

Safety Data Sheet

Product Name: Epoxy Molding Compound
Revised Date: 18th,May.2023
Issue Date: 18th,Otc. 2006

According to GB/T 16483、GB/T 17519
SDS Number: SIS-F-15-038
Version: H

Part 1 Product and company identification

Product identification:

Product Name: Epoxy Molding Compound
Product Series: CEL-8240HF10 Series

Company identification:

Company Name: RESONAC Materials (Suzhou) Co.,Ltd.
Company Address: No.198 Xingpu Road, Suzhou Industrial Park, Jiangsu Province, China,215100
Telephone No.: 0512-62601818-855
FAX No.: 0512-62601822
Mail address: rmsz_emc_msds@resonac.com
Emergency Call: 0512-62601818-855

Recommended use of the chemical and restrictions on use:

Recommended use Encapsulation materials for semiconductor
Restrictd use All usage excepted the recommended use

Part 2 Hazards Overview

Emergency Situation overview:

Gray to Black solid or powder, may cause an allergic skin reaction;Harmful to aquatic life;Harmful to aquatic life with long lasting effects.

GHS Hazards identification:

skin sensitization	Classification 1
Hazardous to the aquatic environment(Acute)	Classification 3
Hazardous to the aquatic environment(Chronic)	Classification 3

Label elements:

Pictogram or symbol



Signal Word: Warning

Hazard/Risk Statement: May cause an allergic skin reaction.
Harmful to aquatic life.
Harmful to aquatic life with long lasting effects.

Precautionary Statement

【Precautionary measure】

- Read this SDS carefully before use.
- Be sure not to operate before understanding all of the safety precautionary measure.
- Wear protective equipment for handling.
- Avoid inhalation of dust、smoke、gas、smog、vapour、spray.
- Contaminated labour suits are prohibited to be taken out of work place.
- Wash thoroughly after handling.
- Feed,drinking,smoking are forbidden at workplace.
- Avoid release to the environment.

【Accident Respond】

- In case of contact with skin, wash it with soap and water.
- Go to see doctor or call Poison Control Center if contact or be worried
- Go to see doctor if feel uncomfortable
- Take off contaminated clothing and wash it before reuse.

【Safe Storage】

- Store in a sealed status.

【Disposal】

- Please follow your country and your region requirements for waste disposal.

Physical and Chemical Hazard: No data

Health hazard: May cause an allergic skin reaction.

Environmental Hazard: Harmful to aquatic life.
Harmful to aquatic life with long lasting effects.

Other Hazard: No data.

Part 3 Composition Information

Single substance / Mixture : Mixture

Chemical name	Content (%)	CAS number
Epoxy Resin 1	0.5~8	Trade secret
Epoxy Resin 2	0~6	Trade secret
Phenolic Resin	3~8	Trade secret
Organic Phosphorus compounds	<1	Trade secret
Carbon black	<0.3	1333-86-4
Amorphous silica1	67~92	60676-86-0
Amorphous silica2	0~15	7631-86-9

Note: Crystal silica sometimes existed as a impurity part of amorphous silica.

Part 4 First aid measures

First aid:

Inhalation: Promptly move individual to fresh air. If breathing has stopped or breathing is difficult, loosen clothes, maintain patient airway respiration. and give artificial. Cover the body with blankets, keep person warm and calm. Seek immediate medical attention.

Skin contact : Immediately wash affected area with soap and water. If signs/symptoms occur, consult a physician.

Eye contact: Rinse the affected eyes with clean water for at least 15 minutes. Immediately call for an ophthalmologist.

Ingestion: Induce vomiting with plenty of water. Seek immediate medical attention. It is also effective to rinse mouth with water.

the most important symptom and Health hazard: May cause an allergic skin reaction.

Suggestion to the Rescuer: Wear protective equipment.

Special suggestion to doctor: Treat according to the symptom. Different treatment would be used according to different symptom.

In all cases of potential poisoning, on-site emergency medical treatment is essential.

Part 5 Fire-Fighting measures

Extinguishing media:

Extinguishing agents for Usual Fire (e.g. water spray, powder, carbon dioxide)

N/A Extinguishing media: No special

Specific Dangerous: It will produce smoke, fumes containing toxic gases such as carbon monoxide when burned.

Fire precautions and protective measures:

Firefighters should wear proper protective equipments, Fire in the wind, Avoid inhalation of toxic gases. As far as possible to move containers from the scene to empty Department for fire fighting and for cooling. It can also be used to reduce the ambient temperature by water spray.

