 75V1-15	Bectron® SG 79V1-15
Colour	Transparent	Transparent
Spec. gravity 20°C [g/cm <sup>3</sup> ]	0.97	0.97
Shelf Life	12 months	12 months

## TYPICAL MIXTURE CHARACTERISTICS

Mixing Ratio (parts by weight)	1:1
Viscosity of mixture @ 25°C [mPas]	3000
Working Time at Room Temperature [min]	60

## TYPICAL THERMAL PROPERTIES OF THE CURED PRODUCT

Test	Value
Thermal Conductivity [W/m*K]	0.20
UL 94 classification (internal only)	V0

## TYPICAL MECHANICAL PROPERTIES OF THE CURED PRODUCT

Test	Value
Specific Gravity @ 20°C [g/cm <sup>3</sup> ]	0.98
Penetration [mm/10]	15
Water Absorption [mg] 23°C for 24h at RT	10

## TYPICAL DIELECTRIC PROPERTIES OF THE CURED PRODUCT

Test	Value
Dielectric Strength [KV/mm]	15
Dielectric Constant 50 Hz, 1000 Hz, 10000Hz at 20 °C	3.3
Volume Resistivity [Ω·cm]	4.2*10 <sup>14</sup>

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