



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
US OSHA Hazard Communication Standard 2024 (29 CFR 1910.1200)

Revision date: 01-09-2026

Revision Number: 1

1. Identification

Product identifier

Product Name 5160-B Epoxy Hardener

Other means of identification

Product Code FO20052235

Material number(s) FO20052235PZ

UN number or ID number UN1760

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended use For industrial use only

Restrictions on use None.

Details of the supplier of the safety data sheet

Supplier Address

Avient Corporation
33587 Walker Road, Avon Lake, OH 44012

E-mail address regulatoryservices@avient.com

Emergency telephone number

Company Phone Number 1 (440) 930-1000
or 1 (844) 4 AVIENT

24 Hour Emergency Phone Number CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure or accident)

Emergency Telephone No information available

2. Hazard(s) identification

Classification of the substance or mixture

Acute toxicity - Oral	Category 4
Acute toxicity - Inhalation (Gases)	Category 4
Skin corrosion/irritation	Category 1 Sub-category A
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1
Reproductive toxicity	Category 1B

Hazards not otherwise classified (HNOC)

Not applicable.

Label elements



Danger

Hazard statements

Harmful if swallowed.

Harmful if inhaled.

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

May damage fertility or the unborn child.

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling.

Do not eat, drink or smoke when using this product.

Avoid breathing dust, fume, gas, mist, vapors and spray.

Use only outdoors or in a well-ventilated area.

Do not breathe dust, fume, gas, mist, vapors and spray.

Contaminated work clothing must not be allowed out of the workplace.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Wear protective gloves, protective clothing, eye protection, face protection, and hearing protection.

Precautionary Statements - Response

Immediately call a POISON CENTER or doctor.

Specific treatment (see supplemental first aid instructions on this label).

IF exposed or concerned: Get medical advice and attention.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER or doctor.

Wash contaminated clothing before reuse.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

If skin irritation or rash occurs: Get medical advice and attention.

Take off contaminated clothing and wash it before reuse.

IF ON SKIN: Wash with plenty of water and soap.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Call a POISON CENTER or doctor if you feel unwell.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Immediately call a POISON CENTER or doctor.

Rinse mouth.

IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Precautionary Statements - Storage

Store locked up.

Precautionary Statements - Disposal

Dispose of contents and container in accordance with local, regional, national, and international regulations as applicable.

Hazards classified under paragraph (d)(1)(ii) of 1910.1200

No information available.

Other information

May be harmful if inhaled. Toxic to aquatic life with long lasting effects.

3. Composition/information on ingredients

Substance

Not applicable.

Mixture

Chemical name	CAS No.	Weight-%	Trade secret / Unique identifier
Benzyl alcohol	100-51-6	20 - 40%	*
Reaction products of 3-aminomethyl-3,5,5-trimethylcyclohexylamine (IPDA) with bisphenol A diglycidyl ether (BADGE)	68609-08-5	20 - 40%	*
1,3-Cyclohexanedimethanamine (1,3-BAC; Hexahydro-m-xylylenediamine)	2579-20-6	20 - 40%	*
Cyclohexanemethanamine, 5-amino-1,3,3-trimethyl-	2855-13-2	10 - 20%	*
Phenol, 4-nonyl-, branched	84852-15-3	5 - 10%	*
Dinonylphenol	1323-65-5	0.1 - 1%	*
Benzaldehyde	100-52-7	0.1 - 1%	*

4. First-aid measures**Description of first aid measures****General advice**

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

Inhalation

If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER, doctor or physician if you feel unwell.

Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical attention.

Skin contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical attention. May cause an allergic skin reaction.

Ingestion

Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get immediate medical attention. Call a POISON CENTER, doctor or physician if you feel unwell.

Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8). Avoid breathing dust, fume, gas, mist, vapors and spray. Use personal protective equipment. See section 8 for more information. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Most important symptoms and effects, both acute and delayed**Symptoms**

Burning sensation. Redness. May cause blindness. Coughing and/ or wheezing. May cause redness and tearing of the eyes. Itching. Rashes. Hives. Difficulty in breathing.

