



Revision Number: 003.0

Issue date: 06/25/2013

1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	DB EPOXY ADH E-20NS 50 ML RESIN	IDH number:	702001
Product type:	Epoxy resin	Item number:	29334_209540
		Region:	United States
Company address:	Contact information:		
Henkel Corporation	Telephone: 860.571.5100		
One Henkel Way	MEDICAL EMERGENCY Phone: Poison Control Center		
Rocky Hill, Connecticut 06067	1-877-671-4608 (toll free) or 1-303-592-1711		
	TRANSPORT EMERGENCY Phone: CHEMTREC		
	1-800-424-9300 (toll free) or 1-703-527-3887		
	Internet: www.henkelna.com		

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state:	Viscous, Liquid	HEALTH:	*2
Color:	Off white	FLAMMABILITY:	1
Odor:	Mild	PHYSICAL HAZARD:	1
		Personal Protection:	See MSDS Section 8
WARNING:	MAY CAUSE ALLERGIC SKIN REACTION. MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.		

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects

Inhalation:	Mild respiratory tract irritation. May cause irritation to nose and throat.
Skin contact:	Allergic skin reaction. Irritating to skin. Itching. Redness.
Eye contact:	Vapors may irritate eyes. Contact with eyes will cause irritation.
Ingestion:	Not expected under normal conditions of use.

Existing conditions aggravated by exposure: Eye, skin, and respiratory disorders.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous components	CAS NUMBER	%
Epichlorohydrin-4,4'-isopropylidene diphenol resin	25068-38-6	30 - 60
Talc	14807-96-6	30 - 60
Phenol polymer with formaldehyde, glycidyl ether	28064-14-4	10 - 30
Treated fumed silica	67762-90-7	1 - 5
Titanium dioxide	13463-67-7	0.1 - 1

4. FIRST AID MEASURES

Inhalation: Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If symptoms develop and persist, get medical attention.

Skin contact:	Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and footwear. If symptoms develop and persist, get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.
Eye contact:	Immediately flush eyes with plenty of water for at least 15 minutes. If symptoms develop and persist, get medical attention.
Ingestion:	DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

5. FIRE FIGHTING MEASURES

Flash point:	> 93 °C (> 199.4 °F) Setaflash Closed Cup
Autoignition temperature:	Not available.
Flammable/Explosive limits - lower:	Not available.
Flammable/Explosive limits - upper:	Not available.
Extinguishing media:	Foam, dry chemical or carbon dioxide.
Special firefighting procedures:	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.
Unusual fire or explosion hazards:	May decompose above 149°C (300°F). May polymerize above 260°C (500°F) in which case closed containers may rupture or explode. Fumes and vapors from thermal decompositions vary in composition and toxicity. In case of fire, keep containers cool with water spray.
Hazardous combustion products:	Oxides of carbon. Phenolics. Acids. Aldehydes. Formaldehyde. Irritating vapors.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions:	Do not allow product to enter sewer or waterways.
Clean-up methods:	Ensure adequate ventilation. Wear appropriate personal protective equipment. Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Scrape up spilled material and place in a closed container for disposal.

7. HANDLING AND STORAGE

Handling:	Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Use only with adequate ventilation. Keep container closed.
Storage:	Store in original container until ready to use. Keep container tightly closed and in a cool, well-ventilated place away from incompatible materials. Keep away from heat, spark and flame. Protect from direct sunlight.

For information on product shelf life contact Henkel Customer Service at (800) 243-4874.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous components	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Epichlorohydrin-4,4'-isopropylidene diphenol resin	None	None	None	None
Talc	2 mg/m3 TWA Respirable fraction.	2.4 MPPCF TWA Respirable. 0.1 mg/m3 TWA Respirable. 20 MPPCF TWA 0.3 mg/m3 TWA Total dust.	None	50 ppm
Phenol polymer with formaldehyde, glycidyl ether	None	None	None	None
Treated fumed silica	10 mg/m3 TWA Inhalable dust. 3 mg/m3 TWA Respirable fraction.	15 mg/m3 TWA Total dust. 5 mg/m3 TWA Respirable fraction.	None	None
Titanium dioxide	10 mg/m3 TWA	15 mg/m3 TWA Total dust.	None	None

