



This is a kit that contains the following components:

DURAL HS GEL PART A

DURAL HS GEL PART B



# SAFETY DATA SHEET

## 1. Identification

**Product identifier:** DURAL HS GEL PART A  
**Product Code:** 070HS 96

### Recommended use and restriction on use

**Recommended use:** Adhesive  
**Restrictions on use:** Not known.

### Manufacturer/Importer/Supplier/Distributor Information

EUCLID CHEMICAL COMPANY  
19218 REDWOOD ROAD  
CLEVELAND OH 44110  
US

**Contact person:** EH&S Department  
**Telephone:** 216-531-9222  
**Emergency telephone number:** 1-800-424-9300 (US); 1-613-996-6666 (Canada)

## 2. Hazard(s) identification

### Hazard Classification

#### Health Hazards

Acute toxicity (Oral)	Category 4
Acute toxicity (Dermal)	Category 4
Acute toxicity (Inhalation - vapor)	Category 4
Acute toxicity (Inhalation - dust and mist)	Category 4
Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Skin sensitizer	Category 1

#### Unknown toxicity - Health

Acute toxicity, oral	89 %
Acute toxicity, dermal	89 %
Acute toxicity, inhalation, vapor	89.5 %
Acute toxicity, inhalation, dust or mist	89 %

#### Environmental Hazards

Chronic hazards to the aquatic environment	Category 2
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#### Unknown toxicity - Environment



Acute hazards to the aquatic environment	99 %
Chronic hazards to the aquatic environment	40 %

## Label Elements

### Hazard Symbol:



**Signal Word:** Warning

**Hazard Statement:** Harmful if swallowed, in contact with skin or if inhaled.  
Causes skin irritation.  
Causes serious eye irritation.  
May cause an allergic skin reaction.  
Toxic to aquatic life with long lasting effects.

### Precautionary Statements

**Prevention:** Avoid breathing dust/fume/gas/mist/vapors/spray. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:** IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing. Call a POISON CENTER or doctor/ physician if you feel unwell. Specific treatment (see supplemental first aid instructions on this label). IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. Collect spillage.

**Disposal:** Dispose of contents/ container to an approved facility in accordance with local, regional, national and international regulations.

**Hazard(s) not otherwise classified (HNOC):** None.

## 3. Composition/information on ingredients

### Mixtures

000000026398



Chemical Identity	CAS number	Content in percent (%)*
Epichlorohydrin polymer	25085-99-8	50 - <100%
1,4-Butanediol DiGlycidyl Ether	2425-79-8	10 - <20%
o-Cresyl glycidyl ether	2210-79-9	0.1 - <1%
Titanium dioxide	13463-67-7	0.1 - <1%

\* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

#### 4. First-aid measures

##### Description of necessary first-aid measures

<b>Inhalation:</b>	Move to fresh air.
<b>Skin Contact:</b>	Call a POISON CENTER/doctor if you feel unwell. Destroy or thoroughly clean contaminated shoes. Immediately remove contaminated clothing and shoes and wash skin with soap and plenty of water. If skin irritation or an allergic skin reaction develops, get medical attention.
<b>Eye contact:</b>	Remove contact lenses, if present and easy to do. Continue rinsing. Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.
<b>Ingestion:</b>	Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
<b>Personal Protection for First-aid Responders:</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

##### Most important symptoms/effects, acute and delayed

<b>Symptoms:</b>	Prolonged or repeated contact with skin may cause redness, itching, irritation and eczema/chapping. Extreme irritation of eyes and mucous membranes, including burning and tearing.
<b>Hazards:</b>	No data available.

##### Indication of immediate medical attention and special treatment needed

<b>Treatment:</b>	Symptoms may be delayed.
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#### 5. Fire-fighting measures

<b>General Fire Hazards:</b>	No unusual fire or explosion hazards noted.
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##### Suitable (and unsuitable) extinguishing media

<b>Suitable extinguishing media:</b>	Use fire-extinguishing media appropriate for surrounding materials.
<b>Unsuitable extinguishing media:</b>	Do not use water jet as an extinguisher, as this will spread the fire.



**Specific hazards arising from the chemical:** During fire, gases hazardous to health may be formed.

**Special protective equipment and precautions for fire-fighters**

**Special fire-fighting procedures:** No data available.

**Special protective equipment for fire-fighters:** Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

## 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures:** See Section 8 of the SDS for Personal Protective Equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away.

**Accidental release measures:** In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

**Methods and material for containment and cleaning up:** Dam and absorb spillages with sand, earth or other non-combustible material. Collect spillage in containers, seal securely and deliver for disposal according to local regulations.

**Environmental Precautions:** Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid release to the environment.

## 7. Handling and storage

### Handling

**Technical measures (e.g. Local and general ventilation):** Observe good industrial hygiene practices. Observe occupational exposure limits and minimize the risk of inhalation of vapors and mist. Mechanical ventilation or local exhaust ventilation may be required.

