



**TIE<sup>®</sup>380-45** is a single-component heat-curable modified epoxy resin adhesive containing high-purity thermally conductive fillers. It features high thermal conductivity, low shrinkage, high bonding strength, and excellent thermal shock resistance. Ready-to-use, it is suitable for automatic dispensing/screen printing. It is used for structural thermal conductive bonding, fixing, and potting of electronic components and heat sinks, improving heat dissipation efficiency and long-term reliability.

### Features

- › High thermal conductivity
- › Single-component design, easy and efficient to use
- › Strong bonding performance and stable structure
- › Low shrinkage rate
- › Good thermal shock resistance

### Application

- › Thermal conductive bonding for power electronic devices
- › LED lighting field
- › Encapsulation and fixing of precision electronic components
- › PCB board heat dissipation treatment
- › Thermal conductive bonding of core components of medical devices

Typical Properties of TIE <sup>®</sup> 380-45		
Property	Value	Test Method
Construction & Composition	Epoxy resin	-
Appearance (Before Curing)	Gray Paste	Visual
Appearance (After Curing)	Gray Solid	Visual
Component	Single Component	-
Viscosity (cps)	15,000	GB/T 10247
Density (g/cm <sup>3</sup> )	2.0	ASTM D792
Hardness (Shore A)	92	ASTM D2240
Recommended Operating Temperature (°C)	- 40~200	-
Shear Strength (psi) (Al/Al) 25°C	> 2900	ASTM D1002
Thermal Conductivity (W/m·K)	4.5	ASTM D5470
Shelf Life (Day) @25°C	10 (Unopened)	-
Shelf Life (Month) @0°C	6 (Unopened)	-
Curing Conditions		
Curing Temperature 100°C	Curing Time 4h	Ziitek Test Method
Curing Temperature 125°C	Curing Time 2h	Ziitek Test Method

### Application Guide

#### Notice:

1. Please carefully read the safety and hygiene information before use, and strictly follow the instructions on the product label and safety manual.
2. To ensure that electronic packaging components maintain stable and excellent performance over the long term, the surface of the components must be thoroughly cleaned before each packaging to remove dust, moisture, salt, grease, and other contaminants. These substances can cause quality issues such as short circuits, poor adhesion, and corrosion.
3. Storage methods and temperature can affect the shelf life.

#### Safety/Hygiene:

1. Similar to other resin products, this product is irritating to human skin and eyes. In some individuals, skin contact or inhalation of its emitted vapors may cause allergic reactions, primarily characterized by rash and skin itching. In high-temperature work environments, it may also trigger respiratory odor sensitivity.
2. The curing agent is corrosive to skin and eyes. Direct contact can cause burns. In some individuals, skin contact or inhalation of its emitted vapors may cause skin or respiratory allergies, with symptoms including rash, itching, and difficulty breathing. Odor sensitivity of the respiratory system may also occur during handling.
3. Good hygiene and safety practices must be observed when handling this product. Safety goggles and chemical-resistant clothing should be worn during work to avoid direct contact. For detailed information on engineering controls, personal protective equipment (PPE), and first aid measures, please refer to the Product Safety Data Sheet (SDS).

### Product Specifications

1 kg/can, 300 ml/tube

If you would like to learn about products in different specifications, please contact our company.

If you want to learn more about thermal conductive materials, please visit our company's website.

#### Global solutions: Local support

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