

# PT 912-1

## Black Thermally Conductive Silicone

### Description

PT 912-1 is a black colored and thermally conductive silicone system suitable for potting and thermal dissipation of electronic devices. This two part silicone can be cure very fast over 120°C. This silicone system has high hardness and yet provides flexible to give low stress for excellent performances in temperature cycling, high temperature storage and high humidity storage. The silicone is also formulated with flame retardant, longer pot life stability and good adhesion strength on glass, some metals and plastics.

### Properties

Property	Test Method	Unit	Typical value		
			Part A Resin	Part B Crosslinker	Mixed
Chemical type	-	-	Siloxane	Siloxane	Siloxane
Appearance	Pen 10	-	White viscous liquid	Black viscous liquid	Black viscous liquid
Mix ratio, by weight	-	-	1	1	-
Shelf life, 25 °C	-	Month	12	12	-
Pot life, 25 °C	Pen 26	Hour	-	-	3
Viscosity, CAP 2000+, C01, 5rpm, 25 °C	Pen 44	cP	20,000	11,400	15,187
Hardness, cured at 120 °C/30min	Pen 29	Shore A	-	-	53
Thermal conductivity	ISO/DIS 22007	W/mK	-	-	0.7
Tensile strength	Pen 41	MPa	-	-	1.2
Elongation at break	Pen 41	%	-	-	50
Flammability test	Pen 55	-	-	-	V-0

### Applications

- Heat dissipation silicone for used in potting, encapsulant, and coating of electronic device.

- Most of the test methods correspond to American Standard Test Methods (ASTM) or UL 94.
- The values above are tested based on batch to batch basis. These values are not use as a basis for preparing specifications.

### Guidelines for Use

- Stir the part A Resin and part B Crosslinker prior to use.
- Add the part B cross-linker into part A resin by weight ratio 1:1. Stir with an electric mixer until the silicone is homogenously mixed.
- Remove the air bubbles in the silicone mix by vacuum degas at 0.001 mbar (0.1 Pa) for 10 minutes.
- The mixed silicone can be dispensed with a syringe.
- Cure the silicone at room temperature for 24 hours. Cure rate can be accelerate by increasing the curing temperature up to 120°C for 30min.

- Avoid contamination with heavy metals, amines and sulphur compounds as the silicone catalyst can be easily poisoned. Silicone may not cure properly when contaminate.
- Wear rubber gloves when handling silicone resins and crosslinkers.

### Packaging

- 300ml jar
- 500g plastic bottle
- 1kg plastic pail

### Environment, Health & Safety

This product is RoHS compliant. It does not contain any known carcinogenic, mutagenic or teratogenic components.

### Recommended Cure

Temperature	Cure time
120°C	30 min

### Storage

Store both Part A resin and Part B crosslinker in a cool, dark place to prolong shelf life.

### Contact Information

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