**Safe handling advice:** Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Avoid contact with eyes, skin, and clothing. Wash hands thoroughly after handling. Do not taste or swallow. Avoid contact with skin.

**Contact avoidance measures:** No data available.

**Hygiene measures:** Avoid contact with skin. Observe good industrial hygiene practices. Do not eat, drink or smoke when using the product. Wash hands after handling. Wash contaminated clothing before reuse. Wash hands before breaks and immediately after handling the product. Contaminated work clothing should not be allowed out of the workplace.

### Storage

**Safe storage conditions:** Store away from incompatible materials. Store in original tightly closed container.

**Safe packaging materials:** No data available.

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

Chemical Identity	Type	Exposure Limit Values	Source
Titanium dioxide - Total dust.	PEL	15 mg/m <sup>3</sup>	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)
Titanium dioxide - Respirable fraction.	TWA	15 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (03 2016)
Titanium dioxide - Total dust.	TWA	15 mg/m <sup>3</sup>	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (03 2016)
Titanium dioxide - Respirable fraction.	TWA	5 mg/m <sup>3</sup>	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (03 2016)
Titanium dioxide - Total dust.	TWA	50 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (03 2016)
Titanium dioxide - Respirable finescale particles	TWA	2.5 mg/m <sup>3</sup>	US. ACGIH Threshold Limit Values, as amended (01 2022)
Titanium dioxide - Respirable nanoscale particles	TWA	0.2 mg/m <sup>3</sup>	US. ACGIH Threshold Limit Values, as amended (01 2022)

Chemical name	Type	Exposure Limit Values	Source
Calcium Carbonate (Limestone) - Total dust.	STEL	20 mg/m <sup>3</sup>	Canada. British Columbia OELs: Table of Exposure Limits for Chemical Biological Substances (Workers Compensation Board); as amended (07 2007)
	TWA	10 mg/m <sup>3</sup>	Canada. British Columbia OELs: Table of Exposure Limits for Chemical Biological Substances (Workers Compensation Board); as amended (07 2007)
Calcium Carbonate (Limestone) - Respirable fraction.	TWA	3 mg/m <sup>3</sup>	Canada. British Columbia OELs: Table of Exposure Limits for Chemical Biological Substances (Workers Compensation Board); as amended (07 2007)
Calcium Carbonate (Limestone) - Total dust.	TWA	10 mg/m <sup>3</sup>	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
Titanium dioxide - Total dust.	TWA	10 mg/m <sup>3</sup>	Canada. British Columbia OELs: Table of Exposure Limits for Chemical Biological Substances (Workers Compensation Board); as amended (07 2007)
Titanium dioxide - Respirable fraction.	TWA	3 mg/m <sup>3</sup>	Canada. British Columbia OELs: Table of Exposure Limits for Chemical Biological Substances (Workers Compensation Board); as amended (07 2007)
Titanium dioxide	TWA	10 mg/m <sup>3</sup>	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
Titanium dioxide - Total dust.	TWA	10 mg/m <sup>3</sup>	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)

**Appropriate Engineering Controls**

Observe good industrial hygiene practices. Observe occupational exposure limits and minimize the risk of inhalation of vapors and mist. Mechanical ventilation or local exhaust ventilation may be required.

**Individual protection measures, such as personal protective equipment**



<b>Eye/face protection:</b>	Wear safety glasses with side shields (or goggles).
<b>Skin Protection</b>	
<b>Hand Protection:</b>	Additional Information: Use suitable protective gloves if risk of skin contact.
<b>Skin and Body Protection:</b>	Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Contact health and safety professional or manufacturer for specific information.
<b>Respiratory Protection:</b>	In case of inadequate ventilation use suitable respirator. Seek advice from local supervisor.
<b>Hygiene measures:</b>	Avoid contact with skin. Observe good industrial hygiene practices. Do not eat, drink or smoke when using the product. Wash hands after handling. Wash contaminated clothing before reuse. Wash hands before breaks and immediately after handling the product. Contaminated work clothing should not be allowed out of the workplace.

## 9. Physical and chemical properties

### Appearance

<b>Physical state:</b>	liquid
<b>Form:</b>	Viscous Liquid
<b>Color:</b>	White
<b>Odor:</b>	Slight odor
<b>Odor threshold:</b>	No data available.
<b>pH:</b>	No data available.
<b>Melting point/freezing point:</b>	No data available.
<b>Initial boiling point and boiling range:</b>	No data available.
<b>Flash Point:</b>	No data available.
<b>Evaporation rate:</b>	Slower than n-Butyl Acetate
<b>Flammability (solid, gas):</b>	No
<b>Upper/lower limit on flammability or explosive limits</b>	
<b>Flammability limit - upper (%):</b>	No data available.
<b>Flammability limit - lower (%):</b>	No data available.
<b>Explosive limit - upper:</b>	No data available.
<b>Explosive limit - lower:</b>	No data available.
<b>Vapor pressure:</b>	No data available.
<b>Vapor density:</b>	Vapors are heavier than air and may travel along the floor and in the bottom of containers.
<b>Relative density:</b>	> 1.0
<b>Solubility(ies)</b>	
<b>Solubility in water:</b>	Insoluble in water
<b>Solubility (other):</b>	No data available.
<b>Partition coefficient (n-octanol/water):</b>	No data available.
<b>Auto-ignition temperature:</b>	No data available.



