

2A

MATERIAL SAFETY DATA SHEET

1. [CHEMICAL PRODUCT & COMPANY IDENTIFICATION]

CHEMICAL PRODUCT NAME : HITACHI CHEMICAL MOLDING COMPOUND, CEL-9200 series
 NAME OF MANUFACTURER : HITACHI CHEMICAL Co., Ltd
 ADDRESS : 1772-1 Kanakubo, Yuki Ibaraki 307 Japan
 NAME OF SECTION : Research & Development Center : H. Sashima
 TEL. No. : 0296-32-8111, FAX No. : 0296-32-8381

16 AUG 2001

2. [COMPOSITION/INFORMATION IN INGREDIENTS]

SUBSTANCE/MIXTURE : MIXTURE
 INGREDIENTS AND COMPOSITION :

CONTROLLED

Chemical Name	Composition	Chemical Formula	CAS No.
Epoxy Resin	4~6%	—	85954-11-6
Phenol Resin	4~6%	—	26834-02-6
Brominated Epoxy Resin	approx. 1%	—	68541-56-0
Antimony trioxide	approx. 0.5%	Sb ₂ O ₃	1309-64-4
Silica	87~90%	SiO ₂	60676-86-0
Others	approx. 1%	—	—

UN CLASS AND UN NUMBER : Not applicable

3. [HAZARDS IDENTIFICATION]

CLASS NAME OF HAZARDOUS CHEMICALS : Not applicable
 PHYSICAL AND CHEMICAL HAZARDS : Not applicable
 ADVERSE HUMAN HEALTH EFFECTS : No data of mixture

16 AUG 2001

4. [FIRST-AID MEASURES]

EYE CONTACT : Gently rinse the affected eyes with clean water for at least 15 minutes. Immediately call for a physician.
 SKIN CONTACT : Thoroughly wash material off the skin with soap and water. If irritation persists, arrange for transport to the nearest medical facility for examination and treatment by a physician as soon as possible.
 INHALATION : If affected, move individual to fresh air. If breathing is difficult, administer oxygen. If breathing has stopped, give artificial respiration. Keep person warm, calm, and seek immediately medical attention.
 INGESTION : Try to vomit and rinse mouth with water. Give the person plenty of water and arrange for transport to the nearest medical facility for examination and treatment by a physician as soon as possible.

RECEIVED

5. [FIRE-FIGHTING MEASURES]

EXTINGUISHING MEDIA : Dry chemical powder, carbon dioxide, foam, dry sand.
 SPECIFIC HAZARDS WITH REGARD TO FIRE-FIGHTING MEASURES :
 • Dry chemical powder, carbon dioxide or dry sand should be used for small fires.
 • Apply water from a safe distance to cool and protect surrounding area. Move container from fire areas if it can be done without risk.
 • Firefighters should wear proper protective equipments.
 • Evacuate personnel from area of fires.

[EMC CEL-9200 series]

RECEIVED
 16 AUG 2001
 H. SASHIMA

6. [ACCIDENTAL RELEASE MEASURES]

- Sweep up in a bag and clean up by a vacuum cleaner.
- Wear proper protective equipments .
- Wipe off residual spill using paper soaked with methanol or acetone.
- Consult an expert on the disposal of recovered material.

7. [HANDLING AND STORAGE]

- Wear proper protective equipments to avoid direct contact and inhalation.
- Use with local exhaust ventilation.
- Keep the products sealed and kept in the cold room, away from direct sunlight and under the Temperature of 5°C.

8. [EXPOSURE CONTROL / PERSONAL PROTECTION]

CONTROL PARAMETERS :

- ACGIH TLV (1995-1996) TWA 0.1mg/m³ (SILICA)
- ACGIH TLV (1995-1996) TWA 0.5mg/m³ (content of Sb in Sb₂O₃)

ENGINEERING MEASURES :

- Do not use in areas without adequate ventilation and local exhaust ventilation.
- Set up the shower and the washing eyes equipment near the working area.