Effects of Exposure

May cause adverse reproductive effects - such as birth defect, miscarriages, or infertility.

Indication of any immediate medical attention and special treatment needed

Note to physicians	Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization in susceptible persons. Treat symptomatically.
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5. Fire-fighting measures

Suitable Extinguishing Media	Dry chemical, CO2, water spray or regular foam.
Unsuitable extinguishing media	Do not use water jetstream.
Specific hazards arising from the chemical	The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors. Product is or contains a sensitizer. May cause sensitization by skin contact.
Hazardous combustion products	Decomposition products can include and are not limited to: Carbon monoxide. Carbon dioxide (CO2). Nitrogen oxides (NOx). Ammonia.
Explosion data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.
Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protective equipment.

6. Accidental release measures**Personal precautions, protective equipment and emergency procedures**

Personal precautions	Attention! Corrosive material. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Avoid breathing dust, fume, gas, mist, vapors and spray. Use personal protective equipment.
Other information	Refer to protective measures listed in Sections 7 and 8.
For emergency responders	Use personal protection recommended in Section 8.

Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly.
Prevention of secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.
Reference to other sections	See section 8 for more information. See section 13 for more information.

7. Handling and storage**Precautions for safe handling**

Advice on safe handling	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with
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skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Remove contaminated clothing and shoes. Avoid breathing dust, fume, gas, mist, vapors and spray. Use personal protective equipment.

General hygiene considerations

Avoid contact with skin, eyes or clothing. Wear protective gloves, eye protection and face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing must not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid breathing dust, fume, gas, mist, vapors and spray. Use personal protection recommended in Section 8.

Conditions for safe storage, including any incompatibilities**Storage Conditions**

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Protect from moisture. Store locked up. Store away from other materials.

8. Exposure controls/personal protection**Control Parameters****Exposure Limits**

This product, as supplied, contains materials that do not have reportable occupational exposure limits or are not subject to the reporting requirements of the local jurisdiction.

Biological occupational exposure limits

This product, as supplied, contains materials that do not have reportable biological exposure limits or are not subject to the reporting requirements of the local jurisdiction.

Appropriate engineering controls**Engineering controls**

Ensure adequate ventilation, especially in confined areas. Apply technical measures to comply with the occupational exposure limits.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Face protection shield. Tight sealing safety goggles.

Hand protection

Wear suitable gloves.

Skin and body protection

Wear suitable protective clothing. Chemical resistant apron.

Respiratory protection

Use appropriate respiratory protection. Consult with an industrial hygienist to determine the appropriate respiratory protection for your specific use of this material.

Environmental exposure controls

Local authorities should be advised if significant spillages cannot be contained.

9. Physical and chemical properties**Information on basic physical and chemical properties**

Appearance	Liquid
Physical state	Liquid
Color	clear
Odor (includes odor threshold)	Slight

Property**Values****Remarks • Method**

Melting point / freezing point	No data available	None known
Boiling point (or initial boiling point or boiling range)	No data available	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Flash point	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
SADT (°C)	No data available	None known
pH	No data available	None known
pH (as aqueous solution)	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Solubility	No data available	None known
Water solubility	No data available	None known
Partition coefficient n-octanol/water (log value)	No data available	None known
Vapor pressure (includes evaporation rate)	No data available	None known
Evaporation rate	No data available	None known
Density and/or relative density	No data available	None known
Bulk density	No data available	
Liquid Density	No data available	
Relative vapor density	No data available	None known
Particle characteristics		None known
Particle Size	No data available	
Particle Size Distribution	No data available	

Other information**10. Stability and reactivity**

Reactivity	No information available.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	Exposure to air or moisture over prolonged periods. Excessive heat.
Incompatible materials	Acids. Bases. Oxidizing agent.
Hazardous decomposition products	None under normal use conditions.

