

# SAFETY DATA SHEET

PRODUCT NAME: "SUMIRESIN EXCEL®" CRM-1076WA  
 MSDS NO.: MSDS-CRM-723  
 DATE PREPARED: Feb.,17,2012

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** "SUMIRESIN EXCEL®" CRM-1076WA  
**CHEMICAL NATURE:** Epoxy Silver Paste  
**APPLICATION:** Semiconductors (or electronic devices and so forth) die attach paste.  
**MANUFACTURER:** SUMITOMO BAKELITE CO., LTD.  
 TENNOZ PARK SIDE BLDG., 5-8, HIGASHI-SHINAGAWA 2-CHOME,  
 SHINAGAWA-KU, TOKYO, 140-0002 JAPAN PHONE: 81-3-5462-4267  
**SUPPLIER:** SUMITOMO BAKELITE CO., LTD.  
 TENNOZ PARK SIDE BLDG., 5-8, HIGASHI-SHINAGAWA 2-CHOME,  
 SHINAGAWA-KU, TOKYO, 140-0002 JAPAN PHONE: 81-3-5462-4267

EMERGENCY ASSISTANCE (Please contact any of manufacture's following sales offices)

NAME & EMERGENCY PHONE NUMBER	ADDRESS
SUMITOMO PLASTICS AMERICA, INC. PHONE: 408-243-8402 (USA)	900 Lafayette Street Suite#510 Santa Clara, CA 95050
SUMITOMO BAKELITE SINGAPORE PTE.LTD. PHONE: 6755-5550 (SINGAPORE)	1 Senoko South Road Singapore 758069
n.v. SUMITOMO BAKELITE EUROPE s.a. PHONE: 02-709-2139 (BELGIUM)	Regus Pegasus Park Pegasuslaan 5 1831 Diegem, Belgium
SUMITOMO BAKELITE (SUZHOU) CO., LTD. PHONE: 0512-67613850 (CHINA)	140 Jinjihu Road, China-Singapore Suzhou Industrial Park, Suzhou, China, 215021
SUMITOMO BAKELITE (TAIWAN) CO., LTD. PHONE: 07-787-1285 (TAIWAN)	No.1 Hwa Syi Road, Ta Fa Industrial District, Ta Liao, Kaohsiung, Taiwan
CHEMTREC PHONE: 800-424-9300 (USA) 24 hours EVERYDAY	

## 2. HAZARDS IDENTIFICATION

### GHS-Classification

Acute toxicity – oral	Category5
Skin corrosion/irritation	Category3
Serious eye damage/eye irritation	Category2
Sensitisation – respiratory	Category1
Sensitisation – skin	Category1
Reproductive toxicity	Category2
Specific target organ toxicity – single exposure	Category1
Specific target organ toxicity – repeated exposure	Category1
Hazardous to the aquatic environment – chronic toxicity	Category3

### GHS-Labeling



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## Danger

### Hazard Statement :

May be harmful if swallowed  
Causes mild skin irritation  
Causes serious eye irritation  
May cause allergy or asthma symptoms or breathing difficulties if inhaled  
May cause an allergic skin reaction  
Suspected of damaging fertility or the unborn child  
Causes damage to organs  
Causes damage to organs  
Harmful to aquatic life with long lasting effects

### Precaution Statement :

Use protection gloves, protection glasses not to touch the skin  
Use fully ventilated equipment to avoid breathing of vapor during heating and baking.  
Store in a refrigerator (less than -15 degrees Celsius ) with a dense stopper.  
In case of skin and clothes contact, rinse with plenty of water and soaps.  
For eyes immediately flush with plenty of water and get medical attention.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### Mixture

COMPONENTS	(CAS NO.)	BY WEIGHT (%)
Silver	7440-22-4	65~85
Epoxy resin A	9003-36-5	1~7
Epoxy resin B	(Trade Secret)	3~9
Diluent A	(Trade Secret)	1~7
Diluent B	(Trade Secret)	3~9
Phenolic Hardener	(Trade Secret)	2~8
Dicyandiamide	461-58-5	< 0.5
Organic peroxide	(Trade Secret)	< 1

## 4. FIRST AID MEASURES

**EYE CONTACT** : Immediately flush eyes with large amounts of water for at 15 minutes. Get medical attention.  
**SKIN CONTACT** : Wash off thoroughly the affected areas under flowing water or shower with soap. If irritation occurs, get medical attention.  
**INGESTION** : Do not induce vomiting. Rinse mouth with plenty of water and immediately give the victim milk or water. Get medical advice.  
**INHALATION** : Immediately remove to the victim from the contamination to fresh air.

### SPECIAL NOTE TO PHYSICIANS

: Treat symptomatically. Treatment may vary with condition of victim and specifics of incident.

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## 5. FIRE FIGHTING MEASURES

Extinguishing media : Suitable for water, foam, carbon dioxide or dry chemicals.  
 Specific hazards :Combustion gas contains carbon mono oxide.  
 Specific methods :Wear protective equipment. Evacuate the people from leeward side, and extinguish the fire from windward.  
 Protection of firefighters :Wear full bunker gear inducing positive self-contained breathing apparatus in any closed space.

## 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTION : Use personal protective equipments. Avoid dust formation.  
 ENVIRONMENTAL PRECAUTIONS : Do not flush into surface water or sanitary swear system.  
 METHODS FOR CLEANING UP : Ventilate spilled area. Remove all sources. Take up with absorbent, inert material (e.g. paper towel, sand) with suitable protective equipment and place in suitable, closed impervious container.