- Engineering controls:** Use local ventilation if general ventilation is insufficient to maintain vapor concentration below established exposure limits.
- Respiratory protection:** Use NIOSH approved respirator if there is potential to exceed exposure limit(s).
- Eye/face protection:** Safety goggles or safety glasses with side shields.
- Skin protection:** Use chemical resistant, impermeable clothing including gloves and either an apron or body suit to prevent skin contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

- | | |
|---|---|
| Physical state: | Viscous, Liquid |
| Color: | Off white |
| Odor: | Mild |
| Odor threshold: | Not available. |
| pH: | Not available. |
| Vapor pressure: | Nil |
| Boiling point/range: | > 260 °C (> 500°F) |
| Melting point/ range: | Not available. |
| Vapor density: | Not available. |
| Flash point: | > 93 °C (> 199.4 °F) Setaflash Closed Cup |
| Flammable/Explosive limits - lower: | Not available. |
| Flammable/Explosive limits - upper: | Not available. |
| Autoignition temperature: | Not available. |
| Evaporation rate: | Not available. |
| Solubility in water: | Insoluble |
| Partition coefficient (n-octanol/water): | Not available. |
| VOC content: | < 1 %; < 10 g/l Estimated |

10. STABILITY AND REACTIVITY

Stability:	Stable under normal conditions of storage and use.
Hazardous reactions:	Reaction with some curing agents may produce an exothermic reaction which in large masses could cause runaway polymerization.
Hazardous decomposition products:	Oxides of carbon. Phenolics. Acids. Aldehydes. Formaldehyde. Irritating vapors.
Incompatible materials:	Acids. Bases. Oxidizing agents. Amines.
Conditions to avoid:	Keep away from heat, ignition sources and incompatible materials. Protect from direct sunlight. Note: Heating the epoxy resin in this product above 148.9 °C (300 °F) in the presence of air may cause slow oxidative decomposition. Above 260 °C (500 °F) polymerization of the epoxy resin may occur. Aliphatic polyamines can produce exothermic reactions with epoxy resins which in large masses can cause runaway polymerization and charring of the reactants. Fumes and vapors from these thermal and chemical decompositions vary widely in composition and toxicity. Do not breathe fumes.

11. TOXICOLOGICAL INFORMATION

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Epichlorohydrin-4,4'-isopropylidene diphenol resin	No	No	No
Talc	No	No	No
Phenol polymer with formaldehyde, glycidyl ether	No	No	No
Treated fumed silica	No	No	No
Titanium dioxide	No	Group 2B	No

Hazardous components	Health Effects/Target Organs
Epichlorohydrin-4,4'-isopropylidene diphenol resin	Allergen, Irritant
Talc	Irritant, Lung, Some evidence of carcinogenicity
Phenol polymer with formaldehyde, glycidyl ether	Irritant, Allergen
Treated fumed silica	Irritant
Titanium dioxide	Irritant, Respiratory, Some evidence of carcinogenicity

12. ECOLOGICAL INFORMATION

Ecological information: Not available.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.

Hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

International Air Transportation (ICAO/IATA)

Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (Bisphenol-A Epichlorhydrin resin)
Hazard class or division: 9
Identification number: UN 3082
Packing group: III

Water Transportation (IMO/IMDG)

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol-A Epichlorhydrin resin)
Hazard class or division: 9
Identification number: UN 3082
Packing group: III
Marine pollutant: Bisphenol-A Epichlorhydrin resin

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12(b) Export Notification: None above reporting de minimus
CERCLA/SARA Section 302 EHS: None above reporting de minimus
CERCLA/SARA Section 311/312: Immediate Health, Delayed Health
CERCLA/SARA 313: None above reporting de minimus
California Proposition 65: This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada Regulatory Information

CEPA DSL/NDL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.
WHMIS hazard class: D.2.A, D.2.B

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: 1,2,4,5,6,7,8,10

Prepared by: Rena Petrides, Regulatory Affairs Specialist

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Revision Number: 004.0

Issue date: 12/27/2011

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: DB EPOXY ADH E-20NS 50 ML HARD
Product type: Epoxy Hardener
Company address: Henkel Corporation, One Henkel Way, Rocky Hill, Connecticut 06067
IDH number: 702002
Item number: 29334_209541
Region: United States
Contact information: Telephone: 860.571.5100, MEDICAL EMERGENCY Phone: Poison Control Center, 1-877-671-4608 (toll free) or 1-303-592-1711, TRANSPORT EMERGENCY Phone: CHEMTREC, 1-800-424-9300 (toll free) or 1-703-527-3887, Internet: www.henkelna.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state: Viscous, Liquid
Color: Tan, Light green
Odor: Strong, Ammoniacal
HEALTH: *3
FLAMMABILITY: 1
PHYSICAL HAZARD: 0
Personal Protection: See MSDS Section 8
DANGER: CAUSES EYE, SKIN AND RESPIRATORY TRACT BURNS.
MAY CAUSE ALLERGIC SKIN REACTION.
HARMFUL IF ABSORBED THROUGH SKIN.
MAY BE HARMFUL IF SWALLOWED.

