



This is a kit that contains the following components:

DURAL EPOXY PRIMER 1:1 PART A, DURAL EPOXY PRIMER PART A
DURAL EPOXY PRIMER 1:1 PART B, DURAL EPOXY PRIMER PART B



SAFETY DATA SHEET

1. Identification

Product identifier: DURAL EPOXY PRIMER 1:1 PART A, DURAL EPOXY PRIMER PART A
Product Code: TD2358104

Recommended use and restriction on use

Recommended use: Sealant
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

Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2A
Skin sensitizer	Category 1

Unknown toxicity - Health

Acute toxicity, oral	42.36 %
Acute toxicity, dermal	42.65 %
Acute toxicity, inhalation, vapor	57.72 %
Acute toxicity, inhalation, dust or mist	57.42 %

Environmental Hazards

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

Unknown toxicity - Environment

Acute hazards to the aquatic environment	57.72 %
Chronic hazards to the aquatic environment	57.72 %

**Label Elements****Hazard Symbol:****Signal Word:** Warning**Hazard Statement:** 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 thoroughly after handling. 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:** Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing. If eye irritation persists: Get medical advice/attention. Collect spillage.**Disposal:** Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.**Hazard(s) not otherwise classified (HNOC):** None.**3. Composition/information on ingredients****Mixtures**

Chemical Identity	CAS number	Content in percent (%)*
Bisphenol A Polyglycidyl Ether Resin	25068-38-6	25 - <50%
Aliphatic glycidyl ether	2461-15-6	10 - <20%

* 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****Inhalation:** Move to fresh air.



Skin Contact:	Get medical attention. 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.
Eye contact:	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.
Ingestion:	Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
Personal Protection for First-aid Responders:	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Most important symptoms/effects, acute and delayed

Symptoms:	Prolonged or repeated contact with skin may cause redness, itching, irritation and eczema/chapping.
Hazards:	No data available.

Indication of immediate medical attention and special treatment needed

Treatment:	Symptoms may be delayed.
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5. Fire-fighting measures

General Fire Hazards:	No unusual fire or explosion hazards noted.
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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.
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Special protective equipment and precautions for firefighters

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.
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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. Wash hands thoroughly after handling. Avoid contact with eyes. Avoid contact with skin. Avoid contact with eyes, skin, and clothing.
Contact avoidance measures:	No data available.
Hygiene measures:	Observe good industrial hygiene practices. Avoid contact with eyes. Wash contaminated clothing before reuse. Avoid 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 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

None of the components have assigned exposure limits.
None of the components have assigned exposure limits.

Chemical name	Type	Exposure Limit Values	Source
Methanol	TWA	200 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Methanol	TWA	200 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
	STEL	250 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)



	STEL	250 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
Methanol	STEL	250 ppm	328 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
	TWA	200 ppm	262 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
Allyl glycidyl ether	TWA	1 ppm		Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Allyl glycidyl ether	TWA	1 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
Allyl glycidyl ether	STEL	10 ppm	47 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
	TWA	5 ppm	23 mg/m3	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**General information:**

Provide easy access to water supply and eye wash facilities. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Eye/face protection:

Wear safety glasses with side shields (or goggles).

Skin Protection**Hand Protection:**

Use suitable protective gloves if risk of skin contact.

Other:

Wear suitable protective clothing. 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:

Observe good industrial hygiene practices. Avoid contact with eyes. Wash contaminated clothing before reuse. Avoid 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:	liquid
Color:	Colorless
Odor:	Mild
Odor threshold:	No data available.
pH:	No data available.
Melting point/freezing point:	No data available.
Initial boiling point and boiling range:	No data available.
Flash Point:	> 93 °C > 200 °F (Setaflash Closed Cup)
Evaporation rate:	Slower than Ether
Flammability (solid, gas):	No
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	No data available.
Flammability limit - lower (%):	No data available.
Explosive limit - upper:	No data available.
Explosive limit - lower:	No data available.
Vapor pressure:	< 10 mmHg (20 °C 68 °F)
Vapor density:	Vapors are heavier than air and may travel along the floor and in the bottom of containers.
Relative density:	1.13
Solubility(ies)	
Solubility in water:	Insoluble in water
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	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:	No data available.
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:	May be harmful in contact with skin. Causes skin irritation. May cause an allergic skin reaction.
Eye contact:	Causes serious eye irritation.
Ingestion:	May be 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: 2,726.94 mg/kg
Dermal	
Product:	ATEmix: 2,000.16 mg/kg
Inhalation	
Product:	
Specified substance(s):	
Bisphenol A Polyglycidyl Ether Resin	LC 50: > 20 mg/l LC 50: > 5 mg/l