**Decomposition temperature:** No data available.  
**Viscosity:** No data available.

## 10. Stability and reactivity

**Reactivity:** No data available.

**Chemical Stability:** Material is stable under normal conditions.

**Possibility of hazardous reactions:** No data available.

**Conditions to avoid:** Avoid heat or contamination.

**Incompatible Materials:** Alcohols. Amines. Strong acids. Avoid contact with oxidizing agents (e.g. nitric acid, peroxides and chromates). Strong bases. Water, moisture.

**Hazardous Decomposition Products:** Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

## 11. Toxicological information

### Information on likely routes of exposure

**Inhalation:** In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes.

**Skin Contact:** Harmful in contact with skin. Causes skin irritation. May cause an allergic skin reaction.

**Eye contact:** Eye contact is possible and should be avoided.

**Ingestion:** Harmful if swallowed.

### Symptoms related to the physical, chemical and toxicological characteristics

**Inhalation:** No data available.

**Skin Contact:** No data available.

**Eye contact:** No data available.

**Ingestion:** No data available.

### Information on toxicological effects

#### Acute toxicity (list all possible routes of exposure)

**Oral Product:** ATEmix: 1,229.8 mg/kg

**Dermal Product:** ATEmix: 1,210 mg/kg

**Inhalation Product:** ATEmix: 11.55 mg/l





ATEmix : 1.65 mg/l

**Repeated dose toxicity****Product:** No data available.**Skin Corrosion/Irritation****Product:** No data available.**Specified substance(s):**1,4-Butanediol in vivo (Rabbit): Not Classified , 24 - 72 h  
DiGlycidyl Ether

o-Cresyl glycidyl ether in vivo (Rabbit): Not irritant , 7 d

**Serious Eye Damage/Eye Irritation****Product:** No data available.**Specified substance(s):**1,4-Butanediol Rabbit, 24 - 72 h: Category 1  
DiGlycidyl Ether**Respiratory or Skin Sensitization****Product:** No data available.**Carcinogenicity****Product:** No data available.**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:****US. National Toxicology Program (NTP) Report on Carcinogens:**

No carcinogenic components identified

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053), as amended:**

No carcinogenic components identified

**Germ Cell Mutagenicity****In vitro****Product:** No data available.**In vivo****Product:** No data available.**Reproductive toxicity****Product:** No data available.

**Specific Target Organ Toxicity - Single Exposure****Product:** No data available.**Specific Target Organ Toxicity - Repeated Exposure****Product:** No data available.**Aspiration Hazard****Product:** No data available.**Other effects:**

Constituents of this product may include crystalline silica which, if in inhalable form, may cause silicosis, a form of progressive pulmonary fibrosis. Inhalable crystalline silica is listed by IARC as a group I carcinogen (lung) based on sufficient evidence in occupationally exposed humans and sufficient evidence in animals. Crystalline silica is also listed by the NTP as a known human carcinogen. Constituents may also contain asbestiform or non-asbestiform tremolite or other silicates as impurities, and above de minimis exposure to these impurities in inhalable form may be carcinogenic or cause other serious lung problems.

**12. Ecological information****Ecotoxicity:****Acute hazards to the aquatic environment:****Fish****Product:** No data available.**Specified substance(s):**

1,4-Butanediol DiGlycidyl Ether LC 50 (Danio rerio, 24 h): 61 mg/l

o-Cresyl glycidyl ether LC 50 (Oncorhynchus mykiss, 96 h): 7.5 mg/l

**Aquatic Invertebrates****Product:** No data available.**Specified substance(s):**

o-Cresyl glycidyl ether EC 50 (Daphnia magna, 48 h): 3.3 mg/l Experimental result, Key study

**Chronic hazards to the aquatic environment:****Fish****Product:** No data available.

**Aquatic Invertebrates****Product:** No data available.**Toxicity to Aquatic Plants****Product:** No data available.**Persistence and Degradability****Biodegradation****Product:** No data available.**Specified substance(s):**

1,4-Butanediol DiGlycidyl Ether 98 % (60 d) Detected in water. Experimental result, Key study

o-Cresyl glycidyl ether 11 - 17 % (28 d) Detected in water. Experimental result, Key study

**BOD/COD Ratio****Product:** No data available.**Bioaccumulative potential****Bioconcentration Factor (BCF)****Product:** No data available.**Partition Coefficient n-octanol / water (log Kow)****Product:** No data available.**Mobility in soil:**

No data available.

**Other adverse effects:**

Toxic to aquatic life with long lasting effects.

**13. Disposal considerations****Disposal methods:**

Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Contaminated Packaging:**

No data available.