Relevant routes of exposure: Skin, Inhalation, Eyes, Ingestion

Potential Health Effects

Inhalation: Can cause severe irritation and burns to the respiratory tract.
Skin contact: Causes skin burns. May cause allergic skin reaction. Harmful if absorbed through skin. Product may be absorbed through skin and cause nausea, headache and general discomfort.
Eye contact: Causes eye burns. Burns of the eye may cause blindness.
Ingestion: If ingested, severe burns of the mouth and throat may occur, as well as perforation of the esophagus and the stomach. May be harmful if swallowed.

Existing conditions aggravated by exposure: Eye, skin, and respiratory disorders.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous components	CAS NUMBER	%
Talc	14807-96-6	30 - 60
Amine epoxy adduct	Proprietary	10 - 30
Quartz (SiO ₂)	14808-60-7	10 - 30
N-Aminoethylpiperazine	140-31-8	5 - 10
Nonylphenol	25154-52-3	5 - 10
2,2'-Iminodi(ethylamine)	111-40-0	5 - 10
4,4'-Isopropylidenediphenol	80-05-7	1 - 5
Treated fumed silica	67762-90-7	1 - 5

4. FIRST AID MEASURES

Inhalation:	Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Skin contact:	Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and footwear. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.
Eye contact:	Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
Ingestion:	DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

5. FIRE FIGHTING MEASURES

Flash point:	> 93 °C (> 199.4 °F) Setaflash Closed Cup
Autoignition temperature:	Not available.
Flammable/Explosive limits - lower:	Not available.
Flammable/Explosive limits - upper:	Not available.
Extinguishing media:	Water spray (fog), foam, dry chemical or carbon dioxide.
Special firefighting procedures:	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.
Unusual fire or explosion hazards:	Personnel in vicinity and downwind should be evacuated. Burning produces obnoxious and toxic fumes. Use of water may result in the formation of very toxic aqueous solutions. Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products:	Oxides of carbon. Oxides of nitrogen. Aldehydes. Ammonia. Formaldehyde. Nitric acid. Toxic fumes. Irritating vapors.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions: Do not allow product to enter sewer or waterways.

Clean-up methods:

Ensure adequate ventilation. Wear appropriate personal protective equipment. Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Scrape up spilled material and place in a closed container for disposal.

7. HANDLING AND STORAGE

Handling:

Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Do not taste or swallow. Use only with adequate ventilation. Keep container closed.

Storage:

Store in original container until ready to use. Keep container tightly closed and in a cool, well-ventilated place away from incompatible materials. Keep away from heat, spark and flame.

For information on product shelf life contact Henkel Customer Service at (800) 243-4874.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous components	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Talc	2 mg/m3 TWA Respirable fraction.	20 MPPCF TWA 2.4 MPPCF TWA Respirable. 0.1 mg/m3 TWA Respirable. 0.3 mg/m3 TWA Total dust.	None	50 ppm
Amine epoxy adduct	None	None	None	None
Quartz (SiO ₂)	0.025 mg/m3 TWA Respirable fraction.	2.4 MPPCF TWA Respirable. 0.1 mg/m3 TWA Respirable. 0.3 mg/m3 TWA Total dust.	None	None
N-Aminoethylpiperazine	None	None	None	None
Nonylphenol	None	None	None	None
2,2'-Iminodi(ethylamine)	1 ppm TWA (SKIN)	None	None	None
4,4'-Isopropylidenediphenol	None	None	None	None
Treated fumed silica	10 mg/m3 TWA Inhalable dust. 3 mg/m3 TWA Respirable fraction.	15 mg/m3 TWA Total dust. 5 mg/m3 TWA Respirable fraction.	None	None

Engineering controls:

Use local ventilation if general ventilation is insufficient to maintain vapor concentration below established exposure limits.

Respiratory protection:

Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

Eye/face protection:

Safety goggles or safety glasses with side shields. Full face protection should be used if the potential for splashing or spraying of product exists.