Repeated dose toxicity

Product:	No data available.
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Skin Corrosion/Irritation

Product:	No data available.
Specified substance(s):	
Bisphenol A Polyglycidyl Ether Resin	Irritating. in vivo (Rabbit): Slightly irritating , 24 - 72 h
Aliphatic glycidyl ether	in vivo (Rabbit): Category 2 , 24 - 78 h

**Serious Eye Damage/Eye Irritation****Product:** No data available.**Specified substance(s):**

Bisphenol A	Strongly irritating.
Polyglycidyl Ether Resin	Rabbit, 24 hrs: Slightly irritating

Respiratory or Skin Sensitization**Product:** No data available.**Carcinogenicity****Product:** No data available.**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:**

No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050), 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:** No data available.

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

Bisphenol A Polyglycidyl Ether Resin LC 50 (Oncorhynchus mykiss, 96 h): 1.5 mg/l Experimental result, Key study

Aliphatic glycidyl ether LC 50 (Goldfish (Carassius auratus), 24 h): 14 mg/l Mortality

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

Bisphenol A Polyglycidyl Ether Resin EC 50 (Daphnia magna, 48 h): 1.1 mg/l Experimental result, Key study

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

Bisphenol A Polyglycidyl Ether Resin NOAEL (Daphnia magna): 0.3 mg/l Experimental result, Key study

Toxicity to Aquatic Plants**Product:** No data available.**Persistence and Degradability****Biodegradation****Product:** No data available.**BOD/COD Ratio****Product:** No data available.**Bioaccumulative potential****Bioconcentration Factor (BCF)****Product:** No data available.**Specified substance(s):**



Bisphenol A Polyglycidyl Ether Resin Bioconcentration Factor (BCF): 31 Aquatic sediment QSAR, Key study

Partition Coefficient n-octanol / water (log Kow)

Product: No data available.

Specified substance(s):

Bisphenol A Polyglycidyl Ether Resin Log Kow: 2.64 - 3.78 25 °C Yes Experimental result, Key study

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:

Not Regulated

CFR / DOT:

Not Regulated

IMDG:

Not Regulated

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 1910.1001-1050), as amended

None present or none present in regulated quantities.



CERCLA Hazardous Substance List (40 CFR 302.4):

<u>Chemical Identity</u>	<u>Reportable quantity</u>
Methanol	5000 lbs.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

- Immediate (Acute) Health Hazards
- Skin Corrosion or Irritation
- Serious eye damage or eye irritation
- Respiratory or Skin Sensitization

SARA 302 Extremely Hazardous Substance

None present or none present in regulated quantities.

SARA 304 Emergency Release Notification

None present or none present in regulated quantities.

SARA 311/312 Hazardous Chemical

<u>Chemical Identity</u>	<u>Threshold Planning Quantity</u>
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SARA 313 (TRI Reporting)

None present or none present in regulated quantities.

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

Reproductive Harm - www.P65Warnings.ca.gov

US. New Jersey Worker and Community Right-to-Know Act

No ingredient regulated by NJ Right-to-Know Law present.

US. Massachusetts RTK - Substance List

No ingredient regulated by MA Right-to-Know Law present.

US. Pennsylvania RTK - Hazardous Substances

No ingredient regulated by PA Right-to-Know Law present.

US. Rhode Island RTK

No ingredient regulated by RI Right-to-Know Law present.