**14. Transport information****TDG:**

UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Polyfunctional Epoxy), 9, PG III

**CFR / DOT:**

UN3077, Environmentally hazardous substance, solid, n.o.s. (Polyfunctional Epoxy), 9, PG III, MARINE POLLUTANT

**IMDG:**

UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Polyfunctional Epoxy), 9, PG III, MARINE POLLUTANT

**Further Information:**

The above shipping description may not be accurate for all container sizes and all modes of transportation. Please refer to Bill of Lading.

**15. Regulatory information****US Federal Regulations****TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

None present or none present in regulated quantities.

**US. Toxic Substances Control Act (TSCA) Section 5(a)(2) Final Significant New Use Rules (SNURs) (40 CFR 721, Subpt E)**

None present or none present in regulated quantities.

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053), as amended**

None present or none present in regulated quantities.

**CERCLA Hazardous Substance List (40 CFR 302.4):**

None present or none present in regulated quantities.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)****Hazard categories**

Immediate (Acute) Health Hazards  
Acute toxicity (any route or exposure)  
Skin Corrosion or Irritation  
Respiratory or Skin Sensitization

**US. EPCRA (SARA Title III) Section 304 Extremely Hazardous Substances Reporting Quantities and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substances**

Not Regulated.

**US. EPCRA (SARA Title III Section 313 Toxic Chemical Release Inventory (TRI) Reporting****Chemical Identity                      % by weight****Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

None present or none present in regulated quantities.

**Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)**

None present or none present in regulated quantities.

**US State Regulations**



**US. California Proposition 65**



**WARNING**

Cancer - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

**International regulations**

**Montreal protocol**

Not applicable

**Stockholm convention**

Not applicable

**Rotterdam convention**

Not applicable

**Kyoto protocol**

Not applicable

**VOC:** When appropriately mixed with the other part, product has a VOC less water and exempt solvent of:  
7 g/l

Regulatory VOC (less water and exempt solvent) : 0 g/l

VOC Method 310 : 0.00 %

**Inventory Status:**

Canada DSL Inventory List:	All components in this product are listed on or exempt from the Inventory.
EC Inventory:	One or more components in this product are not listed on or exempt from the Inventory.
Japan (ENCS) List:	One or more components in this product are not listed on or exempt from the Inventory.
China Inv. Existing Chemical Substances:	All components in this product are listed on or exempt from the Inventory.
Korea Existing Chemicals Inv. (KECI):	All components in this product are listed on or exempt from the Inventory.
Canada NDSL Inventory:	One or more components in this product are not listed on or exempt from the Inventory.
Philippines PICCS:	All components in this product are listed on or exempt from the Inventory.
US TSCA Inventory:	All components in this product are listed on or exempt from the Inventory.
New Zealand Inventory of Chemicals:	All components in this product are listed on or exempt from the Inventory.
Japan ISHL Listing:	One or more components in this product are not listed on or exempt from the Inventory.
Japan Pharmacopoeia Listing:	One or more components in this product are not listed on or exempt from the Inventory.
Mexico INSQ:	One or more components in this product are not listed on or exempt from the Inventory.
Ontario Inventory:	One or more components in this



product are not listed on or exempt from the Inventory.

Taiwan Chemical Substance Inventory: One or more components in this product are not listed on or exempt from the Inventory.

Australia Industrial Chem. Act (AIC): One or more components in this product are not listed on or exempt from the Inventory.

Switzerland New Subs Notified/Registered: One or more components in this product are not listed on or exempt from the Inventory.

Thailand DIW Existing Chemical Inv. List: One or more components in this product are not listed on or exempt from the Inventory.

Vietnam National Chemical Inventory: One or more components in this product are not listed on or exempt from the Inventory.

#### 16. Other information, including date of preparation or last revision

**Revision Date:** 08/15/2024

**Version #:** 6.0

**Further Information:** No data available.

**Disclaimer:** For Industrial Use Only. Keep out of Reach of Children. The hazard information herein is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.



# SAFETY DATA SHEET

## 1. Identification

**Product identifier:** DURAL HS GEL PART B  
**Product Code:** 070HS 96

### Recommended use and restriction on use

**Recommended use:** Adhesive  
**Restrictions on use:** Not known.

### Manufacturer/Importer/Supplier/Distributor Information

EUCLID CHEMICAL COMPANY  
19218 REDWOOD ROAD  
CLEVELAND OH 44110  
US

**Contact person:** EH&S Department  
**Telephone:** 216-531-9222  
**Emergency telephone number:** 1-800-424-9300 (US); 1-613-996-6666 (Canada)

## 2. Hazard(s) identification

### Hazard Classification

#### Health Hazards

Acute toxicity (Oral)	Category 4
Acute toxicity (Dermal)	Category 4
Skin Corrosion/Irritation	Category 1B
Serious Eye Damage/Eye Irritation	Category 1
Skin sensitizer	Category 1
Toxic to reproduction	Category 2

#### Unknown toxicity - Health

Acute toxicity, oral	63 %
Acute toxicity, dermal	88 %
Acute toxicity, inhalation, vapor	98 %
Acute toxicity, inhalation, dust or mist	98 %

### Environmental Hazards

Acute hazards to the aquatic environment	Category 1
Chronic hazards to the aquatic environment	Category 2

#### Unknown toxicity - Environment





Acute hazards to the aquatic environment	63 %
Chronic hazards to the aquatic environment	63 %

## Label Elements

### Hazard Symbol:



**Signal Word:** Danger

**Hazard Statement:** Harmful if swallowed or in contact with skin. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Suspected of damaging fertility or the unborn child. Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

### Precautionary Statements

**Prevention:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/ protective clothing/ eye protection/ face protection. Use personal protective equipment as required.