## 7. HANDLING AND STORAGE

**HANDLING** : Use with adequate ventilation. Keep away from heat, sparks and open flames. Avoid contact with eyes and skin, and avoid breathing of vapor if generated. Practice good personal hygiene after using this material, especially before eating, drinking smoking or using the toilet  
**STORAGE** : Keep container tightly closed in a below -15 degC, well-ventilated dark place for quality separate from strong oxidents, and protect from direct sunlight.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### EXPOSURE LIMITS:

COMPONENTS	EXPOSURE GUIDELINES (mg/m <sup>3</sup> )	
	ACGIH (TLV-TWA)	OSHA (PEL)
Silver	0.1(respirable)	0.01
Epoxy resin A	Not listed	Not listed
Epoxy resin B	Not listed	Not listed
Diluent A	Not listed	Not listed
Diluent B	Not listed	Not listed
Hardener	Not listed	Not listed
Dicyandiamide	Not listed	Not listed
Organic peroxide	Not listed	Not listed

### ENGINEERING MEASURES:

Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines. Good general ventilation should be sufficient for most conditions. When processing at elevated temperature, provide local exhaust ventilation.

### PERSONAL PROTECTIVE EQUIPMENTS:

Respiratory protection - Wear an approved respirator to protect from vapors or fume.  
 Hand protection - Chemical-resistant gloves.  
 Eye protection - Chemical splash goggles or safety glass with side-shields.  
 Skin & body protection - Clean clothing, long sleeves, apron, full-face cover or legs-covering clothing as appropriate.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Silver Color Paste
Odour	:	Slight characteristic odor
Odour threshold	:	No information available
pH	:	No information available.
Melting point/freezing point	:	No information available.
Initial boiling point and boiling range	:	No information available.
Flash point	:	No information available.
Evaporation rate	:	No information available.
Flammability(solid,gas)	:	No information available.
Upper/lower flammability or explosive limits	:	No information available.
Vapor pressure	:	No information available.
Vapor density	:	No information available.
Relative density	:	3.0~4.0
Solubility(ies)	:	Negligible
Partition coefficient:n-octanol/water	:	No information available.
Auto-ignition temperature	:	No information available.
Decomposition temperature	:	No information available.
Viscosity	:	No information available.

## 10. STABILITY AND REACTIVITY

### CHEMICAL STABILITY:

Stable under recommended storage condition.

### CONDITIONS TO AVOID:

Keep away from heat, open flame, sparks and sunlight for quality.

### MATERIALS TO AVOID:

Oxidizing agents or base .

### HAZARDOUS DECOMPOSITION PRODUCTS:

Mainly: Carbon oxide

Slightly: Carbon monoxide and various hydrocarbons.

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## 11. TOXICOLOGICAL INFORMATION

No data is available on product itself.

### Acute toxicity

Epoxy resin A	----orl-rat LD50: >2,000 mg/kg
Diluent A	---orl-rat LD50: 2,500 mg/kg
Diluent B	---orl-rat LD50: 12,600 mg/kg
Organic peroxide	----orl-rat LD50: 16,653 mg/kg
Dicyandiamide	---orl-mus LD50: 10.5~20 g/kg
Skin corrosion/irritation	Epoxy Resin A
Serious eye damage/eye irritation	Hardener, Silver, Epoxy Resin A
Sensitisation – respiratory	Epoxy Resin A, Diluent A
Sensitisation – skin	Diluent B, Hardener, Silver, Epoxy Resin A ,Diluent A
Germ cell mutagenic substance:	Epoxy resin A(by Ames Test)
Carcinogenic substance	: Not applicable
Reproductive toxicity	Hardener, Epoxy Resin A
Specific target organ toxicity – single exposure	Diluent B, Silver
Specific target organ toxicity – repeated exposure	Silver
Hazardous to the aquatic environment – chronic toxicity	Epoxy Resin A

## 12. ECOLOGICAL INFORMATION

### Aquatic/terrestrial ecology toxicity:

Waste water from subsequent processing should be given appropriate treatment in line with local regulations.

Residual and degradability: No data is available on product itself.

Biological concentration: No data is available on product itself.

Soil mobility: No data is available on product itself.

Other hazardous effects: No data is available on product itself.

## 13. DISPOSAL INFORMATION

### WASTE FROM RESIDUES:

Can burn in a chemical incinerator equipped with an afterburner and scrubber in compliance with government or local disposal regulations, also contaminated packaging do so.

## 14. TRANSPORT INFORMATION

### International regulations:

ICAO-TI/IATA-DGR, IMDG Code, DOT (USA), RID/ADR (EU):

Not dangerous by any mode of international transport.

UN Number: None assigned to product.

(Ref. Organic peroxide: Class 5.2, UN 3106)

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## 15. REGULATORY INFORMATION

Applicable regulations:

Rules on Hazard Communication and Labeling of Hazardous Substances

<Ref> Each substance

Rules on Hazard Communication and Labeling of Hazardous Substances

Silver, Organic peroxide

Standards on Workplace Atmosphere of Dangerous and Hazardous Materials

Silver

## 16. OTHER INFORMATION

Reference documents: ACGIH (2006)  
OSHA (USA CFR 29, 2006)  
IARC (Vol. 1 ~ 88)  
NTP (11th)  
RTECS (2006, Internet)  
International Chemical Safety Cards (ICSCs)  
Supplier's Material Safety Data Sheet

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