



SAFETY DATA SHEET

1. Identification of the substance or mixture and of the supplier

1.1 GHS product identifier **SUMIKON® EME-G605 Type -L**

1.2 Other means of identification

SDS number P001822

1.3 Recommendations and restrictions on the use of substances or mixtures

Recommended use For Semiconductors.

Product uses Epoxy Molding Compound for Encapsulant of Semiconductors.

1.4 Supplier's details

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2. Hazards identification

2.1 GHS classification of substance or mixture, and national or regional information

Physical hazards Not classified.

Health hazards Not classified.

Environmental hazards Not classified.

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

2.2 GHS label elements

Hazard symbol(s) None.

Signal word None.

Hazard Statement(s) The mixture does not meet the criteria for classification.

Precautionary Statement(s)

Prevention Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required.

Response IF exposed or concerned: Get medical advice/attention.

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

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

2.3 Other hazards which do not result in GHS classification None known.

Supplemental information None.

3. Composition/information on ingredients

Mixture

Chemical identity	Common name(s), synonym(s)	CAS No. and other unique identifiers	Concentration
Epoxy Resin	-	Trade Secret	5 - 10
Phenol Resin A	-	Trade Secret	1 - 5
Phenol Resin B	-	Trade Secret	1 - 5
Silica(Amorphous)	-	60676-86-0	80 - 100
Carbon Black	-	1333-86-4	0.1 - 1

Composition comments Silica(Amorphous) of Raw material contains a very slight Silica(Crystal).

4. First-aid measures

4.1 Description of 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.

4.2 Most important symptoms/effects, acute and delayed Dusts may irritate the respiratory tract, skin and eyes. Irritation of eyes and mucous membranes.

4.3 Indication of immediate medical considerations and important specific treatment that should be performed Treat symptomatically. Symptoms may be delayed.

General advice 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.

5. Fire-fighting measures

5.1 Prohibited extinguishing media and suitable extinguishing media

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	None known.

5.2 Specific hazards arising from chemicals Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Special protective equipment and precautions for fire-fighters Wear suitable protective equipment.
Use personal protective mask and fight fire from upwind, to avoid fumes upon combustion.

General fire hazards No unusual fire or explosion hazards noted.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

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

6.3 Methods and materials for containment and cleaning up

Stop the flow of material, if this is without risk. Collect dust using a vacuum cleaner equipped with HEPA filter.

Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Avoid the generation of dusts during clean-up. Prevent entry into waterways, sewer, basements or confined areas. 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.

7. Handling and storage

7.1 Precautions for safe handling, use and storage

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

7.2 Conditions for safe storage, including any incompatibilities

Store in original 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.

8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Thailand. OELs. Notification of the Ministry of Interior, Re: Working Safety in Respect to Environmental Condition (Chemical)

Components	Type	Value
Silica(Amorphous) (CAS 60676-86-0)	TWA	0.8 mg/m ³
		0.8 mg/m ³
		20 Mppcf

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).

8.2 Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) 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 engineering measures are not sufficient to maintain concentrations of dust particulates below the OEL (occupational exposure limit), suitable respiratory protection must be worn. 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.

8.3 Personal protective measures

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection

For prolonged or repeated skin contact use suitable protective gloves. Use protective gloves as required.

Other

Use personal protective equipment as required.

Respiratory protection

Wear respirator with dust filter.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

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.

9. Physical and chemical properties

9.1 Appearance

Physical state

Solid.

Form

Tablet. Powder.

Colour

Black.

9.2 Odor	Epoxy.
9.3 Odor threshold limit	Not available.
9.4 pH	Not available.
9.5 Melting point/freezing point	Not available.
9.6 Initial boiling point and boiling range	Not available.
9.7 Flash point	Not available.
9.8 Evaporation rate	Not available.
9.9 Flammability (solid, gas)	Not available.
9.10 Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit – upper (%)	Not available.
9.11 Vapor pressure	Not available.
9.12 Vapor density	Not available.
9.13 Relative density	Not available.
9.14 Solubility	
Solubility (water)	Not available.
9.15 Partition coefficient: n-octanol/water	Not available.
9.16 Auto-ignition temperature	Not available.
9.17 Decomposition temperature	Not available.
9.18 Viscosity	Not available.
Other information	
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Specific gravity	1.8 - 2.2

10. Stability and reactivity

10.1 Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
10.2 Chemical stability	Stable under recommended storage conditions.
10.3 Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
10.4 Conditions to avoid	Contact with incompatible materials. Keep away from heat, moisture and sunlight for quality.
10.5 Incompatible materials	Strong acids, alkalies and oxidizing agents.
10.6 Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

11.1 Information on likely routes of exposure	
Inhalation	Dust may irritate respiratory system. Prolonged inhalation may be harmful.
Skin contact	Dust or powder may irritate the skin.
Eye contact	Dust may irritate the eyes.
Ingestion	Expected to be a low ingestion hazard.
11.2 Symptoms related to physical, chemical and toxicological characteristics	Irritation of eyes and mucous membranes. Dusts may irritate the respiratory tract, skin and eyes.

11.3 Delayed and immediate effects, including chronic effects from short- and long-term exposure Occupational exposure to the substance or mixture may cause adverse effects.

11.4 Numerical values of toxicity

Acute toxicity

Components	Species	Test results
Carbon Black (CAS 1333-86-4)		
Acute Oral		
LD50	Rat	> 8000 mg/kg
Silica(Amorphous) (CAS 60676-86-0)		
Acute Oral		
LD50	Rat	> 22500 mg/kg
Skin corrosion/irritation	Not available.	
Serious eye damage/eye irritation	Not available.	
Respiratory or skin sensitisation		
Respiratory sensitisation	Not available.	
Skin sensitisation	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.	
ACGIH Carcinogens		
Hydrotalcite (CAS 11097-59-9)		A4 Not classifiable as a human carcinogen.
IARC Monographs. Overall Evaluation of Carcinogenicity		
Carbon Black (CAS 1333-86-4)		2B Possibly carcinogenic to humans.
Silica(Amorphous) (CAS 60676-86-0)		3 Not classifiable as to carcinogenicity to humans.
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.	
Specific target organ toxicity - single exposure	Not available.	
Specific target organ toxicity - repeated exposure	Not available.	
Aspiration hazard	Not available.	

12. Ecological information

12.1 Ecological toxicity	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.
12.2 Persistence and degradability	No data is available on the degradability of this product.
12.3 Bioaccumulative potential	
12.4 Mobility in soil	No data available.
12.5 Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Waste from residues / unused products	Dispose of in accordance with local regulations.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Specific precautions

Keep cool below 5°C.

Keep containers tightly closed. And take care leaks, spills or collapse of cargo, not to avoid damage of containers.

15. Regulatory information

Federal regulations

Thailand. Explosive Substances & Precursors (Ministry of Defense Notification Re: Arms Subject to Imports License)

Not regulated.

Thailand. Notification of the Ministry of Interior, Re: Work Safety Relating to Dangerous Chemicals

Not regulated.

Thailand. Notification of the Ministry of Interior, Re: Work Safety Relating to More Dangerous Chemicals

Not regulated.

Thailand. Reportable Hazardous Substances (Notification of Ministry of Industry Re: Bases respecting report of quantity of hazardous materials under Department of Industrial Works, B.E. 2547)

Not regulated.

International regulations

Montreal Protocol

Not applicable.

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Basel Convention

Not applicable.

16. Other information, including date of preparation or last revision

Version No.

01

Disclaimer

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