

Material Safety Data Sheet

Reference Number C1-083c

Preparation Date: October 9, 2002

1. Manufacturer's Name and Contact Information

Product Name: KBK E396 (Hardening Agent)
Company Name: Nippon NSC
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Department: Industrial Science Headquarters Safety and Certification Division
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Developer: Research and Development
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2. Composition / Information on Ingredients

Pure / Compound: Compound
Chemical Name: Epoxy Resin Solution
Hazardous Ingredients:

Ingredient	Content (%)	Control #
Amines (including polyamide amine)	80 – 90%	2-159, 3-312, 7-324, 7-401
Phenol	0 – 10%	3-481
Solvent	0 – 10%	4-38, 4-1611

3. Hazards Identification

Classification: Classified as a skin corrosive.
Flammability: Mixing with a large amount of epoxy will result in a rapid increase in temperature.
Toxicity: Skin and eye irritant.

4. First Aid Measures

Inhalation: If itchiness or irritation develops from inhaling fumes produced by heating or mixing with epoxy, seek medical attention.
Skin Contact: Remove material from skin. Wash thoroughly with water and a pH neutral soap. Seek medical attention if itchiness or irritation develops.
Eye Contact: Flush eyes with water for at least 15 minutes. Seek medical attention for any abnormality.
Ingestion: Drink plenty of water or milk and induce vomiting. Do not give anything orally to unconscious victims.

5. Fire Fighting Measures

Extinguishing Media: Water, foam, powder, CO₂ gas, sand, or related media.
Extinguishing Methods: Work at the base of source of the fire using an approved extinguishing media. Quickly remove other combustible materials to a safe location. If removal is not a possibility, use water to keep containers cool.
Protective Gear: Wear protective goggles and clothing. Wear a respirator if necessary.

6. Accidental Release Measures

Soak up spills with sand, rags, or other absorbent material. Place in a sealed container.

7. Handling and Storage

Handling: To prevent ignition, avoid high temperatures, sparks, and strong oxidizers. When finished handling material, thoroughly wash hands and gargle. Take measures to avoid inhalation and contact with eyes, skin, and clothing. Provide adequate ventilation in work areas. Avoid spills, overflows, and unnecessary evaporation. Take measures to prevent

static electricity build up by wearing conductive clothing and footwear. Do not topple, drop, drag, or handle containers in a rough manner.

Storage: Take measures to prevent sparking in electrical devices in the storage areas. Keep storage containers tightly sealed to prevent contact with air. Avoid direct sunlight. Store in a cool and dark place.

Other: Obey all applicable work-safety and fire regulations.

8. Exposure Controls / Personal Protection

Exposure Limits:	Work Environment Limits:	Diethylenetriamine	Phenol
	ACGIH (TLV)	Not established.	5ppm
		TWA 1ppm (skin)	5ppm

Facilities: Provide adequate ventilation for work areas. Keep containers closed when not in use. Provide well-marked safety showers, sinks, and eye wash stations near work areas.

Equipment: Masks approved for organic gases, respirators, protective gloves, goggles, clothing, and footwear.

9. Physical and Chemical Properties

Appearance: Transparent pale-yellow liquid.

Odor: Strong amine odor.

Boiling Point: No data available.

Melting Point: No data available.

Solubility: Phenol and some amines are soluble in water.

Vapor Density: No data available.

Vapor Pressure: No data available.

Specific Gravity: 1.0 – 1.1 (20°C)

10. Stability and Reactivity

Flash Point: 158°C

Flammability Limits: No data available.

Auto Ignition Temp.: No data available.

Reactivity: Strongly acidic. Reacts violently with epoxy compounds.

11. Toxicological Information

Acute Toxicity: No data available at present.

Skin Corrosive: Prolonged contact with skin may cause inflammation.

Irritant: Inhalation of fumes may cause irritation.

Sensitizer: May act as a skin sensitizer in some individuals.

Mutagen: Phenol has been recognized as a mutagenic substance.

Carcinogen: Current information indicates carcinogenetic properties.

12. Ecological Information

No data available at present.

13. Disposal Considerations

Dispose of with a licensed professional.

14. Transportation Information

Take measures to prevent toppling, dropping, and damaging containers during transportation. Obey all applicable regulations.

15. Regulatory information

16. Other Information

Contact Information: See section 1.

Please note that the safety information in this document may be incomplete. Use caution as all materials may present unknown health hazards.