Skin protection:

Use chemical resistant, impermeable clothing including gloves and either an apron or body suit to prevent skin contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:

Viscous, Liquid

Color:

Tan, Light green

Odor:	Strong, Ammoniacal
Odor threshold:	Not available.
pH:	Not available.
Vapor pressure:	Not available.
Boiling point/range:	Not available.
Melting point/ range:	Not available.
Specific gravity:	1.47
Vapor density:	Not available.
Flash point:	> 93 °C (> 199.4 °F) Setafash Closed Cup
Flammable/Explosive limits - lower:	Not available.
Flammable/Explosive limits - upper:	Not available.
Autoignition temperature:	Not available.
Evaporation rate:	Not available.
Solubility in water:	Slight
Partition coefficient (n-octanol/water):	Not available.
VOC content:	< 1.0 %; < 10 g/l (estimated value for resin and hardener mixed together)

10. STABILITY AND REACTIVITY

Stability:	Stable under normal conditions of storage and use.
Hazardous reactions:	None under normal processing.
Hazardous decomposition products:	Oxides of carbon. Oxides of nitrogen. Aldehydes. Ammonia. Formaldehyde. Nitric acid. Toxic fumes. Irritating vapors.
Incompatible materials:	Acids. Bases. Oxidizing agents. Peroxides. Reactive metals. Sodium hypochlorite. This product slowly corrodes copper, aluminum, zinc and galvanized surfaces.
Conditions to avoid:	Keep away from heat, ignition sources and incompatible materials. Avoid mixing resin (Part A) and curing agent (Part B) unless you plan to use immediately. Failure to observe these precautions may result in excessive heat build-up causing an exotherm.

11. TOXICOLOGICAL INFORMATION

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Talc	No	No	No
Amine epoxy adduct	No	No	No
Quartz (SiO ₂)	Known To Be Human Carcinogen.	Group 1	No
N-Aminoethylpiperazine	No	No	No
Nonylphenol	No	No	No
2,2'-Iminodi(ethylamine)	No	No	No
4,4'-Isopropylidenediphenol	No	No	No
Treated fumed silica	No	No	No

Hazardous components	Health Effects/Target Organs
Talc	Irritant, Lung, Some evidence of carcinogenicity
Amine epoxy adduct	No Target Organs
Quartz (SiO ₂)	Immune system, Lung, Some evidence of carcinogenicity
N-Aminoethylpiperazine	Irritant, Corrosive, Allergen
Nonylphenol	Allergen, Corrosive, Irritant, Kidney
2,2'-Iminodi(ethylamine)	Allergen, Irritant, Eyes
4,4'-Isopropylidenediphenol	Allergen, Blood, Irritant, Kidney, Reproductive, Spleen
Treated fumed silica	Irritant

12. ECOLOGICAL INFORMATION

Ecological information:	Not available.
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13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.
Hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Corrosive liquids, n.o.s. (Diethylenetriamine, Nonylphenol)
Hazard class or division: 8
Identification number: UN 1760
Packing group: II

International Air Transportation (ICAO/IATA)

Proper shipping name: Corrosive liquid, n.o.s. (Diethylenetriamine, Nonylphenol)
Hazard class or division: 8
Identification number: UN 1760
Packing group: II

Water Transportation (IMO/IMDG)

Proper shipping name: CORROSIVE LIQUID, N.O.S. (Diethylenetriamine, Nonylphenol)
Hazard class or division: 8
Identification number: UN 1760
Packing group: II
Marine pollutant: Nonylphenol

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12(b) Export Notification: None above reporting de minimus
CERCLA/SARA Section 302 EHS: None above reporting de minimus
CERCLA/SARA Section 311/312: Immediate Health, Delayed Health
CERCLA/SARA 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). 4,4'-Isopropylidenediphenol (CAS# 80-05-7).
California Proposition 65: This product contains a chemical known in the State of California to cause cancer.

Canada Regulatory Information

CEPA DSL/NDL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.
WHMIS hazard class: D.2.A, D.2.B, E

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: 1,2,5,6,10,14

Prepared by: Rena Petrides, Regulatory Affairs Specialist

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation and its affiliates ("Henkel") does not assume responsibility for any results obtained by persons over whose methods Henkel has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Henkel's products. In light of the foregoing, Henkel specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel's products. Henkel further disclaims any liability for consequential or incidental damages of any kind, including lost profits.