11. Toxicological information

This mixture has not been evaluated as a whole for health effects. Exposure effects listed are based on existing health data for the individual components which comprise the mixture.

Information on likely routes of exposure**Product Information**

Inhalation	Specific test data for the substance or mixture is not available. Corrosive by inhalation. (based on components). Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs.
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Pulmonary edema can be fatal. Harmful by inhalation. May be harmful if inhaled.

Eye contact Specific test data for the substance or mixture is not available. Causes serious eye damage. (based on components). Corrosive to the eyes and may cause severe damage including blindness. May result in permanent damage including blindness.

Skin contact Specific test data for the substance or mixture is not available. Corrosive. (based on components). Causes burns. May cause sensitization by skin contact. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

Ingestion Specific test data for the substance or mixture is not available. Causes burns. (based on components). Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Burning sensation. Redness. May cause blindness. Coughing and/ or wheezing. May cause redness and tearing of the eyes. Itching. Rashes. Hives. Difficulty in breathing.

Acute toxicity Harmful if swallowed. Harmful by inhalation.

Numerical measures of toxicity

The following ATE values have been calculated for the mixture

ATEmix (oral)	807.50 mg/kg
ATEmix (dermal)	8,500.00 mg/kg
ATEmix (inhalation-gas)	15,000.00 ppm
ATEmix (inhalation-vapor)	36.70 mg/L
ATEmix (inhalation-dust/mist)	13.90 mg/L

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Benzyl alcohol (100-51-6)	1230 mg/kg (Rat)	> 2000 mg/kg	-
Reaction products of 3-aminomethyl-3,5,5-trimethylcyclohexylamine (IPDA) with bisphenol A diglycidyl ether (BADGE) (68609-08-5)	300 mg/kg bw	> 2000 mg/kg (Rat)	-
1,3-Cyclohexanedimethanamine (1,3-BAC; Hexahydro-m-xylylenediamine) (2579-20-6)	700 mg/kg (Rat)	= 1700 mg/kg (Rabbit)	-
Cyclohexanemethanamine, 5-amino-1,3,3-trimethyl- (2855-13-2)	= 1030 mg/kg (Rat)	> 2000 mg/kg (Rat)	> 5.01 mg/L (Rat) 4 h 1.07 - 5.01 mg/L (Rat) 4 h
Phenol, 4-nonyl-, branched (84852-15-3)	= 1300 mg/kg (Rat)	>2000 mg/kg	-
Benzaldehyde (100-52-7)	1292 mg/kg (Rat)	> 2000 mg/kg	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Classification based on data available for ingredients. Causes severe skin burns and eye damage.

Serious eye damage/eye irritation Classification based on data available for ingredients. Causes serious eye damage. Causes burns.

Respiratory or skin sensitization	May cause an allergic skin reaction.
Germ cell mutagenicity	Based on available data, the classification criteria are not met.
Carcinogenicity	Based on available data, the classification criteria are not met.
Reproductive toxicity	Contains a known or suspected reproductive toxin. Classification based on data available for ingredients. May damage fertility or the unborn child.
STOT - single exposure	Based on available data, the classification criteria are not met.
STOT - repeated exposure	Based on available data, the classification criteria are not met.
Aspiration hazard	No information available.
Other adverse effects	No information available.
Interactive effects	No information available.

12. Ecological information

Ecotoxicity Toxic to aquatic life with long lasting effects.

