



Revision Number: 003.3

Issue date: 02/19/2013

1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	Nordbak Brush Ceramic - Grey	IDH number:	702265
Product type:	Epoxy Hardener	Item number:	98733_301000
		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 1-703-527-3887Emergency telephone:		
	860.571.5100		
	Internet: www.henkelna.com		

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state:	Liquid	HMIS:	
Color:	light yellow	HEALTH:	*3
Odor:	ammoniacal	FLAMMABILITY:	1
		PHYSICAL HAZARD:	0
		Personal Protection:	See MSDS Section 8
DANGER:	CAUSES EYE AND SKIN BURNS. MAY CAUSE ALLERGIC SKIN AND RESPIRATORY REACTION. MAY BE HARMFUL IF SWALLOWED OR ABSORBED THROUGH SKIN. MAY CAUSE RESPIRATORY TRACT IRRITATION.		

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

Potential Health Effects

Inhalation:	Allergic respiratory reaction. May cause respiratory tract irritation. May cause irritation to nose and throat.
Skin contact:	May cause skin burns. May cause allergic skin reaction. Rash. Redness. May be harmful if absorbed through skin.
Eye contact:	Severe eye irritation. Redness. Tissue damage. Tearing. Pain and discomfort. Corneal edema may give appearance of "blue haze" or "fog" around lights.
Ingestion:	May be harmful if swallowed. May cause burns of mouth and throat if swallowed.

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

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	%
Benzyl alcohol	100-51-6	30 - 60
Formaldehyde, polymer with benzenamine, hydrogenated	135108-88-2	30 - 60
Diethylenetriamine	111-40-0	1 - 5
4,4'-Methylenebis(cyclohexylamine)	1761-71-3	1 - 5
Organic Acid	Unknown	1 - 5
4,4'-Isopropylidenediphenol	80-05-7	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. Wash clothing before reuse. Thoroughly clean shoes before reuse. If symptoms develop and persist, get medical attention.
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. Keep individual calm. 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:	In case of fire, keep containers cool with water spray.
Hazardous combustion products:	Oxides of carbon. Oxides of nitrogen. Ammonia. Phenolics. Nitric acid. Aldehydes. Nitrosamines. Irritating organic fragments.

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:	Remove all sources of ignition. Immediately contact emergency personnel. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Store in a closed container until ready for disposal.

7. HANDLING AND STORAGE

Handling:	Do not taste or swallow. Avoid contact with eyes, skin and clothing. Do not breathe gas/fumes/vapor/spray. Use only with adequate ventilation. Keep container closed. Wash thoroughly after handling.
Storage:	Store in original container until ready to use. Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

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
Benzyl alcohol	None	None	10 ppm (44.20 mg/m ³) TWA	None
Formaldehyde, polymer with benzenamine, hydrogenated	None	None	None	None
Diethylenetriamine	(SKIN) 1 ppm TWA	None	None	None
4,4'-Methylenebis(cyclohexylamine)	None	None	None	None
Organic Acid	None	None	None	None
4,4'-Isopropylidenediphenol	None	None	None	None

Engineering controls: Use local exhaust ventilation if the potential for airborne exposure exists.

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: Chemical resistant, impermeable gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid
Color: light yellow
Odor: ammoniacal
Odor threshold: Not available.
pH: Alkaline
Vapor pressure: Not available.
Boiling point/range: 400 °C (752°F)
Melting point/ range: Not available.
Specific gravity: 1.0616
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: Partially soluble
Partition coefficient (n-octanol/water): Not available.
VOC content: < 0.1 %; < 1 g/l (value for resin and hardener together)

10. STABILITY AND REACTIVITY

Stability: Stable

Hazardous reactions: Will not occur.

Hazardous decomposition products: None

Incompatible materials: Strong oxidizing agents. Strong reducing agents. Metals. Acids. Strong mineral acids. Strong bases. Peroxides.

Conditions to avoid: Store away from incompatible materials. Excessive heat.

11. TOXICOLOGICAL INFORMATION

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Benzyl alcohol	No	No	No
Formaldehyde, polymer with benzenamine, hydrogenated	No	No	No
Diethylenetriamine	No	No	No
4,4'-Methylenebis(cyclohexylamine)	No	No	No
Organic Acid	No	No	No
4,4'-Isopropylidenediphenol	No	No	No

Hazardous components	Health Effects/Target Organs
Benzyl alcohol	Allergen, Central nervous system, Corrosive, Irritant
Formaldehyde, polymer with benzenamine, hydrogenated	No Records
Diethylenetriamine	Allergen, Irritant, Eyes
4,4'-Methylenebis(cyclohexylamine)	Irritant, Allergen
Organic Acid	No Data
4,4'-Isopropylidenediphenol	Allergen, Blood, Irritant, Kidney, Reproductive, Spleen

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: Amines, liquid, corrosive, n.o.s. (Diethylenetriamine, 4,4-methylenebis-cyclohexylamine)
Hazard class or division: 8
Identification number: UN 2735
Packing group: III

International Air Transportation (ICAO/IATA)

Proper shipping name: Amines, liquid, corrosive, n.o.s. (Diethylenetriamine, 4,4-methylenebis-cyclohexylamine)
Hazard class or division: 8
Identification number: UN 2735
Packing group: III

Water Transportation (IMO/IMDG)

Proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S. (Diethylenetriamine, 4,4-methylenebis-cyclohexylamine)
Hazard class or division: 8
Identification number: UN 2735
Packing group: III

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 minimis
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: No California Proposition 65 listed chemicals are known to be present.

Canada Regulatory Information

CEPA DSL/NDSL 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

Prepared by: Gary Pierson, Manager, Regulatory Affairs

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.



