Industry

SikaForce®-7311 L45 GR

Semi-flexible potting compound

Technical Product Data

Properties		Component A SikaForce®-7311 L45 GR	Component B SikaForce®-7020
Chemical base		Polyols	Isocyanate derivatives
Color (CQP[1] 001-1)		Dark grey	Brown
Color mixed		Dark grey	
Cure mechanism		Poly addition	
Density (CQP 006-4)		1.2 g/cm³ approx.	1.2 g/cm³ approx.
Density mixed (calculated)		1.2 g/cm³ approx.	
Solids content		100%	100%
Mixing ratio	by volume	100 : 26	
	by weight	100 : 25	
Viscosity[2] (CQP 538-2, ISO 2555)	Brookfield - RVT 4/20	2'800 mPa·s approx.	
	Brookfield - RVT 2/20		90 mPa·s approx.
Viscosity (mixed)	Brookfield - RVT 4/20	1'500 mPa·s approx.	
Application temperature		15 - 30°C (60 - 85°F)	
Application time[2] (CQP 536-3)		20 minutes approx.	
Pot-life[2] (CQP 536-3)		45 minutes approx.	
Shore D hardness[2] (CQP 537-2, ISO 868)		45 D approx.	
Thermal conductivity (DIN 51908) 23ºC		0.31 W/(m·K)	
Electrical strength of insulating material (DIN 60243-1)		33.4 kV/mm	
Volume resistivity (DIN 60093)		909 Teraohm	
Surface resistivity (DIN 60093)		4.2 Teraohm	
Tracking & erosion resistance (DIN 60587)		Class 1 A 0 / 1 B 0	
Dissipation factor (DIN 53483) 50 Hz / 1 kHz / 1 MHz		265/ 111 / 23.9	
Dielectric constant (DIN 53483) 100 Hz / 1 kHz / 50 KHz		3.68 / 3.21 / 2.84 εr	
Linear coefficient of thermal expansion (DIN 53752) 20ºC		168.5 µm/m·K	
Water absorption (DIN 53495) (after 30 days, 20ºC)		0.94% weight	
Shelf life	1000 l container	6 months	9 months
(storage between 10 and 30°C)	smaller packaging	12 months	

[1] CQP = Corporate Quality Procedure [2] 23°C (73°F) / 50% r.h.

Description

SikaForce®-7311 L45 GR is the base part of a two component polyurethane potting compound used with Sika-Force®-7020 hardener.
SikaForce®-7311 L45 GR is manufactured in accordance with ISO 9001 / 14001 quality assurance systems and the responsible care program.

Product Benefits

- Semi-flexible
- Low viscosity
- Medium application time
- High dielectric strength
- Does not contain chemical substances included in the RoHS directive 2002/95/EC

Areas of Application

SikaForce®-7311 L45 GR is used for encapsulation of electric and electronic components with high requirements as to dielectric strength and flow properties.
This product is suitable for professional experienced users only. Tests with actual substrates and conditions have to be performed to ensure adhesion and material compatibility.

Cure Mechanism

The curing of SikaForce®-7311 L45 GR takes place by a chemical reaction of the two components.
Higher temperatures speed up and lower temperatures slow down the curing process.

Chemical Resistance

In case of chemical or thermal exposure, conduct a project related testing.
Consult the Technical Department of Sika Industry for advice.

Method of Application

Mixing
Stir the base part thoroughly before use. Add hardener according to the indicated mixing ratio and mix manually until a homogeneous colour is obtained. Avoid entrapment of air during mixing. The mixed compound has to be used before expiry of the application time.
Best mixing and dosage take place mechanically with two component mixing equipment

Items

The items to be embedded must be clean, dry and need to have a temperature of minimum 20°C to avoid condensation. It is mandatory to tests new materials to ensure adequate adhesion.

Dosage

To avoid formation of air bubbles, always feed the compound from the lowest part of the item.

Curing
Final curing takes place after approx. 14 days at 23°C. Higher temperatures reduce the curing time.

Removal
Uncured SikaForce®-7311 L45 GR may be removed from tools and equipment with SikaForce®-7260 Cleaner. Once cured, the material can only be removed mechanically. Hands and exposed skin should be washed immediately using Sika® Handclean towels or a suitable industrial hand cleaner and water. Do not use solvents!

Storage Conditions

SikaForce®-7311 L45 GR has to be kept between 10°C and 30°C in a dry place. Do not expose it to direct sunlight or frost. After opening of the packaging, the content has to be protected against humidity. Minimum temperature during transportation is -20°C for maximum 7 days.

Further Information

Copies of the following publications are available on request:
- Safety Data Sheets

Value Bases

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

Health and Safety Information

For information and advice regarding transportation, handling, storage and disposal of chemical products, users shall refer to the actual Safety Data Sheets containing physical, ecological, toxicological and other safety-related data.

Legal Notes

Further information available at:
www.sika.co.uk
www.sika.com

Sika Limited
Business Unit Industry
Watchmead, Welwyn Garden City
Herts, AL7 1BQ
United Kingdom
Tel. +44 (0)1707 394444