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:
97 g/l

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

VOC Method 310 : 0.00 %

**Inventory Status:**

EINECS, ELINCS or NLP:	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.
New Zealand Inventory of Chemicals:	All components in this product are 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.
Australia AICS:	One or more components in this product are not listed on or exempt from the Inventory.
Canada DSL Inventory List:	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.
China Inv. Existing Chemical Substances:	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.
Japan ISHL Listing:	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.
Mexico INSQ:	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.
Taiwan Chemical Substance Inventory:	One or more components in this product are not listed on or exempt from the Inventory.
US TSCA 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: 04/02/2021

Version #: 3.0

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 EPOXY PRIMER 1:1 PART B, DURAL EPOXY PRIMER PART B
Product Code: TD2358104

Recommended use and restriction on use

Recommended use: Curative
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 (Inhalation - vapor)	Category 4
Skin Corrosion/Irritation	Category 1A
Serious Eye Damage/Eye Irritation	Category 1
Skin sensitizer	Category 1
Toxic to reproduction	Category 2
Specific Target Organ Toxicity - Repeated Exposure	Category 1

Unknown toxicity - Health

Acute toxicity, oral	4.27 %
Acute toxicity, dermal	33.07 %
Acute toxicity, inhalation, vapor	73.83 %
Acute toxicity, inhalation, dust or mist	83.69 %

Environmental Hazards

Acute hazards to the aquatic environment	Category 1
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Unknown toxicity - Environment

Acute hazards to the aquatic environment	52.86 %
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Chronic hazards to the aquatic environment 89.62 %

Label Elements

Hazard Symbol:



Signal Word: Danger

Hazard Statement: Harmful if inhaled.
Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
Suspected of damaging fertility or the unborn child.
Causes damage to organs through prolonged or repeated exposure.
Very toxic to aquatic life.

Precautionary Statements

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

Response: 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 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/attention. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor. Specific treatment (see on this label). Wash contaminated clothing before reuse. Collect spillage.

Storage: Store locked up.

Disposal: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

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	25 - <50%
Benzyl alcohol	100-51-6	10 - <20%
Proprietary mixed cycloaliphatic amines in SAP 12837 (Ancamide 2353)	Trade Secret	10 - <20%
Heavy aromatic naphtha	64742-94-5	5 - <10%
Proprietary tertiary amine in SAP 12837 (Ancamide 2353)	Trade Secret	1 - <5%
Triethylenetetramine	112-24-3	1 - <5%
Tris(dimethylaminomethyl)phenol	90-72-2	1 - <3%
Phenol	108-95-2	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**

Inhalation:	Call a physician or poison control center immediately. If breathing stops, provide artificial respiration. Move to fresh air. If breathing is difficult, give oxygen.
Skin Contact:	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.
Eye contact:	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.
Ingestion:	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.
Personal Protection for First-aid Responders:	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Most important symptoms/effects, acute and delayed

Symptoms: 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.

Hazards: No data available.

Indication of immediate medical attention and special treatment needed

Treatment: Symptoms may be delayed.



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 firefighters

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: Wash hands thoroughly after handling. 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. Avoid contact with eyes, skin, and clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

**Contact avoidance measures:** No data available.**Hygiene measures:** Do not get in eyes. Observe good industrial hygiene practices. 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. Avoid contact with skin.**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
Heavy aromatic naphtha - Non-aerosol. - as total hydrocarbon vapor	TWA	200 mg/m3	US. ACGIH Threshold Limit Values, as amended (03 2014)
Phenol	TWA	5 ppm	US. ACGIH Threshold Limit Values, as amended (2008)
	PEL	5 ppm 19 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)

Chemical name	Type	Exposure Limit Values	Source
Heavy aromatic naphtha - Non-aerosol. - as total hydrocarbon vapor	TWA	200 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013)
Heavy aromatic naphtha - Non-aerosol. - as total hydrocarbon vapor	TWA	200 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
Heavy aromatic naphtha	TWA	525 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
Triethylenetetramine	TWA	0.5 ppm 3 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)



Chemical name	Type	Exposure Limit Values	Source
Heavy aromatic naphtha - Non-aerosol. - as total hydrocarbon vapor	TWA	200 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013)
Heavy aromatic naphtha - Non-aerosol. - as total hydrocarbon vapor	TWA	200 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
Heavy aromatic naphtha	TWA	525 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
Triethylenetetramine	TWA	0.5 ppm 3 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
Phenol	TWA	5 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Phenol	TWA	5 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
Phenol	TWA	5 ppm 19 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)

Biological Limit Values

Chemical Identity	Exposure Limit Values	Source
Phenol (Phenol with hydrolysis: Sampling time: End of shift.)	250 mg/g (Creatinine in urine)	ACGIH BEI (03 2013)

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

General information: Provide easy access to water supply and eye wash facilities. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

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:**

Use suitable protective gloves if risk of skin contact.

