



Thermal conductivity flame retardant Two-Component Silicone

Product Description

FX176G5 is a two-component silicone, and the ratio by weight A:B=1:1 is used for potting. This product has great leveling operability. After mixed, it can be cured within 60 minutes at 80 °C, and also can be cured at room temperature.

Features

1. Great leveling.
2. Great adhesiveness to metal materials.
3. Lower curing volume shrinkage.
4. Great resistance to thermal shock after curing.
5. Weather resistance, aging resistance, non-yellowing.
6. This product complies to the 2011/65/EU RoHS regulations.
7. Fire resistance grade(1.5mm) UL 94 V-0.

Typical Uncured Properties

	FX176G5A	FX176G5B
Composition	Polysiloxane resin	Polysiloxane resin
Appearance	Liquid	Liquid
Color	Gray	Gray
Viscosity*25°C, S14 10rpm, cps	30,000~60,000	30,000~60,000

*This value is for reference. Please refer to COA for the actual value.

Typical Curing Properties

Mix Ratio (A:B) by Weight	1 : 1
Operating time, 25°C, hr	1
Thoroughly Cured Time, 80°C, min	60
Thoroughly Cured Time, 25°C, hr	24

Direction of Use

1. It should be applied to a clean surface which is free of dirt, grease or mold release. In many cases, a simple solvent wipe is sufficient.
2. Mix the product evenly, centrifuge or vacuum to remove bubbles, pour or apply to the target to be coated.
3. Use this product as soon as possible after opening the original packages. When not using, please replace the lid tightly and store in a cool and dry place.
4. Cure time on the really part will depend on factors, such as part geometry, materials to be bonded, bondline thickness.
5. If this product is used with treatment agent FZ014, it can effectively increase the bonding strength to plastics, TPU, etc.

Typical Cured Properties

Glass Transition Temp., (DSC), °C	-55
Hardness (Durometer) ASTM D2240-03, Shore A	42
Specific Gravity	2.5
Water Absorption Ratio (25°C /24hr), %	0.02
Elongation, %	30
Volume Shrinkage, %	0.02
Volume Resistivity, Ω .cm	1.8*10 ¹⁴
Dielectric Strength, KV/mm	22
Dielectric Constant, 100KHz	3.1
Thermal Conductivity, W/mK	1.2
Shear Strength Copper vs Copper, kgf/cm ²	9
Shear Strength SUS vs SUS, kgf/cm ²	21
Shear Strength Al vs Al, kgf/cm ²	8
Recommend working temperature, °C	-50~200

Storage and Shelf Life

The container should be stored in cool and dark place. This product should be kept without any possibility of moisture exposure. Replace the lid immediately after use. Self life of this product is 6 months when stored in dark place at 14~34°C in original, unopened containers.

Keep the following items away from this product. For example: (1) Sulfides (such as mercaptans, sulfates, sulfides, rubber, etc., when the above products touch the surface of this product, they will cause a vulcanization reaction.). (2) Compounds containing nitrogen and phosphorus (such as amino compounds, amines, sulfimines, nitrites, phosphates, phosphates, etc.). (3) Compounds containing heavy metal ions such as tin, lead, mercury, bismuth, arsenic, etc. (such as condensed silicone, stable PVC, etc.).

Caution

Some findings indicate a lack of potential for carcinogenicity with the compositions of this product by long term recurrent application to the skin. However, contact with skin is likely to produce mild transient reddening. It is important to remove adhesive from skin with soap and water thoroughly. DO NOT use solvents for cleaning hands. This product is of moderate acute toxicity by swallowing. If swallowed, call a physician. Avoid contact with eyes. In case of contact, flush with water for at least 15 minutes and get medical attention immediately. For specific information on this product, consult the Material Safety Data Sheet.