**Response:** IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER or doctor/ physician if you feel unwell. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention. Specific treatment (see supplemental first aid instructions on this label). IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical advice/attention. Collect spillage.

**Storage:** Store locked up.

**Disposal:** Dispose of contents/ container to an approved facility in accordance with local, regional, national and international regulations.



Hazard(s) not otherwise classified (HNOC): None.

### 3. Composition/information on ingredients

#### Mixtures

Chemical Identity	CAS number	Content in percent (%)*
4-Nonylphenol	84852-15-3	10 - <25%
N-Aminoethylpiperazine	140-31-8	10 - <20%
1,5-Pentanediamine, 2-methyl-	15520-10-2	5 - <10%
Crystalline Silica (Quartz)/ Silica Sand	14808-60-7	1 - <5%

\* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

### 4. First-aid measures

#### Description of necessary first-aid measures

<b>Inhalation:</b>	Call a physician or poison control center immediately. If breathing stops, provide artificial respiration. Move to fresh air. If breathing is difficult, give oxygen.
<b>Skin Contact:</b>	Call a physician or poison control center immediately. Destroy or thoroughly clean contaminated shoes. Immediately remove contaminated clothing and shoes and wash skin with soap and plenty of water. If skin irritation or an allergic skin reaction develops, get medical attention.
<b>Eye contact:</b>	Remove contact lenses, if present and easy to do. Continue rinsing. Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Call a physician or poison control center immediately.
<b>Ingestion:</b>	Rinse mouth. Call a physician or poison control center immediately. Never give liquid to an unconscious person. Do not induce vomiting without advice from poison control center.
<b>Personal Protection for First-aid Responders:</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

#### Most important symptoms/effects, acute and delayed

<b>Symptoms:</b>	Prolonged or repeated contact with skin may cause redness, itching, irritation and eczema/chapping. Extreme irritation of eyes and mucous membranes, including burning and tearing.
<b>Hazards:</b>	No data available.

#### Indication of immediate medical attention and special treatment needed

<b>Treatment:</b>	Symptoms may be delayed.
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### 5. Fire-fighting measures



**General Fire Hazards:** No unusual fire or explosion hazards noted.

**Suitable (and unsuitable) extinguishing media**

**Suitable extinguishing media:** Use fire-extinguishing media appropriate for surrounding materials.

**Unsuitable extinguishing media:** Do not use water jet as an extinguisher, as this will spread the fire.

**Specific hazards arising from the chemical:** During fire, gases hazardous to health may be formed.

**Special protective equipment and precautions for fire-fighters**

**Special fire-fighting procedures:** No data available.

**Special protective equipment for fire-fighters:** Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

## 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures:** See Section 8 of the SDS for Personal Protective Equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away.

**Accidental release measures:** In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

**Methods and material for containment and cleaning up:** Dam and absorb spillages with sand, earth or other non-combustible material. Collect spillage in containers, seal securely and deliver for disposal according to local regulations.

**Environmental Precautions:** Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid release to the environment.

## 7. Handling and storage

### Handling

**Technical measures (e.g. Local and general ventilation):** Observe good industrial hygiene practices. Observe occupational exposure limits and minimize the risk of inhalation of vapors and mist. Mechanical ventilation or local exhaust ventilation may be required.

**Safe handling advice:** Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Avoid contact with eyes, skin, and clothing. Wash hands thoroughly after handling. Do not taste or swallow. Do not get in eyes. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required. Do not get in eyes, on skin, on clothing.

**Contact avoidance measures:** No data available.**Hygiene measures:** Avoid contact with skin. Observe good industrial hygiene practices. Do not eat, drink or smoke when using the product. Wash hands after handling. Do not get in eyes. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Wash contaminated clothing before reuse. Do not get this material in contact with skin. Wash hands before breaks and immediately after handling the product. Contaminated work clothing should not be allowed out of the workplace.**Storage****Safe storage conditions:** Store locked up.**Safe packaging materials:** No data available.**8. Exposure controls/personal protection****Control Parameters****Occupational Exposure Limits**