Aquatic ecotoxicity

Component Information

Chemical name	Fish	Crustacea	Algae/aquatic plants	Toxicity to microorganisms
Cyclohexanemethanamine, 5-amino-1,3,3-trimethyl- (2855-13-2)	-	EC50: 14.6 - 21.5mg/L (48h, Daphnia magna)	EC50: =37mg/L (72h, Desmodesmus subspicatus)	-
Phenol, 4-nonyl-, branched (84852-15-3)	LC50: =0.135mg/L (96h, Pimephales promelas) LC50: =0.1351mg/L (96h, Lepomis macrochirus)	EC50: =0.14mg/L (48h, Daphnia magna)	EC50: 0.36 - 0.48mg/L (96h, Pseudokirchneriella subcapitata) EC50: 0.16 - 0.72mg/L (72h, Pseudokirchneriella subcapitata) EC50: =1.3mg/L (72h, Desmodesmus subspicatus)	-
Dinonylphenol (1323-65-5)	LC50: =0.135mg/L (96h, Pimephales promelas)	EC50: =0.14mg/L (48h, Daphnia magna) EC50: 0.17 - 0.21mg/L (48h, Daphnia magna) EC50: 0.0874 - 0.124mg/L (48h, Daphnia magna)	EC50: =0.41mg/L (96h, Pseudokirchneriella subcapitata) EC50: =1.3mg/L (72h, Desmodesmus subspicatus)	-

Persistence and degradability No information available.

Bioaccumulative potential**Component Information**

Chemical name	Partition coefficient	Bioconcentration factor (BCF)	Trophic magnification factor (TMF)
Reaction products of 3-aminomethyl-3,5,5-trimethylcyclohexylamine (IPDA) with bisphenol A diglycidyl ether (BADGE) (68609-08-5)	2.36	-	-
1,3-Cyclohexanedimethanamine (1,3-BAC; Hexahydro-m-xylylenediamine) (2579-20-6)	0.783	-	-
Cyclohexanemethanamine, 5-amino-1,3,3-trimethyl- (2855-13-2)	0.99	-	-
Phenol, 4-nonyl-, branched (84852-15-3)	5.4	271	-
Dinonylphenol (1323-65-5)	3.28	-	-
Benzaldehyde (100-52-7)	1.4	-	-

Mobility in soil

No information available.

Other adverse effects

No information available.

13. Disposal considerations**Disposal methods****Waste from residues/unused products**

Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging

Do not reuse empty containers.

14. Transport information**DOT**

UN number or ID number	UN1760
Proper shipping name	Corrosive liquids, n.o.s.
Transport hazard class(es)	8
Packing group	I
Special Provisions	A7, B10, T14, TP2, TP27
DOT Marine Pollutant	I
Marine pollutant	Phenol, 4-nonyl-, branched, Reaction products of 3-aminomethyl-3,5,5-trimethylcyclohexylamine (IPDA) with bisphenol A diglycidyl ether (BADGE)
Description	UN1760, Corrosive liquids, n.o.s. (1,3-Cyclohexanedimethanamine (1,3-BAC; Hexahydro-m-xylylenediamine), Cyclohexanemethanamine, 5-amino-1,3,3-trimethyl-), 8, I, Marine pollutant (Phenol, 4-nonyl-, branched, Reaction products of 3-aminomethyl-3,5,5-trimethylcyclohexylamine (IPDA) with bisphenol A diglycidyl ether (BADGE))
Emergency Response Guide Number	154

TDG

UN number or ID number	UN1760
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UN proper shipping name	Corrosive liquid, n.o.s.
Transport hazard class(es)	8
Packing group	I
Marine pollutant name	Phenol, 4-nonyl-, branched.
Description	UN1760, Corrosive liquid, n.o.s. (1,3-Cyclohexanedimethanamine (1,3-BAC; Hexahydro-m-xylylenediamine), Cyclohexanemethanamine, 5-amino-1,3,3-trimethyl-), 8, I

MEX

UN number or ID number	UN1760
UN proper shipping name	Corrosive liquid, n.o.s.
Transport hazard class(es)	8
Packing group	I
Technical Name	1,3-Cyclohexanedimethanamine (1,3-BAC; Hexahydro-m-xylylenediamine), Cyclohexanemethanamine, 5-amino-1,3,3-trimethyl-
Description	UN1760, Corrosive liquid, n.o.s. (1,3-Cyclohexanedimethanamine (1,3-BAC; Hexahydro-m-xylylenediamine), Cyclohexanemethanamine, 5-amino-1,3,3-trimethyl-), 8, I
Special Provisions	274