PERSONAL PROTECTIVE EQUIPMENTS :

- RESPIRATORY PROTECTION : Dustproof mask.
- EYE PROTECTION : Safety goggles or face shield.
- HAND, SKIN AND BODY PROTECTION : Chemical-resistant gloves boots and apron.

9. [PHYSICAL & CHEMICAL PROPERTIES]

- APPEARANCE : Gray tablet or powder (product).
- DENSITY : 1.97~2.03 (product)
- BOILING POINT : 2230°C (SILICA), 1550°C (ANTIMONY TRIOXIDE)
- MELTING POINT : 1710°C (SILICA), 656°C (ANTIMONY TRIOXIDE)
- DECOMPOSITION POINT : approx. 300°C (product)
- MELTING POINT : 70~80°C (product)
- VAPOR PRESSURE : 130Pa (674°C) (ANTIMONY TRIOXIDE)
- SOLUBILITY IN WATER : Not soluble (product)

10. [PHYSICAL HAZARD (STABILITY & REACTIVITY)]

This product is considered a stable material under normal and anticipated storage and handling condition.

PHYSICAL HAZARD		PRODUCT
FLASH POINT	(°C)	(including flame retarder) ^{*)}
AUTOIGNITION TEMP.	(°C)	approx. 600°C
EXPLOSION LIMIT (in Air)	UPPER (°C)	N. A.
	LOWER (°C)	N. A.

*) UL-94 V-0

FORM No. : YSO-31018-00
ISSUE DATE : 17th Feb. 1997
PAGE : 3/3

A/E

11. [TOXICOLOGICAL INFORMATION]

TOXICOLOGICAL INFORMATION OF SILICA

- ROUTE OF ENTRY : It may cause absorption in the body by inhalation, dermal and oral.
- CORROSIVE AND IRRITANT PROPERTIES : It is irritating to eyes skin, mucous membrane and respiratory tract. Repeated or prolonged contact may cause dermatitis.
- ACUTE TOXICITY : No data available.
- CARCINOGENIC EFFECTS IARC : Group 2A
- MUTAGENIC EFFECTS : No data available.

TOXICOLOGICAL INFORMATION OF ANTIMONY TRIOXIDE

- ROUTE OF ENTRY : It may cause absorption in the body by inhalation, dermal and oral.
- CORROSIVE AND IRRITANT PROPERTIES : It is irritating to eyes skin, mucous membrane and respiratory tract. Repeated or prolonged contact may cause dermatitis.
- ACUTE TOXICITY : Oral LD₅₀ (mouse) 720mg/kg
- CARCINOGENIC EFFECTS IARC : Group 2B
- MUTAGENIC EFFECTS : No data available.

12. [ECOLOGICAL INFORMATION]

- Antimony trioxide should be paid attention to water. Relating the food chain, there is a potential of bioaccumulation specially in the Crustacea.

13. [DISPOSAL CONSIDERATION]

Please be advised that your country and your region requirements for waste disposal may be more restrictive or otherwise different from fede. EU regulation.

14. [TRANSPORT INFORMATION]

Please follow the notes of treatment and storage.

15. [REGULATORY INFORMATION]

It is your responsibility to obtain the regulatory information with regard to this substances from the authority in your country/state/district, etc.

16. [OTHER INFORMATION]

INQUIRY OF THE INFORMATION CONTAINED HEREIN :

Hitachi Chemical Co., Ltd. Research & Development Center : H. Sashima
Tel. No. ; 0296-32-8111 (Japan)

The information herein is given in good faith, but not warranty, expressed or implied, is made. Please consult Hitachi Chemical Co., Ltd. for further information.

The information contained herein are, to the best of Hitachi Chemical Company's knowledge and belief, accurate and reliable as of the data issued. It is the user's responsibility to determine the suitability of this information for the adoption of necessary safety precautions. We reserved the right to revise MSDS periodically as and when new information is available.