Chemical Identity	Type	Exposure Limit Values	Source
Crystalline Silica (Quartz)/ Silica Sand - Respirable dust.	TWA	0.05 mg/m3	US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053), as amended (03 2016)
	OSHA_ACT	0.025 mg/m3	US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053), as amended (03 2016)
Crystalline Silica (Quartz)/ Silica Sand - Respirable dust.	PEL	0.05 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (03 2016)
Crystalline Silica (Quartz)/ Silica Sand - Respirable.	TWA	2.4 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (2000)
	TWA	0.1 mg/m3	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (2000)
Crystalline Silica (Quartz)/ Silica Sand - Respirable fraction.	TWA	0.025 mg/m3	US. ACGIH Threshold Limit Values, as amended (02 2020)

Chemical name	Type	Exposure Limit Values	Source
Calcium Carbonate (Limestone) - Total dust.	STEL	20 mg/m3	Canada. British Columbia OELs: Table of Exposure Limits for Chemical Biological Substances (Workers Compensation Board); as amended (07 2007)
	TWA	10 mg/m3	Canada. British Columbia OELs: Table of Exposure Limits for Chemical Biological Substances (Workers Compensation Board); as amended (07 2007)



Calcium Carbonate (Limestone) - Respirable fraction.	TWA	3 mg/m3	Canada. British Columbia OELs: Table of Exposure Limits for Chemical Biological Substances (Workers Compensation Board); as amended (07 2007)
Calcium Carbonate (Limestone) - Total dust.	TWA	10 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
Crystalline Silica (Quartz)/ Silica Sand - Respirable fraction.	TWA	0.10 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (06 2015)
Crystalline Silica (Quartz)/ Silica Sand - Respirable dust.	TWA	0.1 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
	TWA	0.05 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (04 2022)
Crystalline Silica (Quartz)/ Silica Sand - Respirable fraction.	TWA	0.025 mg/m3	Canada. British Columbia OELs: Table of Exposure Limits for Chemical Biological Substances (Workers Compensation Board); as amended (08 2023)

**Appropriate Engineering Controls**

Observe good industrial hygiene practices. Observe occupational exposure limits and minimize the risk of inhalation of vapors and mist. Mechanical ventilation or local exhaust ventilation may be required.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection:**

Wear a full-face respirator, if needed. Wear safety glasses with side shields (or goggles) and a face shield.

**Skin Protection**

**Hand Protection:**

Additional Information: Use suitable protective gloves if risk of skin contact.

**Skin and Body Protection:**

Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Contact health and safety professional or manufacturer for specific information.

**Respiratory Protection:**

In case of inadequate ventilation use suitable respirator. Seek advice from local supervisor.

**Hygiene measures:**

Avoid contact with skin. Observe good industrial hygiene practices. Do not eat, drink or smoke when using the product. Wash hands after handling. Do not get in eyes. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Wash contaminated clothing before reuse. Do not get this material in contact with skin. Wash hands before breaks and immediately after handling the product. Contaminated work clothing should not be allowed out of the workplace.

**9. Physical and chemical properties**

**Appearance**

**Physical state:**

liquid

**Form:**

Viscous Liquid



<b>Color:</b>	Black
<b>Odor:</b>	Slight odor
<b>Odor threshold:</b>	No data available.
<b>pH:</b>	No data available.
<b>Melting point/freezing point:</b>	No data available.
<b>Initial boiling point and boiling range:</b>	No data available.
<b>Flash Point:</b>	No data available.
<b>Evaporation rate:</b>	Slower than n-Butyl Acetate
<b>Flammability (solid, gas):</b>	No
<b>Upper/lower limit on flammability or explosive limits</b>	
<b>Flammability limit - upper (%):</b>	No data available.
<b>Flammability limit - lower (%):</b>	No data available.
<b>Explosive limit - upper:</b>	No data available.
<b>Explosive limit - lower:</b>	No data available.
<b>Vapor pressure:</b>	No data available.
<b>Vapor density:</b>	Vapors are heavier than air and may travel along the floor and in the bottom of containers.
<b>Relative density:</b>	1.05
<b>Solubility(ies)</b>	
<b>Solubility in water:</b>	Insoluble in water
<b>Solubility (other):</b>	No data available.
<b>Partition coefficient (n-octanol/water):</b>	No data available.
<b>Auto-ignition temperature:</b>	No data available.
<b>Decomposition temperature:</b>	No data available.
<b>Viscosity:</b>	No data available.

## 10. Stability and reactivity

<b>Reactivity:</b>	No data available.
<b>Chemical Stability:</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions:</b>	No data available.
<b>Conditions to avoid:</b>	Avoid heat or contamination.
<b>Incompatible Materials:</b>	Alcohols. Amines. Strong acids. Avoid contact with oxidizing agents (e.g. nitric acid, peroxides and chromates). Strong bases. Water, moisture.
<b>Hazardous Decomposition Products:</b>	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation:</b>	In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes.
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<b>Skin Contact:</b>	Harmful in contact with skin. Causes severe skin burns. May cause an allergic skin reaction.
<b>Eye contact:</b>	Causes serious eye damage.
<b>Ingestion:</b>	Harmful if swallowed.

**Symptoms related to the physical, chemical and toxicological characteristics**

<b>Inhalation:</b>	No data available.
<b>Skin Contact:</b>	No data available.
<b>Eye contact:</b>	No data available.
<b>Ingestion:</b>	No data available.

