

BEGR 1100 series Thermal conductivity

The Solutions that Create Value!

Suitable for thermal conductive coating of various components

Product features:

BEGR1100 series thermal conductive silicon grease is used in electronic devices for thermal conductivity materials, with excellent thermal conductivity. The viscosity of the product is low, which can make the surface of the electronic components to be cooled in close contact with the radiator, reduce the thermal resistance, can quickly and effectively reduce the temperature of the electronic components, so as to extend the service life of electronic components and improve its reliability. The 1100 series heat conducting silicone grease is not cross-linked, so it is easy to operate if the radiator is changed or replaced during the electronic assembly process.

In addition to the series of products with high thermal conductivity, also do not produce stress when using, high stability under - 50 to + 250 °C, and has excellent weather resistance, radiation resistance and excellent dielectric properties.

This series of products are widely used in LED, microprocessor, memory module, cache memory, sealed integrated chip, DC/DC converter, IGBTs and other power module, power semiconductor, solid state relay and bridge rectifier and other fields.

- Thermal conductivity: 1.2-3.5 W/m.K
- Low settling, room temperature storage
- Excellent resistance to high and low temperature, excellent weather and radiation resistance
- Excellent dielectric properties
- Excellent chemical and mechanical stability

Application :

- Power module
- Integrated chip
- Power supply module
- Automotive electronics
- The telecommunications equipment
- Com
- puter and its accessories

Typical performance

Item	Test Methods	BEGR 1112	BEGR 1115	BEGR 1125	BEGR 1135
Base material	ASTM D374	silicone	silicone	silicone	silicone
Appearance	Visual	White liquid	White liquid	White liquid	White liquid
Viscosity mPa.s	G B/T2794-2013	120,000	80,000	150,000	250,000
Thermal conductivity (W/m·K)	ASTM D5470	1.2	1.5	2.5	3.5
Density (g/ cm ³)	ASTM D792	2.1	2.3	2.8	3.0
Volatile (%)		<1	<1	<1	<1
Oil from (%)		<2	<2	<2	<2
Dielectric constant (MHz)	ASTM D150	3.4	3.4	4.4	4.0
Volume resistance(Ω·cm)	ASTM D257	≥2x10 ¹⁴	≥2x10 ¹⁴	≥2x10 ¹³	≥2x10 ¹²
Long-term use temperature range, °C		-60 to +250°C	-60 to +250°C	-60 to +250°C	-60 to +250°C

HOW TO USE

- BEGR 1100 series can be applied by hand, specially designed automated equipment, brushing or wiping. Certain designs of grease guns may seize up with silicone compounds; test prior to use. A thinner consistency can be achieved by dispersing in solvents such as xylene, mineral spirits and methyl ethyl ketone.
- BEGR 1100 series can then be applied by brushing, dipping or spraying. BEGR 1100 series should not be applied to any surface which will be painted or finished.
- Such coatings may not adhere to the silicone-treated surface. If contaminated by a silicone coating, parts can be wiped or washed with solvent, washed with detergent, or immersed in an alcoholic potassium hydroxide solution and then rinsed in clear water before painting.

Dispensing

- Separation and compaction can occur with some high pressure dispensing equipment. This should be considered when designing dispensing systems for use with BEGR 1100 series.
- For information on appropriate dispensing equipment for your application, please contact BEGINOR CHEMICAL.

Solubility

- BEGR 1100 series is insoluble in water, methanol, ethanol or mineral oil and is soluble in mineral spirit and methyl ethyl ketone. The suitability of a particular solvent should be based on testing prior to use. Flammability and toxicological properties should be important considerations in the choice of solvent.
- Dimethyl silicone compounds should not be applied to O rings or other components made of silicone rubber because they will destroy the silicone rubber.
- These compounds will also slightly swell natural butyl rubbers.

Chemical resistance

- BEGR 1100 series is not greatly affected by mineral oils, vegetable oils or air. It is generally resistant to dilute acids and alkalines, and to most aqueous solutions.
- As each application may vary in chemical composition, pressure, flow velocity, relubrication requirements and equipment design, it is recommended that BEGR 1100 series be tested before adopting for regular use.
- BEGR 1100 series is not intended to be used with liquid oxygen and should not be used in applications requiring LOX compatibility without thorough testing for the specific application.

HANDLING PRECAUTIONS

When using solvents avoid heat, sparks and open flame. Always provide adequate ventilation. Obtain and follow handling precautions from the solvent supplier.

USABLE LIFE AND STORAGE

When stored in the original unopened containers this product has a usable life of 24 months from the date of production.

Packaging

Product name	BEGR 1112	BEGR 1115	BEGR 1120	BEGR 1125	BEGR 1135
Packing	300ML/PCS; 1kg/barrel;10kg/barrel	300ML/PCS; 1kg/barrel;10kg/barrel	1kg/barrel 10kg/barrel	1kg/barrel 10kg/barrel	300ml/PCS 1kg/barrel

LIMITATIONS

This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

HEALTH AND ENVIRONMENTAL INFORMATION

- To support customers in their product safety needs, BEGINOR CHEMICAL has an extensive Product Stewardship organization and a team of Health, Environment and Regulatory Affairs specialists available in each area.
- For further information, please consult your local BEGINOR CHEMICAL representative.