

SAFETY DATA SHEET

PRODUCT NAME : "SUMIRESIN EXCEL" CRM-1084
MSDS NO. : MSDS-CRM-208
DATE PREPARED : Aug.23,2004 according to 2001/58/EC

1.PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: "SUMIRESIN EXCEL" CRM-1084
CHEMICAL NATURE: Preparation. Epoxy Silver paste
MANUFACTURER: SUMITOMO BAKELITE CO., LTD.
Tennoz Parkside Bldg., 5-8, Higashi-Shinagawa 2-chome, Shinagawa-ku,
Tokyo 140-0002, Japan Phone: 81-3-5462-4267
SUPPLIER: SUMITOMO BAKELITE CO., LTD.
Tennoz Parkside Bldg., 5-8, Higashi-Shinagawa 2-chome, Shinagawa-ku,
Tokyo 140-0002, Japan Phone: 81-3-5462-4267

EMERGENCY ASSISTANCE : (Please contact any of 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 65-755-5550 (Singapore)	1 Senoko South Road, Singapore 758069
Sumitomo Bakelite Europe (Barcelona), S.L. Phone 34-93-579-9050 (Spain)	Antonio Machado 2-4, 08170 Montornes del valles Barcelona
n.v. Sumitomo Bakelite Europe s.a. Phone 32-89-320-304 (Belgium)	Henry Ford Laan 80 3600 Genk
CHEMTREC Phone 800-424-9300 (USA)	24 hours everyday

2.COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	CAS No.	by weight (%)
Silver	7440-22-4	75~85
Epoxy Resin	9003-36-5	5~10
Phenolics	9003-35-4	1~5
Epoxy silane	2530-83-8	2~8
Dicyandiamide	461-58-5	< 0.5

Labeling according to EC directives:

Hazardous components: none
Hazard symbol: No symbol and risk phrases are required.
Risk phrases: none
Safety phrase: none

3.HAZARDS IDENTIFICATION

*** EMERGENCY OVERVIEW ***

Silver gray paste and slightly odor.
Repeated contact may cause skin irritation and sensitization. Can burn in fire but not ordinarily an emergency problem. Epoxy Resin is a substrate known to be positive by Ames test.
Foam, carbon dioxide and dry chemicals can be used on fires.

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POTENTIAL HEALTH EFFECTS

EYE : May cause irritating to eyes.
SKIN : May cause sensitization by skin contact.
INGESTION : Small amounts (teaspoonful) swallowed during normal handling operations are not likely to cause injury; swallowing amounts larger than that may cause injury.
INHALATION : Heated product may produce generate vapors. May be harmful for respiratory tract if inhaled.

4.FIRST-AID MEASURES

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

5.FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA:
Use foam, carbon dioxide or dry chemicals
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.
ENVIRONMENTAL PRECAUTIONS:
Do not flush into surface water or sanitary sewer 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.

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8.EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE LIMITS:

COMPONENT	EXPOSURE GUIDELINES(mg/m ³)	
	ACGIH(TLV-TWA)	OSHA(PEL)
Silver	0.1(respirable)	0.01
Epoxy Resin	Not listed	Not listed
Phenolics	Not listed	Not listed
Epoxy silane	Not listed	Not listed
Dicyandiamide	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.

9.PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE : Silver gray paste with slightly odor.
pH : No information available.
BOILING POINT : 290 degC (as Epoxy silane).
DECOMPOSITION TEMPERATURE : No information available.
FLASH POINT : 259 degC (as Epoxy resin)
AUTOIGNITION TEMPERATURE : Not applicable.
EXPLOSION PROPERTIES : Not applicable.
VAPOR PRESSURE : below 1.3 kPa (as Epoxy silane).
VAPOR DENSITY : not available.
DENSITY : 3.2~4.2
SOLUBILITY : Slightly (as Epoxy silane) in water.

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10.STABILITY AND REACTIVITY

STABILITY : Stable under recommended storage conditions.
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, various hydrocarbons and siloxane compounds.

11.TOXICOLIGICAL INFORMATION

ACUTE TOXICITY :	Epoxy resin ----	orl-rat LD50:	2,000 mg/kg
	Phenolics ---	orl-rat LD50:	5 g/kg
	Dicyandiamide ---	orl-mus LD50:	10.5-20 g/kg
LOCAL EFFECTS :	Irritating to eyes and skin.		
SENSITIZATION :	May cause sensitization by skin contact.		
CHRONIC TOXICITY:	Potential carcinogen		
IARC :	Not listed		
NTP :	Not listed		
OSHA :	Not regulated		

12.ECOLOGICAL INFORMATION

MOBILITY : No data is available on the product itself.
ECOTOXICITY : May cause long-term adverse effects in the aquatic environment.

13.DISPOSAL CONSIDERATION

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 packagings do so.

14.TRANSPORT INFORMATION

Not a hazardous material for D.O.T. (Department Of Transportation) shipping.
Not dangerous by any mode of international transport.
UN No. : None assigned.

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15.REGULATORY INFORMATION

TSCA(TOXIC SUBSTANCES CONTROL LAW):

The ingredients of this product are all on the 8(b) inventory list.

EINECS(EUROPEAN INVENTORY OF EXISTING COMMERCIAL CHEMICAL SUBSTANCES)

This product complies with the provisions of the European Inventory.

EINECS No. Silver: 231-131-3

Epoxy silane: 219-784-2

Dicyandiamide: 207-312-8

NLP No. Epoxy resin: 500-006-8

Phenolics: 500-005-2

Labeling according to EC Directives:

Hazard symbol: No symbol and risk phrases are required.

Risk phrases: none

Safety phrase: none

16.OTHER INFORMATION

DISCLAIMER : The information presented herein was prepared for your reference to be best of our knowledge. It is given in good faith but no warrantly expressed on implied is made.

DATA PREPARED BY : SUMITOMO BAKELITE CO.,LTD.
QA DEPARTMENT, UTSUNOMIYA PLANT