Other:

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: Do not get in eyes. Observe good industrial hygiene practices. 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. Avoid contact with skin.

9. Physical and chemical properties

Appearance

Physical state:	liquid
Form:	liquid
Color:	Amber
Odor:	Mild pungent
Odor threshold:	No data available.
pH:	No data available.
Melting point/freezing point:	No data available.
Initial boiling point and boiling range:	No data available.
Flash Point:	> 93 °C > 200 °F (Setaflash Closed Cup)
Evaporation rate:	Slower than Ether
Flammability (solid, gas):	No
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	No data available.
Flammability limit - lower (%):	No data available.
Explosive limit - upper:	No data available.
Explosive limit - lower:	No data available.
Vapor pressure:	No data available.
Vapor density:	Vapors are heavier than air and may travel along the floor and in the bottom of containers.
Relative density:	0.992
Solubility(ies)	
Solubility in water:	Practically Insoluble
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	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:	Avoid contact with acids.
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:	Causes severe skin burns. May cause an allergic skin reaction.
Eye contact:	Causes serious eye damage.
Ingestion:	May be 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: 3,094.6 mg/kg
Dermal Product:	ATEmix: 383,606.2 mg/kg
Inhalation Product:	ATEmix: 17.65 mg/l

Repeated dose toxicity Product:	No data available.
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Skin Corrosion/Irritation Product:	No data available.
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Specified substance(s):



4-Nonylphenol	in vivo (Rabbit): Irritating , 1 - 8 d
Benzyl alcohol	in vivo (Rabbit): Not irritant , 1 - 168 h
Heavy aromatic naphtha	in vivo (Rabbit): Irritating , 24 - 72 h
Tris(dimethylaminomet hyl)phenol	in vivo (Rabbit): Corrosive
Phenol	in vivo (Rabbit): Corrosive , 72 h

Serious Eye Damage/Eye Irritation**Product:** No data available.**Specified substance(s):**

4-Nonylphenol	Rabbit, 24 - 72 hrs: Corrosive
Heavy aromatic naphtha	Rabbit, 24 - 72 hrs: Not irritating
Tris(dimethylaminomet hyl)phenol	Rabbit, 3 d: Corrosive

Respiratory or Skin Sensitization**Product:** No data available.**Carcinogenicity****Product:** No data available.**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:**

No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050), as amended:

No carcinogenic components identified

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: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: No data available.

Specified substance(s):

4-Nonylphenol	LC 50 (Fathead minnow (<i>Pimephales promelas</i>), 96 h): 0.13825 mg/l Mortality
Benzyl alcohol	LC 50 (<i>Pimephales promelas</i> , 96 h): 460 mg/l Experimental result, Key study
Heavy aromatic naphtha	LL 100 (96 h): 34 mg/l Experimental result, Supporting study LL 50 (<i>Oncorhynchus mykiss</i> , 48 h): 100 - 1,000 mg/l Experimental result, Supporting study LL 50 (48 h): 16 mg/l Experimental result, Supporting study LC 50 (96 h): 8.41 mg/l Experimental result, Key study LL 0 (<i>Oncorhynchus mykiss</i> , 96 h): 1.4 mg/l Experimental result, Supporting study
Phenol	LC 50 (<i>Oncorhynchus mykiss</i> , 96 h): 8.9 mg/l Experimental result, Key study

Aquatic Invertebrates

Product: No data available.