**Information on toxicological effects****Acute toxicity (list all possible routes of exposure)**

<b>Oral</b>	
<b>Product:</b>	ATEmix: 948.48 mg/kg
<b>Dermal</b>	
<b>Product:</b>	ATEmix: 1,039.2 mg/kg
<b>Inhalation</b>	
<b>Product:</b>	
<b>Specified substance(s):</b>	
1,5-Pentanediamine, 2-methyl-	LC 50 (Rat): 4.9 mg/l

**Repeated dose toxicity**

**Product:** No data available.

**Skin Corrosion/Irritation**

**Product:** No data available.

**Specified substance(s):**

4-Nonylphenol in vivo (Rabbit): Irritating , 1 - 8 d

N-Aminoethylpiperazine in vivo (Rabbit): Severe damage to the belly , 24 h

**Serious Eye Damage/Eye Irritation**

**Product:** No data available.

**Specified substance(s):**

4-Nonylphenol Rabbit, 24 - 72 h: Corrosive



1,5-Pentanediamine, 2-methyl- Rabbit, 24 - 72 h: Category 1

**Respiratory or Skin Sensitization**

**Product:** No data available.

**Carcinogenicity**

**Product:** No data available.

**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:****US. National Toxicology Program (NTP) Report on Carcinogens:****US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053), as amended:****Germ Cell Mutagenicity****In vitro**

**Product:** No data available.

**In vivo**

**Product:** No data available.

**Reproductive toxicity**

**Product:** Suspected of damaging fertility or the unborn child.

**Specific Target Organ Toxicity - Single Exposure**

**Product:** No data available.

**Specific Target Organ Toxicity - Repeated Exposure**

**Product:** No data available.

**Aspiration Hazard**

**Product:** No data available.

**Other effects:**

Constituents of this product may include crystalline silica which, if in inhalable form, may cause silicosis, a form of progressive pulmonary fibrosis. Inhalable crystalline silica is listed by IARC as a group I carcinogen (lung) based on sufficient evidence in occupationally exposed humans and sufficient evidence in animals. Crystalline silica is also listed by the NTP as a known human carcinogen. Constituents may also contain asbestiform or non-asbestiform tremolite or other silicates as impurities, and above de minimis exposure to these impurities in inhalable form may be carcinogenic or cause other serious lung problems.



**12. Ecological information****Ecotoxicity:****Acute hazards to the aquatic environment:****Fish****Product:** No data available.**Specified substance(s):**

4-Nonylphenol EC 50 (Pimephales promelas, 96 h): 96 µg/l

N-Aminoethylpiperazine LC 50 (Pimephales promelas, 96 h): 560 mg/l

1,5-Pentanediamine, 2-methyl-  
LC 50 (96 h): 1,825 mg/l  
LC 100 (Leuciscus idus melanotus, 48 h): 180 mg/l  
LC 50 (Pimephales promelas, 96 h): 1,825 mg/l  
LC 50 (Leuciscus idus melanotus, 48 h): 130 mg/l  
LC 0 (Leuciscus idus melanotus, 48 h): 100 mg/l**Aquatic Invertebrates****Product:** No data available.**Specified substance(s):**

4-Nonylphenol EC 50 (Daphnia magna, 48 h): 84.4 µg/l Experimental result, Key study

N-Aminoethylpiperazine EC 50 (Daphnia magna, 48 h): 58 mg/l Experimental result, Key study

**Chronic hazards to the aquatic environment:****Fish****Product:** No data available.**Specified substance(s):**

4-Nonylphenol NOEL (Lepomis macrochirus): 0.059 mg/l experimental result

**Aquatic Invertebrates****Product:** No data available.**Specified substance(s):**

1,5-Pentanediamine, 2-methyl- EC 10 (Daphnia magna): 11 mg/l experimental result Experimental result, Key study

**Toxicity to Aquatic Plants****Product:** No data available.**Persistence and Degradability****Biodegradation****Product:** No data available.**Specified substance(s):**



4-Nonylphenol	48.2 % (35 d) Detected in water. Experimental result, Key study
1,5-Pentanediamine, 2-methyl-	1 % (14 d) Detected in water. Experimental result, Key study 46 % (17 d) Detected in water. Experimental result, Key study > 0 % (7 d) Detected in water. Experimental result, Key study

**BOD/COD Ratio**

**Product:** No data available.

**Bioaccumulative potential****Bioconcentration Factor (BCF)**

**Product:** No data available.

**Specified substance(s):**

N-Aminoethylpiperazine  
Cyprinus carpio, Bioconcentration Factor (BCF): > 0.3 - 1.7 Aquatic sediment Read-across from supporting substance (structural analogue or surrogate), Supporting study  
Cyprinus carpio, Bioconcentration Factor (BCF): > 2.8 - 6.3 Aquatic sediment Read-across from supporting substance (structural analogue or surrogate), Supporting study

