

Reference Number:
C1-109

Material Safety Data Sheet

KBK E919A
3/16/2005
C1-109
Creation/Revision 3/16/2005

1. Product and Company Information

Product Identification: KBK E919A (Base Resin)

Manufacturer's Name: National Starch and Chemical Company

Manufacturer's Address: 1-6-5 Semba Nishi Minoo, Osaka

Responsible Department: Safety and Product Assurance Division

Telephone Number: 072-728-1719

Fax Number: 072-728-3519

Preparing Department: Engineering Headquarters

Telephone Number: 072-728-1701

2. Composition/Information on Ingredients

Pure/Composite: Composite

Chemical Name: Epoxy Resin Composite (Base Resin)

Composition:

Ingredient	Weight %	CAS Number	Regulation Number
Epoxy Resin	39	25068-38-6	(7)-1283
Epoxy Resin	0 - 5	2426-08-6	(2)-392
Filler	50 - 60	13463-67-7 14080-60-7	(1)-558, (1)-548

PRTR:

(30) A mixture of 4, 4'-Isopropylidenediphenol Polymer with 1-Chloro-2, 3-Epoxypropane

Occupational Health and Safety Material Information:

(311) Silica 0 – 5%, (192) Titanium Oxide 5 – 10%, (433) 1-Butyl-2,3-Epoxypropylether 5%

Poison Designation:

Not designated.

The number in parenthesis is the material enforcement number.

3. Hazards and Toxicology

Classification:

Classified as a hazardous material.

Hazards:

Rapid temperature increase will result from mixing with a large amount of curing agent.

Toxicology:

Skin and eye irritant. May cause skin sensitization. Contains chemicals with known mutagenic properties.

4. First Aid Measures

Inhalation:

Seek prompt medical attention if irritation or other abnormalities develop after inhalation of fumes.

Skin Contact:

Remove any material from the skin and wash thoroughly with a neutral soap. Seek prompt medical attention if irritation or inflammation develops.

Eye Contact:

Flush eyes with copious amounts of water for at least 15 minutes. Seek medical treatment if any abnormalities develop.

Ingestion:

Do not induce vomiting. Seek prompt medical attention. Do not give anything by mouth to an unconscious person.

5. Fire Fighting Measures

Extinguishing Media:

Use water, foam, powder, carbon dioxide or sand.

Fire Fighting Procedures:

Direct the extinguishing media at the base of the fire. Move flammable materials to a safe location. When movement is not possible, cool flammable materials with water.

Protective Equipment:

Fight the fire from upwind wearing protective goggles, clothing and a self-contained breathing apparatus as conditions dictate.

6. Accidental Release Measures

Soak up spilled material with rags, sand, or other absorbent material and place in a covered container.

7. Handling and Storage Precautions

Handling:

- Keep away from ignition sources, high-temperatures, and sources of ignition. Avoid direct contact with strong oxidizing agents.
- Thoroughly wash hands and gargle after use.
- Take necessary precautions to prevent ingestion and contact with eyes, skin or clothing.
- Ensure that the work area is sufficiently ventilated. Close container after use.
- Work to avoid spills, overflow, splattering and the production of excessive vapors.
- Work to prevent static electricity buildup and wear electrically conductive clothing and footwear.
- Do not drop, spill, drag or mishandle the container.

Storage:

- Use well-secured, explosion-proof electrical equipment in the storage facility.
- Store tightly sealed in a cool, dark location away from direct sunlight.

Other Information:

- Follow all local occupational safety and fire regulations.

8. Exposure Controls and Personal Protection**Standard Control Concentration:**

Work Environment Standard: Not Established

Permissible Concentration:

(1-Butyl-2,3-Epoxypropylether)

Japan Journal of Occupational Health Not Established

ACGIH (TWA): 25 ppm, 135 mg/m³

OSHA (PEL): Not Established

(Titanium Oxide)

Japan Journal of Occupational Health 1 – 4 mg/ m³

(2001 Edition)

ACGIH (TWA)(2001 Edition): 10 mg/ m³

Facilities Countermeasures:

- Provide adequate ventilation when working in confined spaces.
- Provide clearly labeled emergency showers, and hand and eye washing stations close to the work site.

Protective Equipment:

Gas masks approved for use with organics, self-contained breathing apparatus, protective goggles, gloves, clothing and footwear.

9. Physical and Chemical Properties

Appearance: Paste

Odor: Characteristic Odor

Vapor Density: No Data Available

Boiling Point (C): No Data Available

Vapor Pressure: No Data Available

Melting Point: No Data Available

Specific Gravity: 1.3 – 2.0 (at 20° C)

Solubility: Insoluble in Water

10. Stability and Reactivity Information

Ignition Point: No Data Available

Explosive Range: No Data Available

Explosion Point: No Data Available

(in air)

Stability/Reactivity:

Stable. Will give off heat and harden accordingly when mixed with a curing agent such as ethylenediamine. Store separately from oxidizers, strong acids, mercaptans and bases. Reacts violently and may ignite when exposed to oxidizers (nitric acid, permanganates, chromic acid, etc.). Explosive peroxides may form upon direct contact with strong oxidizers.

11. Toxicological Information**Acute Toxicity:**

No data currently available.

Dermal Corrosivity:

Persistent skin contact may cause inflammation.

Irritant (Skin, Eyes):

Temporary eye irritant.

Sensitization:

Skin sensitizer.

Mutagenicity:

Epoxy resins are among the chemicals known to exhibit mutagenic effects.

Carcinogenicity:

Undetermined at this time. The following notice from the Labor Ministry addresses epoxies and curing agents.

Labor Ministry and Labor Standards Bureau Notice No. 477, 6/23/1976

“Regarding the Prevention of Health Problems associated with Epoxy Resins and Curing Agents.”

12. Ecological Information

No information available at this time.

13. Disposal Considerations

Follow all applicable regulations and dispose of material with an approved facility.

Follow the same procedure for disposal of containers and rags.

14. Transportation Information**Transportation Safety Precautions:**

Take measures to prevent falling, dropping, or damage to containers during shipment. Follow applicable fire prevention and related laws.

15. Regulatory Information:**Industrial Safety and Health Law:**

Ordinance Number 192 331 433

Chemicals with Known Mutagenic Effects (No. 312)

Bisphenol A Epoxy Resin Intermediate

1-Butoxy-2,3-Epoxypropane (Butyl Glycidyl Ether)

While not a law, the following notice from the Labor Ministry contains information regarding mixtures of epoxy resins and curing agents.

Labor Ministry Bulletin No. 33, 3/29/1996 “Labor Ministry Standards regarding Chemicals in the Workplace”

Fire Prevention Law:

Not Regulated

Poisonous and Deleterious Substances Control Law:

Not Regulated

PRTR Law:

First Class Chemical Designation No. 30 (Bisphenol A Epoxy Resin)

16. Other Information

Always be cautious in handling and use of this material as hazard and toxicological assessment may be incomplete or inadequate.

Contact:

Same as preparing department at the beginning of this document.

Reference Material:

- The Japan Chemical Industry Association MSDS Preparation Guidelines
- The Labor Ministry and Labor Standards Bureau Notice entitled “Regarding the Handling of Chemicals with know Mutagenic Effects” No. 341.2 6/6/1994
- The Labor Ministry and Labor Standards Bureau Notice entitled “Preventing Health Hazards from Chemicals with know Mutagenic Effects” No. 312.2 5/17/1993