

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

CHEMICAL PRODUCT NAME KE-200D2
 NAME OF MANUFACTURER / SUPPLIER KYOCERA Chemical Corporation
 NAME OF SECTION Molding Compound Technical Group , Electronics Device Material Division
 ADDRESS 14-25, Ryoke 5-chome, Kawaguchi Saitama-ken 332-8533, Japan
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2. COMPOSITION/INFORMATION ON INGREDIENTS

SUBSTANCE / MIXTURE Mixture
 CHEMICAL NAME Epoxy resin molding compound

INGREDIENTS	CAS REGISTRY No	TWA in ACGIH	COMPOSITION
Silica	CAS No. 60676-86-0	0.1mg/m ³	80 - 90 %
Epoxy resin	CAS No. 29690-82-2		5.5 - 10.5 %
Brominated epoxy resin	CAS No. 40039-93-8		0.5 ? 2.5 %
Phenol resin	CAS No. 9003-35-4		1.5 - 5.5 %
Antimony Trioxide	CAS No. 1309-64-4	0.5mg/m ³ as Sb	0.5 - 3 %

UN CLASS AND UN NUMBER Not applicable.

3. HAZARDS IDENTIFICATION

CLASS NAME OF HAZARDOUS CHEMICALS FOR MSDS IN JAPAN: Not applicable.
 PHYSICAL AND CHEMICAL HAZARDS: Not applicable.
 ADVERSE HUMAN HEALTH EFFECTS: Not applicable.
 ENVIRONMENTAL EFFECTS: No relevant information found.

4. FIRST-AID MEASURES

EYE CONTACT

Gently rinse the affected eyes with clean water for at least 15 minutes.

Arrange for transport to the nearest medical facility for examination and treatment by a physician as soon as possible.

SKIN CONTACT

Wash the affected area under tepid running water using a mild soap.

INHALATION

Remove the victim from the contamination immediately to fresh air.

INGESTION

Give the person one or two glasses of water, try to get the victim to vomit by having the victim touch the back of their throat with a finger.

5. FIRE-FIGHTING MEASURES

FLAMMABLE PROPERTIES (SPECIFIC HAZARDS): Combustible solid.

EXTINGUISHING MEDIA: Dry chemical powder, carbon dioxide, foam, water or dry sand.

FIRE-FIGHTING PROCEDURES

Dry chemical powder, carbon dioxide or dry sand should be used for small fires.

Cut off of air by using foam is effective for conflagration.

Water extinguishing may be danger under certain circumstances.

Apply water to cool and protect surrounding area.

Move container from fire area if it can be moved.

PROTECTION OF FIRE-FIGHTERS

Firefighters should wear proper protective equipments (wear breathing apparatus and full protective gear).

Evacuate non essential personnel.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Decomposition and combustion products may be toxic.

6. ACCIDENTAL RELEASE MEASURES

Evacuate non essential personnel.

Eliminate all sources of ignition and ventilate the area.

Wear proper protective equipment.

Sweep up, place in a bag and hold for waste disposal.

7. HANDLING AND STORAGE

See section8, EXPOSURE CONTROL/PERSONAL PROTECTION, prior to handling.

Wear proper protective equipment. Clean up all traces of spill.

Transfer spilled material to clean, dry containers for disposal.

Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

Do not breathe or swallow dust and avoid contact with skin or eyes.

Keep away from reactive materials, sunlight, heat, flame or ignition source and store in a cool location.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

TLV (Threshold Limit Value)

See section 2, COMPOSITION/INFORMATION ON INGREDIENTS

ENGINEERING MEASURES

Handle this material in a totally enclosed system, or use with local exhaust ventilation (with minimum capture velocity of 30m/min).

PERSONAL PROTECTIVE EQUIPMENT: Safety spectacles, impervious rubber gloves, rubber apron.

RESPIRATORY PROTECTION (Specify Type) NIOSH approved half-mask air purifying respirator.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Eyewash facility

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Black solid
ODOR	No significant odor
BOILING POINT(degree C)	N/APP
VAPOR PRESSURE	N/APP
MELTING POINT(degree C)	N/APP
DENSITY(at 20degree C)	1.88 – 2.08
SOLUBILITY IN WATER	N/APP
FLASH POINT(degree C)	N/APP
AUTOIGNITION POINT(degree C)	N/APP
VAPOR DENSITY (AIR=1).	N/APP
EVAPORATION RATE(Butyl Acetate=1)	N/APP
EXPLOSION LIMIT(%)	N/APP

"N/APP" means "Not applicable".

10. PHYSICAL HAZARD

STABILITY

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

REACTIVITY

May form explosive dust-air mixture. Avoid contact with oxidizing agents, acids, amines or bases.

HAZARDOUS DECOMPOSITION PRODUCTS

Thermal decomposition may yield hydrogen bromide, bromine vapor, carbon monoxide and carbon dioxide

11. TOXICOLOGICAL INFORMATION

CORROSIVE AND IRRITANT PROPERTIES: Irritating to eyes, skin and respiratory system.

ACUTE TOXICITY

Oral toxicity LD50(rat) >10,000 mg/kg(epoxy resin).

Oral toxicity LD50(rat) > 20,000 mg/kg(Antimony Trioxide).

CARCINOGENIC EFFECTS

This product contains silica which is listed in ACGIH(TWA, 0.1mg/m3), OSHA and IARC(group 3).

This product contains antimony trioxide which is listed as group 2B in IARC.

12. ECOLOGICAL INFORMATION

BIODEGRADABILITY No relevant information found.

BIOACCUMULATION No relevant information found.

FISH TOXICITY No relevant information found.

13. DISPOSAL CONSIDERATION

This combustible material may be burned in a chemical incinerator or landfill.

Do not dump into sewers, on the ground or into any body of water.

Consult an expert on the disposal. Ensure disposal in compliance with government requirements and ensure conformity to local disposal regulations.

14. TRANSPORT INFORMATION

See section 2.

Follow all regulations in your country.

Transport and store according to general caution and instructions in before mentioned comment.

15. REGULATORY INFORMATION

Regulatory information with regard to this substance in your country or in your region should be examined by your own responsibility.

16. OTHER INFORMATION

To the best of our knowledge, the information contained here in is accurate. However, all materials may present unknown hazards and should be used in caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist. Final determination of suitability of any material is the sole responsibility of the user.