



Product Summary:

TIE™380-45 is a one component, heat cured epoxy adhesive. It has excellent thermal conductivity and bond strength.

TIE™380-45 is a good choice for high speed production lines because it has the rheology to allow stencil printing and a fast, one component, heat cure.

Feature

- » Good thermal conductivity: 4.5W/mK
- » Good maneuverability and adhesion performance
- » Low shrinkage
- » Low viscosity, easy-to-gas emissions
- » Good solvent resistance, water resistance
- » Longer working hours
- » Excellent resistance to thermal shock

Application Features:

TIE™380-45

Color	Gray
Viscosity@25°C	150,000 cPs
Specific Gravity@25°C	2.2 g/cc
Shelf life @25°C	10 Days
@0°C	6 Months

(Storage methods and temperature will affect the shelf life)

Curing procedures:

Curing temperature	Curing time
100°C	4 Hours
125°C	2 Hour
150°C	30 Minutes
170°C	5 Minutes

Typical Properties of TIE™380-45		
Chemical type	Epoxy	Test Method
Appearance uncured	Gray Paste	Visual
Appearance cured	Dull Gray Solid	Visual
Components	One Component	*****
Heat Capacity	0.7 l/g-K	ASTM C351
Key Substrates	Metals, ceramics	*****
Hardness	92 Shore A	ASTM 2240
Continuous Use Temp	-40 to 180°C	*****
Tensile strength A/AI @25°C	>2900psi	*****
Thermal Conductivity	4.5 W/m-K	ASTM D5470

INSTRUCTION FOR USE

GENERAL

Thoroughly read the information concerning health and safety contained in this bulletin before using. Observe all precautionary statements that appear on the product label and/or contained in individual Material Safety Data Sheets (MSDS).

To ensure the long term performance of the potted or encapsulated electrical/electronic assembly, complete cleaning of components and substrates should be performed to remove contamination such as dust, moisture, salt, and oils which can cause electrical failure, poor adhesion or corrosion in an embedded part.

STORAGE & HANDLING

For best results, store resins and hardeners in original, unopened containers. Storage in cool clean and dry areas is recommended. Usable shelf life may vary depending on method of application and storage temperature. Certain resins and hardeners are prone to crystallization. If crystallization does occur, warm the contents of the shipping container to 50°C-65°C C until all crystals have dissolved. Be sure the shipping container is loosely covered during the warming stage to prevent any pressure build-up. Allow contents to cool to room temperature before continuing.

ATTENTION SPECIFICATION WRITERS

The technical information contained herein outlines the typical properties of this material and should not be used in the preparation of specifications as it is intended for reference only.

For assistance in preparing specifications, please contact our Quality Assurance Department for specific recommendations. SAFETY/HYGIENE This product like most epoxy compounds possesses the ability to cause skin and eye irritation upon contact. Certain individuals may also develop an allergic reaction after exposure (skin contact, inhalation of vapors, etc.) which may manifest itself skin rashes and itching sensation. Handling this product at elevated temperatures may also generate vapors irritating to the respiratory system. Good industrial hygiene and safety practices should be followed when handling this product. Proper eye protection and appropriate chemical resistant clothing should be worn to minimize direct contact. Consult the Material Safety Data Sheet (MSDS) for detailed recommendations on the use of engineering controls and personal protective equipment. This information is only a brief summary of the available safety and health data. Thoroughly review the MSDS for more complete information before using this product.