ICAO (air)

UN number or ID number	UN1760
UN proper shipping name	Corrosive liquid, n.o.s.
Transport hazard class(es)	8
Packing group	I
Description	UN1760, Corrosive liquid, n.o.s. (1,3-Cyclohexanedimethanamine (1,3-BAC; Hexahydro-m-xylylenediamine), Cyclohexanemethanamine, 5-amino-1,3,3-trimethyl-), 8, I
Special Provisions	A3

IATA

UN number or ID number	UN1760
UN proper shipping name	Corrosive liquid, n.o.s.
Technical Name	1,3-Cyclohexanedimethanamine (1,3-BAC; Hexahydro-m-xylylenediamine), Cyclohexanemethanamine, 5-amino-1,3,3-trimethyl-
Transport hazard class(es)	8
Packing group	I
Environmental hazards	Yes
Special Provisions	A3, A803
ERG Code	8L
Description	UN1760, Corrosive liquid, n.o.s. (1,3-Cyclohexanedimethanamine (1,3-BAC; Hexahydro-m-xylylenediamine), Cyclohexanemethanamine, 5-amino-1,3,3-trimethyl-), 8, I

IMDG

UN number or ID number	UN1760
UN proper shipping name	Corrosive liquid, n.o.s.
Technical Name	1,3-Cyclohexanedimethanamine (1,3-BAC; Hexahydro-m-xylylenediamine), Cyclohexanemethanamine, 5-amino-1,3,3-trimethyl-
Transport hazard class(es)	8
Packing group	I
Marine pollutant indicator	P
Marine pollutant name	Phenol, 4-nonyl-, branched
Special Provisions	274
EmS-No.	F-A, S-B
Description	UN1760, Corrosive liquid, n.o.s. (1,3-Cyclohexanedimethanamine (1,3-BAC; Hexahydro-m-xylylenediamine), Cyclohexanemethanamine, 5-amino-1,3,3-trimethyl-, Phenol, 4-nonyl-, branched), 8, I, Marine pollutant

15. Regulatory information**International Regulations**

The Rotterdam Convention Not applicable

International Inventories

TSCA	Complies
DSL/NDL	Complies
ENCS	Complies
IECSC	Complies
KECL	Not determined
PICCS	Complies
AIIC	Complies
NZIoC	Complies
TCSI	Complies

US Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	De minimis concentration
Dinonylphenol (1323-65-5)	1.0%

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CAA (Clean Air Act)

This product does not contain any substances regulated as pollutants pursuant to Clean Air Act (CAA).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations**California Proposition 65****U.S. State Right-to-Know Regulations**

Chemical name	New Jersey	Massachusetts	Pennsylvania
Benzyl alcohol (100-51-6)	-	X	X
Cyclohexanemethanamine, 5-amino-1,3,3-trimethyl- (2855-13-2)	X	-	-
Phenol, 4-nonyl-, branched (84852-15-3)	-	X	X
Dinonylphenol (1323-65-5)	-	X	X
Benzaldehyde (100-52-7)	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA	Health hazards 3	Flammability 0	Instability 0	Special hazards -
HMIS	Health hazards 3 *	Flammability 0	Physical hazards 0	Personal protection -
<i>Chronic Hazard Star Legend</i>		<i>* = Chronic Health Hazard</i>		

