



TCA (Thermal Conductive Adhesive)

軟質導熱膠 TC10 / HC10 產品特色

TC10 / HC10 為兩液無溶劑熱固型導熱膠。TC10 為主劑，HC10 為硬化劑。使用時，主劑與硬化劑必須預先混合均勻，將 TC10 塗佈於基材表面，黏合元件，以 120°C x 20-30 分鐘進行熟化。

亦可以絲網或點膠的方式塗佈於基材上。先以 120°C x 10 分鐘進行預烘，以獲得具粘性的表面，以便於貼合。貼合後，可採用 120°C x 20 分鐘進行後熟化反應，以形成更穩定的接著。

此產品符合 RoHS 規範。

產品規格

黏度	10 ± 2 Pa.s @ 10 ³ s ⁻¹ ; Cone & plate Rheometer
顏色	黑色
固成份	100±2%
主劑：硬化劑	50：50
混合後保存期限	4 小時
比重	1.3 ± 0.1
熟化	120°C x 20-30 分鐘
產品保存期限	製造後 12 個月

塗膜物性

測試	結果	測試規範
Thermal Conductivity	0.7 W / m.K	ASTM-5470D; Longwin LW-9091IR
90°- peel strength	> 1.5 kg/cm	克瑞富拉力試驗機 30 μm film thickness;
AC Withstand Voltage	>2 kV	Extech-7142 30 μm film thickness Volatage = 4,000 V Max-limit current = 1 mA Ramp-up time = 40 s
Insulation Resistance	> 1 GΩ	Extech-7142 25 μm film thickness Output Voltage = 100 V
高溫老化測試	通過	PC-TM-650 2.4.5.1 150°C x 6 hours 無剝離
耐回焊	通過	IPC-TM-650 2.4.28.1C 300°C x 5 分鐘 無空泡、剝落
吸水率	< 0.3%	IPC-TM-650 2.6.2.1

Material Safety Data Sheet

Teamchem Company

Date of issue: September 18, 2009

Product Identity

Trade name: TC10 / HC10

1. Identification of the product and of the company.

Product name: TC10 / HC10
Company name: Teamchem Company
Address: No.14, Lane 276, Yongfeng Rd.,
Barder City, Taoyuan County, Taiwan
Emergency phone: +886-3375-8654
Preparer: Todd Yeh

2. Composition/information on ingredients

<u>Ingredient Name</u>	<u>CAS Number</u>	<u>Percent</u>
Modified epoxy resin(s)	Trade secret	<45
Boron nitride	10043-11-5	<18
Aluminum oxide	1344-28-1	<18
Carbon black	7440-44-0	<2
Hardener	Trade secret	<25
Other additives	Trade secret	<3

All ingredients comply with applicable rules or orders under TSCA.

Weight percents listed above are within 5% of the actual value.

3. Hazards identification

Emergency Overview:

Liquid; skin irritant

Potential Health Effects:

INHALATION: may cause irritation

EYE CONTACT: may cause irritation.

SKIN CONTACT: may cause irritation.

INGESTION: maybe harmful

4. First aid measures

Eye contact:

Rinse eyes with running water for 15 minutes. Consult a doctor.

Skin contact:

Wash promptly exposed areas with soap and water.

Inhalation of aerosol / vapor / dust:

Move victim to fresh air immediately.

Ingestion or accident:

Get medical attention promptly. If swallowed, seek medical advice immediately

5. Fire fighting measures

Extinguishing media:

Dry chemical, CO₂, foam, water spray

Special advice in case of fire:

Firefighters should wear self-contained breathing apparatus and eye protection in fighting significant fires in which this material is involved.

6. Accidental release measures

After spillage, soak it up with rags or paper towels and dispose it according to regulations.

Avoid breathing vapors and remove ignition sources.

7. Handling and storage

Handling:

Avoid contact with skin and eyes. Wear protective goggles, aprons etc...

Storage:

It should be stored in a cool, dry, well-ventilated location.

8. Exposure controls and personal protection

Personal protective equipment

Respiratory:	Industrial canister gas masks
Eye protection:	Face shields
Hand, skin and body protection:	Impervious clothing, chemical-resistant gloves, apron and impervious boots.

9. Physical and chemical properties

*Flash point:	>100°C (Seta flash Closed Cup)
*Viscosity:	10~20 Pa·s at 23°C
*Solubility in water:	insoluble

10. Stability and reactivity

Stability:

This product is stable under ambient condition.

Conditions to avoid:

Heat, sunlight.

Materials to avoid:

Acids, alkalines, amines, peroxides, oxidizing agents.

11. Toxicological information

<u>Species</u>	<u>Route</u>	<u>Exposure and Dose</u>
Modified epoxy resin	oral-rat	LD50>4,000 mg/kg
Dipropylene Glycol Monomethyl Ether	oral-rat	LD50>4,000 mg/kg
Petroleum Naphtha	oral-rat	LD50>10,000 mg/kg

12. Ecological information

No data

13. Disposal considerations

*Local regulations should be adhered to.

*Disposal of empty containers

14. Transport information

General information: Keep container tightly sealed.
 Load and unload with care.
UN harmful class: None
UN package category: None

15. Regulatory information

Follow all regulations in your country.

Symbol(s) Harmful in contact with skin
 Harmful if swallowed
 Irritating to eyes

Safety-phrase(s) Avoid contact with skin
 Avoid contact with eyes
 In case of contact with eyes, rinses immediately with plenty of
 water and seek medical advice.
 Take off immediately all contaminated clothing
 Wear suitable glove
 In case of insufficient ventilation, wear suitable respiratory
 equipment
 Wear eye / face protection

16. Other information

This product should be stored, handled and used in accordance with good industrial hygiene practices and in conformity with legal regulation.

The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should therefore not be construed as guaranteeing specific properties.