Evacuate the downwind affected person as soon as possible. In case of fire, using the Extinguishing media suggested by the manufacturer / supplier or the competent authorities. Isolate the scene. Unrelated persons were banned to access.

Surrounding fire conditions: Move containers far from the fire under safety condition. In the non-removable condition, use appropriate extinguishing on the container and packaging, reduce the ambient temperature by water spray as well.

fire conditions: First, cut off the combustion source; Second, fire in the wind, at last, recycle the wastewater.

Part 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Wear proper protective equipments during the operation.

Environmental precautions and protective procedures:

Prevent dust from scattering into the atmosphere, impregnating into soil, outflowing to sewers, rivers or watercourses etc..

Methods and materials for containment and cleaning up:

In case of small amount, vacuum spilled material with the vacuum machine and wipe off residual spill using waste cloth absorbed with alcohols.

In case of large amount, collect as much spill as possible into an empty container using riskless shovel.

Vacuum with the vacuum machine and wipe off residual spill using waste cloth absorbed with alcohols.

Preventive measures to avoid Secondary hazards:

Should thoroughly clean contaminated ground after processing. Be sure to remove any ignition source of spilled area, and be fully ventilated to avoid secondary hazards.

Part 7 Handling and storage

Precautions for safe handling

Wear proper protective equipments stated in Section 8 to avoid direct contact during handling.

In case of skin contact, thoroughly wash the effected area with soap or water.

After handling, thoroughly wash hands.

If signs/symptoms occur, make sure to consult a physician after having taken a first aid measure of Section 4.

Conditions for safe storage

Avoid direct sunlight and be kept under 5℃, and do thawing before unsealing.

In case product is unsealed and left, it absorbs moisture, so keep product sealed before storage.

Use product as soon as possible after it is unsealed.

Part 8 Exposure controls & personal protection

Occupational Exposure Limits

China GBZ2.1-2007: Silica dust (50%<Free SiO₂ content≤80%) : PC- TWA: 0.7mg/m³ (Total dust) ; 0.3 mg/m³ (Respirable dust) 。
America ACGIH TLV (2014) : Crystal SiO₂: TWA 0.025 mg/m³ ; Carbon Black: TWA 3 mg/m³

Biological limits: No data.

Monitor Methods: No data.

Appropriate engineering controls

Install local ventilation system at sealed equipment, or for dust, vapor sources.
Set up the shower and the washing eyes equipment near the working place.

Personal protective equipment

Respiratory protection:Dust mask
Eye and face protection:Safety goggles
Skin and body protection:Long-sleeved protective clothing
Hand protection:Protective gloves
Other protection:No smoking, no eating during operate.Pay attention to personal hygiene.Should immediately seek medical attention / advice
After operating, please follow strict cleaning procedures.

Part 9 Physical and chemical properties

Appearance	Gray tablet or powder (product)
Odor	No stimulating odor (product)
pH	Not applicable
Melting point	1710℃(Silica), 70~80℃(product)
Initial boiling point	2230℃(Silica)
Flashing point	No data(Product UL-94 V-0)
Combustion limit	No data available
Vapor pressure	No data available
Steam density	No data available
Relative density	1.8~2.2(product)
Solubility	No data available
Water partition coefficient	Not applicable
Auto-ignition temperature	around 600℃(product)
Decomposition temperature	around 300℃(product)

Part 10 Stability and reactivity

Stability	Stable under normal condition (ordinary temperature/normal pressure)
Possibility of hazardous reactions	None known
Conditions to avoid	Long-time leaving at high temperature/high humidity
Incompatible materials	Strong acids/alkali
Hazardous decomposition products	No data available

Part 11 Toxicological information

Acute Toxicity

Carbon Black:Rat Per oral LD50>8000mg/kg

Skin corrosion/irritation No relevant information found.

Serious eye damage/eye irritation No relevant information found.

Respiratory sensitization: No relevant information found.

skin sensitization

Epoxy Resin:May cause an allergic skin reaction

Germ cell mutagenicity:Epoxy resins contain substances that may have a mutagenic effect.

Carcinogenicity

Amorphous SiO₂:IARC Group 3(uncertain carcinogen to humans)

Carbon Black:IARC Group 2B (Possibly carcinogenic to humans)

ACGIH: A3 (Confirmed animal carcinogen with unknown relevance to humans)

Reproductive toxicity:No data

Specific target organ toxicity- Single exposure

No relevant information found.