Key or legend to abbreviations and acronyms used in the safety data sheet

List may include phrases which are not applicable to this product

ACGIH	American Conference of Governmental Industrial Hygienists
ADN	Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Europe)
ADR	Agreement concerning the International Carriage of Dangerous Goods by Road (Europe)
AIIC	Australian Inventory of Industrial Chemicals
ATE	Acute Toxicity Estimate
ASTM	American Society for the Testing of Materials
bar	Biological Reference Values for Chemical Compounds in the Work Area
BAT	Biological tolerance values for occupational exposure
BEL	Biological exposure limits
bw	Body weight
Ceiling	Maximum limit value
CMR	Carcinogen, Mutagen or Reproductive Toxicant
DOT	Department of Transportation (United States)
DSL	Domestic Substances List (Canada)
ECEL	Existing Chemical Exposure Limit
EINECS	European Inventory of Existing Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
ENCS	Existing and New Chemical Substances (Japan)
EPA	U.S. Environmental Protection Agency
GHS	Globally Harmonized System
HMIS	Hazardous Materials Identification System
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IBC	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
ICAO	International Civil Aviation Organization
IECSC	Inventory of Existing Chemical Substances in China
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
ISO	International Organization for Standardization
KECI	Korean Existing Chemicals Inventory
LC50	Lethal Concentration to 50% of a test population
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
MARPOL	International Convention for the Prevention of Pollution from Ships
NDSL	Non-Domestic Substances List (Canada)
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
n.o.s.	Not Otherwise Specified
NOAEC	No Observed Adverse Effect Concentration
NOAEL	No Observed Adverse Effect Level
NOELR	No Observable Effect Loading Rate
NTP	National Toxicology Program (United States)
NZIoC	New Zealand Inventory of Chemicals
OECD	Organization for Economic Cooperation and Development
OEL	Occupational exposure limits
OSHA	Occupational Safety and Health Administration of the US Department of Labor
PBT	Persistent, Bioaccumulative and Toxic substance
PICCS	Philippines Inventory of Chemicals and Chemical Substances

PMT	Persistent, Mobile and Toxic
PPE	Personal protective equipment
QSAR	Quantitative Structure Activity Relationship
RID	Agreement concerning the International Carriage of Dangerous Goods by Rail (Europe)
SADT	Self-Accelerating Decomposition Temperature
SAR	Structure-activity relationship
SARA	Superfund Amendments and Reauthorization Act
SDS	Safety Data Sheet
SL	Surface Limit
STEL	Short Term Exposure Limit
STOT RE	Specific target organ toxicity - Repeated exposure
STOT SE	Specific target organ toxicity - Single exposure
TCSI	Taiwan Chemical Substance Inventory
TDG	Transport of Dangerous Goods (Canada)
TSCA	Toxic Substances Control Act (United States)
TWA	Time-Weighted Average
UN	United Nations
VOC	Volatile organic compounds
vPvB	Very Persistent and Very Bioaccumulative
vPvM	Very Persistent and Very Mobile
As	Allergenic substance
DS	Dermal Sensitizer
Ot	Ototoxicant
pOt	Ototoxicant - potential to cause hearing disorders
PS	Photosensitizer
RS	Respiratory Sensitizer
S	Sensitizer
poS	Sensitizer - capable of causing occupational asthma
Sa	Simple asphyxiant
Sd	Skin designation
pSd	Skin designation - potential for cutaneous absorption
Sdv	Skin designation - vacated
Sk	Skin notation
dSk	Skin notation - danger of cutaneous absorption
pSk	Skin notation - potential for cutaneous absorption

Key literature references and sources for data used to compile the SDS

U.S. Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 U.S. Environmental Protection Agency
 U.S. EPA Acute Exposure Guideline Level(s) (AEGL(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 U.S. Hazardous Substance Data Bank (HSDB)
 International Uniform Chemical Information Database (IUCLID)
 Japan National Institute of Technology and Evaluation (NITE)
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 U.S. National Institute for Occupational Safety and Health (NIOSH)
 National Library of Medicine's ChemID Plus (NLM CIP)
 National Library of Medicine's PubMed database (NLM PUBMED)
 U.S. National Toxicology Program (NTP)
 New Zealand's Chemical Classification and Information Database (CCID)
 International Organization for Economic Co-operation and Development (OECD) Environment, Health, and Safety Publications
 International Organization for Economic Co-operation and Development (OECD) High Production Volume Chemicals Program
 International Organization for Economic Co-operation and Development (OECD) Screening Information Data Set
 United Nations World Health Organization (WHO)

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Revision Note

No information available.

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End of Safety Data Sheet