



SUMITOMO BAKELITE CO.,LTD.

CHEMICAL PRODUCT SAFETY DATA SHEET

Prepared in accordance with GB/T 16483 and GB/T 17519.

Product name: SUMIKON® EME-G700 Ver.AN

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SECTION 1 Chemical product and company identification

Product name

SUMIKON® EME-G700 Ver.AN

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Recommended use and Limitations on use

Product uses

Epoxy Molding Compound for Encapsulant of Semiconductors.

Recommended use

For Semiconductors.

Restrictions on use

For industrial use only.

SECTION 2 Hazards identification

Emergency overview

Exposure to powder or dusts may be irritating to eyes, nose and throat. Prolonged exposure may cause chronic effects.

Hazard categories

Not classified.

*Hazards not stated here are "Not classified", "Not applicable" or "Classification not possible".

Label elements

Pictograms

None.

Signal word

None.

Hazard statement

None.

Precautionary statement

Prevention

P202

Do not handle until all safety precautions have been read and understood.

P281

Use personal protective equipment as required.

Response

P308 + P313

IF exposed or concerned: Get medical advice/attention.

Storage

P401

Store in accordance with local/regional/national/international regulation.

Disposal

P501

Dispose of contents/container in accordance with local/regional/national/international regulations.

Physical and chemical hazards

The product is stable and non-reactive under normal conditions of use, storage and transport. No unusual fire or explosion hazards noted.

Health hazards	Dust may irritate respiratory system. Prolonged inhalation may be harmful. Dust or powder may irritate the skin. Expected to be a low ingestion hazard. Dust may irritate the eyes.
Environmental hazards	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Other hazards	Not available.

SECTION 3 Composition/information on ingredients

Substance/mixture	Mixture	
Chemical name	Concentration (%)	CAS Number
环氧树脂 Epoxy Resin	5 - 10	Trade Secret
酚醛树脂 Phenol Resin	1 - 5	Trade Secret
二氧化硅(无定形) A Silica(Amorphous) A	70 - 90	60676-86-0
二氧化硅(无定形) B Silica(Amorphous) B	5 - 10	7631-86-9
炭黑 Carbon Black	0.1 - 1	1333-86-4
Composition comments	All concentrations are in percent (%) by weight.	

SECTION 4 First aid measures

Inhalation	Move to fresh air.
Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.
Eye contact	Do not rub eyes. Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms and health effects	Irritation of eyes and mucous membranes. Dusts may irritate the respiratory tract, skin and eyes.
Expected acute symptoms and delayed symptoms	Not available.
Personal protection for first-aid responders	First aid personnel must wear protective gloves/protective clothing/eye protection/face protection. IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
Notes to physician	Treat symptomatically. Symptoms may be delayed.

SECTION 5 Fire-fighting measures

Extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Extinguishing media to avoid	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards	Development of hazardous combustion gases or vapours possible in the event of fire.
General fire hazards	No unusual fire or explosion hazards noted.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
Fire precautions and protective measures	
Special fire fighting procedures	Move containers from fire area if you can do so without risk.
Protection of fire-fighters	Wear suitable protective equipment. Use personal protective mask and fight fire from upwind, to avoid fumes upon combustion.

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. For personal protection, see section 8 of the SDS.

For emergency responders Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

Environmental precautions Avoid discharge into drains, water courses or onto the ground.

Methods and materials for containment and cleanup of chemical spills Avoid the generation of dusts during clean-up. Collect dust using a vacuum cleaner equipped with HEPA filter. Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk.

Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Following product recovery, flush area with water.

Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal. For waste disposal, see section 13.

Prevention of secondary hazards Not available.

SECTION 7 Handling and storage

Handling Minimise dust generation and accumulation. Provide appropriate exhaust ventilation at places where dust is formed. Avoid prolonged exposure. Practice good housekeeping.

Storage Store in tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Keep dry and cool below 5°C for quality.

SECTION 8 Exposure controls/personal protection

Occupational Exposure Limits

China OELs. Occupational Exposure Limits for Hazardous Agents in the Workplace, Chemical Hazardous Agents (GBZ 2.1-2007)

Components	Type	Value	Form
Carbon Black (CAS 1333-86-4)	PC-TWA	4 mg/m ³	Total dust.

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Carbon Black (CAS 1333-86-4)	TWA	3 mg/m ³	Inhalable fraction.

Biological limit values No biological exposure limits noted for the ingredient(s).

Recommended monitoring procedures Follow standard monitoring procedures.

Control parameters Follow standard monitoring procedures.

Engineering measures Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. If material is ground, cut, or used in any operation which may generate dusts, use appropriate local exhaust ventilation to keep exposures below the recommended exposure limits.

Personal protective equipment

Respiratory protection Wear respirator with dust filter.

Hand protection Wear protective gloves.

Eye protection Wear safety glasses with side shields (or goggles).

Skin and body protection Wear apron or protective clothing in case of contact.

Hygiene measures

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

SECTION 9 Physical and chemical properties**Appearance**

Physical state	Solid.
Form	Tablet. Powder.
Colour	Black.
Odour	Epoxy.
pH	Not available.
Melting point/freezing point	Not available.
Boiling point, initial boiling point, and boiling range	Not available.
Flash point	Not available.
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Vapour pressure	Not available.
Vapour density	Not available.
Relative density	Not available.
Density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Flammability (solid, gas)	Not available.
Other data	
Explosive properties	Not explosive.
Oxidising properties	Not oxidising.
Specific gravity	1.8 - 2.2

SECTION 10 Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials. Keep away from heat, moisture and sunlight for quality.
Incompatible materials	Strong oxidising agents. Strong acids, alkalies and oxidizing agents.
Hazardous decomposition products	Toxic gas.

