專業導熱材料生產廠
Professional TIM Manufacturer
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TIS™580-12 One Component Dealcoholized Room Temperature Cured Thermally Conductive Silicone Adhesive

TIS™580-12 Series is dealcoholized, 1 component, room temperature cure thermally conductive silicone adhesive. It possesses good heat conduction and adhesion towards electronic components. It can be cured to a higher hardness elastomer, leads to firmly attached to substrates resulting lower down thermal impedance. Thus, heat transfer among heat source, heat-sink, motherboard, metal casing will become effective. **TIS™580-12 Series** possesses high thermal conductivity, excellent electrical insulation and is ready-to-use. **TIS™ 580-12 Series** has excellent adhesion to copper, aluminium, stainless-steel, etc. As this is a dealcoholized system, it will not corrode, especially, metal surfaces.

Feature

- Good thermal conductivity: **1.2W/mK**
- Good maneuverability and good adhesion
- Low shrinkage
- Low viscosity, leads to void-free surface
- Good solvent resistance, water resistance
- Longer working life
- Excellent thermal shock resistance

Application:

It mainly used in substituting thermally-conductive paste and pads, which currently finds in gap-filling adhesives or heat conduction between LED aluminium motherboard and heat sink, high power electrical module and heat sink. Traditional methods such as fins and screws fixing can be replaced by applying TIS580-10, resulting a more reliable gap-filling thermal conduction, simplified handling and more cost-effective. E.g. Massive application in integrated circuits in portable computer, microprocessor, high power LED, internal storage module, cache, integrated circuits, DC/AC translator, IGBT and other power modules, encapsulation of semi-conductors, relay switches, rectifiers and transfomers

Typical values of TIS™580-12		
Appearance	White paste	Test Method
Density（g/cm^3，25℃）	1.2	ASTM D297
Tack-free time（min,25℃）	≤20	*****
Cure type（1-component）	Dealcoholized	*****
Viscosity@25℃ Brookfield (Uncured)	5000 cps	ASTM D1084
Total cure time（d, 25℃）	3-7	*****
Elongation（%）	≥150	ASTM D412
Hardness（Shore A）	25	ASTM D2240
Lap Shear Strength（MPa）	≥2.0	ASTM D1876
Peel Strength（N/mm）	＞3.5	ASTM D1876
Operation temperature（℃）	-60～250	*****
Volume Resistivity（Ω·cm）	2.0×10^{16}	ASTM D257
Dielectric Strength（KV/mm）	21	ASTM D149
Dielectric Constant (1.2MHz)	2.9	ASTM D150
Thermal Conductivity W/(m·K)	1.2	ASTM D5470
Flame Retardancy	UL94 V-0	E331100

Instruction of use:

1. surface cleaning: clean the surface that need to apply adhesive, such that rust, dust, grease are removed
2. apply adhesive: remove the tip-cap and use the sharp tip to puncture the seal. Apply the adhesive onto the cleaned surface
3. Curing: skinning will gradually occur sitting in room temperature and thus, all process needs to be finished before skinning occurs. This curing starts from surface to underneath. 2-4mm depth will be cured after 24 hours (room temperature and 55%RH). For those the parts very underneath (that difficult to contact with air) and at low temperature, the fully-cured time will be prolonged
4. Please do not use, move or repackaging the adhering part tat is not fully cured

Precautions:

1. Cap the tip after used such that it is sealed good and then store in a proper place. If some skinning is observed, remove it and use as normal. Upon storage, the part at the tip may possess a certain degree of curing, remove it and can be used as normal
2. There may be some by-products evolved out during curing, which may cause skin and eye irritation. It is highly recommended to use in well air regulated area
3. Keep out from children
4. If accidentally contacted with skin, wash it under running water; if contacted to eye, flush with water and get medical assistant immediately

Packing:

100ml / pc, 100pc / box; 300ml / pc, 24pc / box

Storage and transportation:

1. Store in cool, dry place. Shelf life: 6 months (25℃)
2. This product is non-hazardous, refers to local general chemical transportation regulation

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