**Partition Coefficient n-octanol / water (log Kow)**

**Product:** No data available.

**Specified substance(s):**

N-Aminoethylpiperazine  
Log Kow: -1.57

**Mobility in soil:** No data available.

**Other adverse effects:** Very toxic to aquatic organisms. Toxic to aquatic life with long lasting effects.

**13. Disposal considerations**

**Disposal methods:** Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Contaminated Packaging:** No data available.

**14. Transport information****TDG:**

UN2735, AMINES, LIQUID, CORROSIVE, N.O.S. (N-Aminoethylpiperazine, Nonylphenol), 8, PG III

**CFR / DOT:**

UN2735, Amines, liquid, corrosive, n.o.s. (N-Aminoethylpiperazine, Nonylphenol), 8, PG III, MARINE POLLUTANT

**IMDG:**



UN2735, AMINES, LIQUID, CORROSIVE, N.O.S. (N-Aminoethylpiperazine, Nonylphenol), 8, PG III, MARINE POLLUTANT

**Further Information:**

The above shipping description may not be accurate for all container sizes and all modes of transportation. Please refer to Bill of Lading.

**15. Regulatory information**

**US Federal Regulations**

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Chemical Identity

4-Nonylphenol

Reportable quantity

De minimis concentration: TSCA 5(a)(2)% One-Time Export Notification only.

**US. Toxic Substances Control Act (TSCA) Section 5(a)(2) Final Significant New Use Rules (SNURs) (40 CFR 721, Subpt E)**

None present or none present in regulated quantities.

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053), as amended**

Chemical Identity

Crystalline Silica  
(Quartz)/ Silica Sand

OSHA hazard(s)

kidney effects  
lung effects  
immune system effects  
Cancer

**CERCLA Hazardous Substance List (40 CFR 302.4):**

None present or none present in regulated quantities.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories**

- Immediate (Acute) Health Hazards
- Delayed (Chronic) Health Hazard
- Acute toxicity (any route or exposure)
- Skin Corrosion or Irritation
- Serious eye damage or eye irritation
- Respiratory or Skin Sensitization
- Reproductive toxicity

**US. EPCRA (SARA Title III) Section 304 Extremely Hazardous Substances Reporting Quantities and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substances**

Not Regulated.

**US. EPCRA (SARA Title III Section 313 Toxic Chemical Release Inventory (TRI) Reporting**

Chemical Identity

4-Nonylphenol

% by weight

1.0%

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

None present or none present in regulated quantities.



**Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)**

None present or none present in regulated quantities.

**US State Regulations**

**US. California Proposition 65**



**WARNING**

Cancer - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

**International regulations**

**Montreal protocol**

Not applicable

**Stockholm convention**

Not applicable

**Rotterdam convention**

Not applicable

**Kyoto protocol**

Not applicable

**VOC:** When appropriately mixed with the other part, product has a VOC less water and exempt solvent of:  
7 g/l

Regulatory VOC (less water and exempt solvent) : 63 g/l

VOC Method 310 : 6.00 %

**Inventory Status:**

EC Inventory:	One or more components in this product are not listed on or exempt from the Inventory.
Japan (ENCS) List:	One or more components in this product are not listed on or exempt from the Inventory.
China Inv. Existing Chemical Substances:	One or more components in this product are not listed on or exempt from the Inventory.
Korea Existing Chemicals Inv. (KECI):	One or more components in this product are not listed on or exempt from the Inventory.
Canada NDSL Inventory:	One or more components in this product are not listed on or exempt from the Inventory.
Philippines PICCS:	One or more components in this product are not listed on or exempt from the Inventory.
New Zealand Inventory of Chemicals:	One or more components in this product are not listed on or exempt from the Inventory.
Japan ISHL Listing:	One or more components in this product are not listed on or exempt from the Inventory.
Japan Pharmacopoeia Listing:	One or more components in this product are not listed on or exempt from the Inventory.
Mexico INSQ:	One or more components in this product are not listed on or exempt from the Inventory.
Ontario Inventory:	One or more components in this product are not listed on or exempt from the Inventory.
Taiwan Chemical Substance Inventory:	One or more components in this product are not listed on or exempt from the Inventory.
Australia Industrial Chem. Act (AIC):	One or more components in this



product are not listed on or exempt from the Inventory.

Canada DSL Inventory List:

All components in this product are listed on or exempt from the Inventory.

US TSCA Inventory:

All components in this product are listed on or exempt from the Inventory.

Switzerland New Subs  
Notified/Registered:

One or more components in this product are not listed on or exempt from the Inventory.

Thailand DIW Existing Chemical Inv.  
List:

One or more components in this product are not listed on or exempt from the Inventory.

Vietnam National Chemical Inventory:

One or more components in this product are not listed on or exempt from the Inventory.

#### 16. Other information, including date of preparation or last revision

**Revision Date:** 08/15/2024

**Version #:** 6.0

**Further Information:** No data available.

**Disclaimer:** For Industrial Use Only. Keep out of Reach of Children. The hazard information herein is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.