Specific target organ toxicity- Repeated exposure

Carbon black: Damage to respiratory organ was reported.

Aspiration:No data

Toxicokinetics, metabolism and distribution:No data

Besides: No data

Part 12 Ecological information

Eco toxicity:Epoxy Resin Harmful to aquatic life.

Harmful to aquatic life with long lasting effects.

Carbon black Low harmful to aquatic life.

[Toxicity data]

Carbon black Daphnia magna EC50(24h 5600mg/l)

EC₅₀: Effective concentration, 50% immobilized aquatic life

Persistence and degradability:

Epoxy Resin Evaluated non-degradable in Biodegradation and Bioconcentration Data of Existing Chemicals based on the CSCL Japan.

Potential bioaccumulation:

Epoxy resin Estimated to be low bio-accumulable.

Migration in soil:No data available

Part 13 Disposal considerations

Please follow your country and your region requirements for waste disposal.

Part 14 Transport information

UN transport of dangerous goods number:None

The United Nations Transport name: None

The United Nations risk classification:None

Packing group:None

Marine pollutant:No data

Transport precaution:Carry protective equipment and portable fire extinguishers.Before shipping,check leaks for container.

Ensure a smooth, safe loading, in order to prevent the container slide, fall and damage.Appropriate measures should be taken to prevent container damage during transportation.Prevent exposure, rain, high temperature,moisture. Banned to be transported with acid, alkali and residue of forbidden complex. Although it doesn't belong to dangerous goods,please follow the demands of ICAO、IMDG、RID、ADR、AND.

Part 15 Regulatory information

Regulatory information:

You have the obligation to get the information for this substance in your contry and location.All of the users must follow the way of worker protection and environmental emission control measures,specofied in this SDS,State Administration of Work Safety Supervision(SAWS), Ministry of environmental protection of the people's Republic of China (MEP),Ministry of Health(MOH), Ministry of human resources , social security (MHR&SS), and other regulation.

HSE regulations for this product:

Regulation on occupational health and labor protection:

《Diagnostic criteria of occupational chemical eye burns》(GBZ54-2002) : Epoxy Resin

《Diagnostic Criteria of Occupational Contact Dermatitis》(GBZ20-2002) : Epoxy Resin

《Occupation disease classification and catalogue》(National Health Disease Control and Prevention (2013) No.48):Silicosis

《Technical specification for occupational health monitoring》(GBZ188-2007) : Silica dust

《Diagnostic criteria of pneumoconiosis》(GBZ70-2002) : Silicosis

《Selection, use and maintenance of protective clothing chemical protective clothing》(GB/T24536-2009) : Silica dust

Hazardous chemicals catalog (2015)

Environmental management regulations

《List of existing chemical substances in China》(IECSC, ver.2013) : This product contains new chemical substances that are not include in the List of Existing Chemical Substances in China, but have been declared and registered. Due to restrictions, please contact us for details.

《Guidelines for preventing health problems caused by chemicals with mutagenic origin》

Part 16 Other information

Creation and revision information:

Compared with last version,there are some change on Reference guide and format.

On content, this revision SDS has the followed change points:

Part 2 Hazards Overview

Part 2 GHS Hazards identification

Part 3 Composition Information

Part 11 Toxicological information

Part 12 Ecological information

references

1) Globally Harmonized System of Classification and Labelling of Chemicals (GHS) (2011)

2) TLVs and BEIs (ACGIH 2014)

3) International Chemical Safety Card (WHO/ILO/UNEP)

4) GHS Classification Data Base (National Institute of Technology and Evaluation, Japan)

5) SDS published by the manufacturer of the epoxy resin (2014)

6) Hazardous Chemicals Directory of China (2015)

7) (Epoxy resin) Manufacturer's "product safety data sheet" (2017)

Abbreviations and acronyms:

ACGIH: American Conference of Governmental Industrial Hygienists

IARC: International Agency for the Research on Cancer

LD50: lethal dose 50%

LC50: lethal concentration 50%

EC50: 50% Effective concentration

Disclaimer

The SDS information applies only to the specified product, unless otherwise specified, it not applies to a mixture of this product with other substances.

The SDS only provides product safety information to those who have received professional training in the proper use of the product.

Users of this SDS, must make independent judgments of the suitability of the SDS under special conditions.In special occasions, the SDS writers will not take any responsibility due to the damage caused by using the product.