

Product Information

Casting Compound

Elan-tron[®]

SK 6517 / SH 6990 100:10

Addition curing silicone, flexible, good flow properties,
high tear resistance, operation temperature from -50 °C to 200 °C

Product Description

Elan-tron® SK 6517 with Cross-Linker Elan-tron® SH 6990 produces an elastic casting compound with excellent tear strength. The cross-linking is by an addition mechanism.

The system meets the ROHS requirements.

Areas of Application

Elan-tron® SK 6517 is suitable for casting as a mould for the "negative form" of the original die which can later be filled. Examples of filling materials are plastics, such as polyurethane, gypsum, low melting metal alloy or cement. The low surface energy of Elan-tron® SK 6517 gives very accurate copies of the original despite the relatively high viscosity.

Properties of the Insulating Material

- Addition cross-linking
- Room temperature curing
- High long-term thermal resistance (200 °C)
- Low temperature flexibility to - 50 °C
- Elastic casting material
- High mechanical stability
- Good temperature cycling resistance
- Self-extinguishing to UL 94 Class V0

Processing Methods

Preparation of components: The components to be potted should be clean dry and free from grease.

Preparation of Material: Elan-tron® SK 6517 contains filler materials which tend to settle and must be stirred in the original containers to restore the homogenous composition before processing.

Mixing: Elan-tron® SK 6517 and Vernetzer Elan-tron® SH 6990 should be mixed in the prescribed ratio. Care should be taken because air may be included during mixing. Brief application of vacuum can be used to remove air bubbles. Equipment must be kept clean and care is needed to avoid cross-contamination of components, which may cause hardening in the equipment after days or weeks of use.

Application: Elan-tron® SK 6517/Vernetzer Elan-tron® SH 6990 is best suited for manual processing.

Curing conditions:

- at Room Temperature 24 h
- at 80°C 30 min

All vessels pipes, stirrers and equipment used must be thoroughly cleaned because the catalyst in the SK 6517 may be poisoned by traces of sulphur compounds (from vulcanising rubber), amines (from epoxies or adhesives) or heavy metals. Contamination would seriously inhibit the cross-linking reaction.

Storage: Elan-tron® SK 6517 and Cross-linker Elan-tron® SH 6990 in original unopened containers can be stored for 6 months. The shelf of the material is shown on the label of the container

System Specifications

Property	Condition	Resin	Hardener	Units
Viscosity DIN 53019	25°C	40000 ± 5000	100 ± 25	mPa.s
Density DIN EN ISO 2811-2	20°C	1.14 ± 0.05	0.96 ± 0.03	g/cm ³
Shelf Life	23°C	6	6	months

Typical System Characteristics

Property	Condition	Value	Units
Color resin		dark grey	
Color hardener		clear transparent	
Viscosity IO-10-50 resin	25°C	-/-	mPa.s (0,17/1,7 sec ⁻¹)
Viscosity IO-10-50 hardener	25°C	-/-	mPa.s (0,17/1,7 sec ⁻¹)
Mix Ratio by weight (resin : hardener)		100:10	Parts by weight
Mix Viscosity DIN 53019	25°C	22000 ± 5000	mPa.s
Process time (200gr mixture)	20°C	ca. 70	min

Typical Cured System Characteristic (Post cure before measurement 24h/23°C + 16h/80°C)

Property	Condition	Value	Units
Specific Gravity DIN 16945	20 °C	1.12 ± 0.05	g/cm ³
Hardness ISO 868		45 ± 5	Shore A
Tensile Strength DIN 53455/457		> 4.5	MPa
Bending Strength		-	MPa
Tear strength according to Graves DIN 53515		> 10.0	N/mm
Elongation at break		> 300	%
Volume resistivity IEC 60455 Part 2	23°C 23°C (7d storage in water)	5 x 10 ¹⁴ -	Ω.cm Ω.cm
Dielectric Constant ϵ_r IEC 60250	23°C / 50 Hz 23°C / 1K Hz	< 3.2 -	
Dielectric Strength IEC 60250	23°C (50% rh) 23°C (7d storage in water)	20 -	kV/mm kV/mm
Dissipation factor tan- δ IEC 60250	50Hz, 23°C, 50% rh 1 KHz 23°C, 50% rh 1MHz, 23°C, 50% rh	< 0.02 - < 0.02	
Dissipation factor tan- δ IEC 60250 7 days storage in water	50Hz, 23°C, 50% rh 1 KHz 23°C, 50% rh 1MHz, 23°C, 50% rh	- - -	
Tracking resistance IEC 60112		600	CTI
Water absorption ISO 62	24h RT	-	%

Sales office North :

ELANTAS UK Ltd
Keate House
1 Scholar Green Road
Cobra Court
Manchester M32 0TR
United Kingdom
Tel +44 161 848 8411
Fax +44 161 848 0966
sales.elantas.uk@altana.com
www.elantas.com

Sales office Central :

ELANTAS Beck GmbH
Grossmannstr. 105
20539 Hamburg
Germany
Tel +49 40 78946 0
Fax +49 40 78946 349
info.elantas.beck@altana.com
www.elantas.com

Sales office South :

ELANTAS Camattini S.p.A.
Strada Antolini n°1 loc. Lemignano
43044 Collecchio (PR)
Italy
Tel +39 0521 304711
Fax +39 0521 804410
info.elantas.camattini@altana.com
www.elantas.com

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Producer: ELANTAS Beck GmbH, Großmannstraße 105, D-20539 Hamburg

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