Revision Number: 005.0

Issue date: 10/19/2011

1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	Nordbak Brush Ceramic- Grey	IDH number:	702264
Product type:	Epoxy resin	Item number:	98733_10362000
		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:	paste	HEALTH:	*2
Color:	white	FLAMMABILITY:	1
Odor:	Epoxy, mild, Petroleum	PHYSICAL HAZARD:	0
		Personal Protection:	See MSDS Section 8
WARNING:	MAY CAUSE ALLERGIC SKIN REACTION. MAY BE HARMFUL IF SWALLOWED. MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.		

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

Potential Health Effects

Inhalation:	Mild respiratory tract irritation. Coughing. Vapors and mists will irritate nose and throat and possibly eyes.
Skin contact:	Allergic skin reaction. Moderate skin irritation. Redness. Itching. Pain and discomfort. Swelling. Contact at elevated temperatures may cause thermal burns.
Eye contact:	Moderate eye irritation. Redness. Excess tearing. Blurred vision. Pain and discomfort. Contact at elevated temperatures may cause thermal burns. May cause transient eye irritation.
Ingestion:	May be harmful if swallowed. May cause gastrointestinal tract irritation if swallowed. Nausea.

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

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	%
Silicon carbide	409-21-2	30 - 60
Epichlorohydrin-4,4'-isopropylidene diphenol resin	25068-38-6	30 - 60
Aluminum oxide, fibrous	1344-28-1	1 - 5
Castor oil, hydrogenated	8001-78-3	1 - 5
Cristobalite	14464-46-1	0.1 - 1

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. If symptoms develop and persist, get medical attention.
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. Keep individual calm. If symptoms develop and persist, get medical attention.

5. FIRE FIGHTING MEASURES

Flash point:	> 93 °C (> 199.4 °F) Tagliabue 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:	In case of fire, keep containers cool with water spray.
Hazardous combustion products:	Oxides of carbon. Aldehydes. Acids. Phenolics. Carbonyl fluoride. Hexafluoropropene. Perfluoroisobutylene. Tetrafluoroethylene. Irritating organic fragments.

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:	Remove all sources of ignition. Immediately contact emergency personnel. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Store in a closed container until ready for disposal.

7. HANDLING AND STORAGE

Handling:	Keep away from heat, spark and flame. Avoid contact with eyes, skin and clothing. Do not breathe gas/fumes/vapor/spray. Do not taste or swallow. Keep container closed. Wash thoroughly after handling.
Storage:	Store in original container until ready to use. Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

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
Silicon carbide	10 mg/m3 TWA Inhalable fraction. 3 mg/m3 TWA Respirable fraction.	5 mg/m3 TWA Respirable fraction. 15 mg/m3 TWA Total dust.	None	None
Epichlorohydrin-4,4'-isopropylidene diphenol resin	None	None	None	None
Aluminum oxide, fibrous	1 mg/m3 TWA Respirable fraction.	5 mg/m3 TWA Respirable fraction. 15 mg/m3 TWA Total dust.	None	None
Castor oil, hydrogenated	None	None	None	None
Cristobalite	0.025 mg/m3 TWA Respirable fraction.	1.2 MPPCF TWA Respirable. 0.05 mg/m3 TWA Respirable. 0.15 mg/m3 TWA Total dust.	None	None

Engineering controls: Use local exhaust ventilation if the potential for airborne exposure exists.

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: Chemical resistant, impermeable gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: paste

Color: white

Odor: Epoxy, mild, Petroleum

Odor threshold: Not available.

pH: Not available.

Vapor pressure: Not available.

Boiling point/range: Not available.

Melting point/ range: Not available.

Specific gravity: 1.743

Vapor density: > 1

Flash point: > 93 °C (> 199.4 °F) Tagliabue closed cup

Flammable/Explosive limits - lower: Not available.

Flammable/Explosive limits - upper: Not available.

Autoignition temperature: Not available.

Evaporation rate: Slower than butyl acetate.

Solubility in water: Insoluble

Partition coefficient (n-octanol/water): Not available.

VOC content: < 0.1 %; < 1 g/l (value for resin and hardener together)

10. STABILITY AND REACTIVITY

Stability: Stable

Hazardous reactions: Will not occur.

Hazardous decomposition products: None

Incompatible materials: Strong oxidizing agents. Strong bases. Strong Lewis acids. Strong mineral acids. Strong acids. Amines. Mercaptans.

Conditions to avoid: Heat, flames, sparks and other sources of ignition. Excessive heat. Store away from incompatible materials.

11. TOXICOLOGICAL INFORMATION

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Silicon carbide	No	No	No
Epichlorohydrin-4,4'-isopropylidene diphenol resin	No	No	No
Aluminum oxide, fibrous	No	No	No
Castor oil, hydrogenated	No	No	No
Cristobalite	Known To Be Human Carcinogen.	Group 1	No

Hazardous components	Health Effects/Target Organs
Silicon carbide	Nuisance dust
Epichlorohydrin-4,4'-isopropylidene diphenol resin	Allergen, Irritant
Aluminum oxide, fibrous	Irritant, Nuisance dust, Corrosive
Castor oil, hydrogenated	No Target Organs
Cristobalite	Carcinogen, Immune system, Kidney, Lung

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 Epichlorohydrin 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 Epichlorohydrin resin)
Hazard class or division: 9
Identification number: UN 3082
Packing group: III
Marine pollutant: Bisphenol-A Epichlorohydrin 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.

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: This Material Safety Data Sheet contains changes from the previous version in Section(s): 14

Prepared by: Gary Pierson, Manager, Regulatory Affairs

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.