Sunhayato

Thermal conductivity improvement in heat radiation part

Thermally conductive Silicone

(SCH-20 series)

Technological material

Issue on March 23, 2012

REV.1.01

SG043155

Sunhayato Corp.

3-40-1 Minami-Otsuka, Toshima-ku, Tokyo 170-0005 Japan

Tel : +81-3-3984-7791 Fax : +81-3-3971-0535

http://www.sunhayato.co.jp

Request and attention

- **This material targets the person who has general knowledge about electronic construction, electric circuit, and chemical field.**
- **The content published in this material has aimed to buy and use an appropriate product corresponding to the usage for the customer. It is not the one to mean the permission of the guarantee or the license to our and third party's intellectual property rights and other rights by the use. Moreover, our company doesn't assume the responsibility for the violation of the right.**
- **The data that has been described is not a standard value.**
- **Judge right or wrong used about use to the usage in which consideration on the safety side in which the medical treatment usage, food, and cosmetics, etc. is needed after examining and confirming safety in a usage concerned in your company beforehand because this product is the one developed for general industrial uses.**
- **Never use it for the uses in which part might remain in the body, the uses implanted in the body, and the usage injected into the body.**
- **We will firmly refuse to reprint or reproduce part or all of this material in any shape or form without our approval.**
- **All information is the one at the time of the issue of this material, and our company might change the content described to this material without a previous notice.**
- **Though the content of this material is carefully produced, even if you are damaged by the mistake of the description our company doesn't assume the responsibility.**

Contents

1 Introduction

1.1 Outline

This product is grease that based on the silicone oil and mixed the powder with good thermal conductivity. This product possesses an excellent thermo-oxidative stability and the electrical property, etc. over the wide temperature range, and demonstrates a high effect of heat radiation. Moreover, low molecular weight siloxane that causes trouble at contact points is reduced.

1.2 Merit

◆It is excellent in thermal conductivity.

◆It is possible to spread thinly because of grease.

◆There is the following merits because it is excellent in heat resistance and low temperature resistance.

- Dropping point is high.
- Bleed and evaporation are low.
- Heat oxidation stability is excellent.
- Viscosity change is a little.
- It doesn't solidify at low temperature.
- Reduced low molecular weight siloxane product

1.3 Application

◆For heat radiation of semiconductor devices such as transistor, IC, and CPU

◆For filling between transistor, rectifier, thyristor, etc. and heat sink

◆For filling between thermistor, thermo-couples, etc. and temperature measuring point

◆For filling between heat source and heat sink

2 Property data

Items	Standard
Appearance	White grease
Useful temperature range	−50～200℃
Specific gravity	2.45
Worked penetration	290
Oil Separation（150℃、24h）	0.0%
Evaporation（150℃、24h）	0.4%
Thermal conductivity	0.84W/m・K
Volume Resistivity	$2.0\times10^{14}\Omega$・cm
Dielectric constant（60Hz）	5.0
Dissipation factor（60Hz）	0.006
Volatile siloxane（D_3−D_{10}）	30ppm

3 Use

①Wash dirt on the spreading side, and dry it enough.

②Remove the cap, and stir it by spatula etc.

(In case of the tube type, take it out directly to the spreading side.)

③Spread it on the spreading side thinly by using spatula etc.

4 Handling and storage

4.1 Handling

①Be careful about the fire because it is a flammability.

②Use it in the place where ventilation is good.

③Because when adhering to eyes and skins, the inflammation might be caused, wear the protective equipment if necessary, when using it.

④Be careful that a part of plastic and rubber, etc. have the fear of damaging and changing in quality because of the property and the change with the lapse of time of the material.

⑤Avoid mixing other greases and foreign bodies.

⑥Don't use it except the uses.

⑦Don't use it for the human body, animals and plants.

⑧Handle it after perusing the handling manual and MSDS when you use it. MSDS can be downloaded on the Home page (http://www.sunhayato.co.jp/) of Sunhayato Corp..

4.2 Storage

①After you use it, seal up the container and keep it in the cool dark place where ventilation is good.

Thermally conductive silicone　SCH-20 series
Technological material

Date of issue: March 23, 2012　Rev1.01
Issue: Sunhayato Corp.
Address: 3-31-20 Shimura, Itabashi-ku, Tokyo 174-0056 Japan

SG043155