SECTION 11 Toxicological information**Acute toxicity**

Components	Species	Test Results
Carbon Black (CAS 1333-86-4)		
Acute		
Oral		
LD50	Rat	> 8000 mg/kg *

Components	Species	Test Results
Silica(Amorphous) A (CAS 60676-86-0)		
<u>Acute</u>		
Oral		
LD50	Rat	> 22500 mg/kg *
Silica(Amorphous) B (CAS 7631-86-9)		
<u>Acute</u>		
Oral		
LD50	Rat	>= 22500 mg/kg
Routes of exposure	Inhalation. Skin contact. Eye contact.	
Symptoms	Irritation of eyes and mucous membranes. Dusts may irritate the respiratory tract, skin and eyes	
Skin corrosion/irritation	Not available.	
Serious eye damage/eye irritation	Not available.	
Respiratory or skin sensitisation		
Respiratory sensitisation	Not available.	
Skin sensitiser	This product is not expected to cause skin sensitisation.	
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	Risk of cancer cannot be excluded with prolonged exposure.	
China OELs for hazardous agents in the workplace: Carcinogen Category		
CARBON BLACK DUST (TOTAL) (CAS 1333-86-4)	Possible human carcinogen.	
IARC Monographs. Overall Evaluation of Carcinogenicity		
Carbon Black (CAS 1333-86-4)	2B Possibly carcinogenic to humans.	
Silica(Amorphous) A (CAS 60676-86-0)	3 Not classifiable as to carcinogenicity to humans.	
Silica(Amorphous) B (CAS 7631-86-9)	3 Not classifiable as to carcinogenicity to humans.	
Toxic to reproduction	This product is not expected to cause reproductive or developmental effects.	
Specific target organ toxicity following single exposure	Not available.	
Specific target organ toxicity following repeated exposure	Not available.	
Aspiration hazard	Not available.	
Chronic effects	Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.	

SECTION 12 Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. There are no data on the ecotoxicity of this product.
Persistence and degradability	No data is available on the degradability of any ingredients in the mixture.
Bioaccumulation	Not available.
Mobility in soil	No data available for this product.
Other hazardous effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13 Disposal considerations

Residual waste	Dispose in accordance with local regulations.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal.
Local disposal regulations	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

SECTION 14 Transport information

CNDG

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Specific precautions

Keep cool below 5°C.

Keep containers tightly closed. And avoid leaks, spills or collapse of cargo to avoid damage to containers.

SECTION 15 Regulatory information**Law of the People's Republic of China on Prevention and Control of Occupational Diseases****Classification of occupational disease hazards**

Carbon Black (CAS 1333-86-4)

Silica(Amorphous) B (CAS 7631-86-9)

Regulations on the Control over Safety of Dangerous Chemicals

Not regulated.

Measures for the Environmental Management Registration of Hazardous Chemicals (for Trial Implementation)

Not regulated.

Other regulations

This safety data sheet conforms to the following laws, regulations and standards:

- Measures for the Safe Use of Chemicals in Workplaces
 - Regulations on Labor Protection in Workplaces Where Toxic Products Are Used
 - Packing Symbol of Dangerous Goods(GB190-2009)
 - Regulations on the Control over Safety of Dangerous Chemicals
 - Packing - Pictorial Marking for Handling of Goods (GB/T191-2009)
 - Act on the Prevention and Treatment of Occupational Diseases (Order No.52, December 31, 2011)
- All ingredients are listed on the Chinese inventory of Existing Chemical Substances.

Occupational exposure limits for hazardous agents in the workplace (GBZ 2.1-2007)

Carbon Black (CAS 1333-86-4)

China SAWS GHS: Classification

Not applicable.

International regulations**Stockholm Convention**

Not applicable.

Rotterdam Convention

Not applicable.

Montreal Protocol

Not applicable.

Kyoto Protocol

Not applicable.

Basel Convention

Not applicable.

SECTION 16 Other information

References

- ACGIH (2017)
- EPA: AQUIRE database
- NLM: Hazardous Substances Data Base
HSDB® - Hazardous Substances Data Bank
- IARC (vol. 1~117)
- China. GBZ 2.1-2007: OELs. Occupational Exposure Limits for Hazardous Agents in the Workplace, Part 1, Chemical Hazardous Agents (March 2008)
- China. GB13690-2009: General rules for classification and hazard communication of chemicals.
- UN. Globally Harmonized System of Classification and Labelling of Chemicals (GHS)
ST/SG/AC.10/30/Rev.4
- Japan. GHS Classifications of Regulated Chemicals (NITE)
- China. Guidance on the Compilation of Safety Data Sheet for Chemical Products (GB/T 17519-2013)
- China. Safety Data Sheet for Chemical Products - Content and Order of Sections (GB/T 16483-2008)
- China. GB 30000-2013: Rules for classification and labelling of chemicals.
- China. GB/T 32374-2015: Phrase and codification of chemical hazard statements.

Disclaimer

SUMITOMO BAKELITE CO., LTD. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use