Specified substance(s):

Benzyl alcohol	EC 50 (<i>Daphnia magna</i> , 48 h): 230 mg/l Experimental result, Key study
Heavy aromatic naphtha	EC 50 (<i>Daphnia magna</i> , 48 h): 1.2 mg/l Experimental result, Key study
Triethylenetetramine	LC 50 (Water flea (<i>Daphnia magna</i>), 48 h): 33.9 mg/l Intoxication
Phenol	EC 50 (<i>Ceriodaphnia dubia</i> , 48 h): 3.1 mg/l Experimental result, Key study

Chronic hazards to the aquatic environment:

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

4-Nonylphenol NOAEL (Oncorhynchus mykiss, 91 d): 0.006 mg/l Experimental result, Key study

Heavy aromatic naphtha NOAEL (Oncorhynchus mykiss): 0.098 mg/l QSAR QSAR, Key study

Phenol NOAEL (Cirrhinus mrigala): 0.077 mg/l Experimental result, Key study

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

Heavy aromatic naphtha NOAEL (Daphnia magna): 0.48 mg/l Experimental result, Key study

Phenol NOAEL (Daphnia magna): 0.16 mg/l Experimental result, Key study

Toxicity to Aquatic Plants**Product:** No data available.**Specified substance(s):**Heavy aromatic naphtha ErC 50 (Algae, 96 h): 1.6 mg/l Experimental result, Key study
ErC 50 (Algae, 72 h): 2 mg/l Experimental result, Key study
ErC 50 (Algae, 96 h): 1.8 mg/l Experimental result, Key study
ErC 50 (Algae, 72 h): 2 mg/l Experimental result, Key study
ErC 50 (Algae, 72 h): 1.4 mg/l Experimental result, Key study

Phenol LC 50 (Duckweed (Lemna minor), 72 h): 1,500 mg/l Mortality

Persistence and Degradability**Biodegradation****Product:** No data available.**Specified substance(s):**Benzyl alcohol 62 % (5 d) Detected in water. Not specified, Not specified
94 % (4 d) Detected in water. Experimental result, Not specified
95 % (28 d) Detected in water. Experimental result, Not specified
> 79 - < 85 % Detected in water. Experimental result, Not specified
77 % (20 d) Detected in water. Not specified, Not specifiedHeavy aromatic naphtha 43.87 % (56 d) Detected in water. Experimental result, Supporting study
6.48 % Detected in water. Experimental result, Key study
> 0 % Detected in water. Experimental result, Key study
20 % Detected in water. Experimental result, Key study
29 % Detected in water. Experimental result, Key studyPhenol 86 % (20 d) Detected in water. Experimental result, Key study
100 % (1.4 Months) Soil Not specified, Not specified
88 % (20 d) Sediment Experimental result, Not specified
96 % (20 d) Detected in water. Experimental result, Key study
45.5 % Soil Experimental result, Key study**BOD/COD Ratio**



Product: No data available.

Bioaccumulative potential**Bioconcentration Factor (BCF)**

Product: No data available.

Specified substance(s):

4-Nonylphenol	Fathead minnow (<i>Pimephales promelas</i>), Bioconcentration Factor (BCF): 988 (Flow through)
Phenol	Green algae (<i>Oedogonium</i>), Bioconcentration Factor (BCF): 42 (Static) <i>Scenedesmus quadricauda</i> , Bioconcentration Factor (BCF): 3.5 Aquatic sediment Experimental result, Not specified <i>Leuciscus idus</i> , Bioconcentration Factor (BCF): 1.75 Aquatic sediment Experimental result, Supporting study <i>Oncorhynchus mykiss</i> , Bioconcentration Factor (BCF): 3.24 Aquatic sediment Experimental result, Supporting study <i>Carassius auratus</i> , Bioconcentration Factor (BCF): 1.2 Aquatic sediment Experimental result, Not specified

Partition Coefficient n-octanol / water (log Kow)

Product: No data available.

Specified substance(s):

Benzyl alcohol	Log Kow: 1.10
Heavy aromatic naphtha	Log Kow: > 3.3 - < 5.4 25 °C Yes Experimental result, Key study Log Kow: > 3.1 - < 4.7 25 °C Yes Experimental result, Key study Log Kow: 2.8 - 6.5 23 °C Yes Experimental result, Key study Log Kow: 3.19 - 3.25 21 °C Experimental result, Key study Log Kow: 3.4 - 5 25 °C Yes Experimental result, Key study
Phenol	Log Kow: 1.46

Mobility in soil: No data available.

Other adverse effects: Very toxic to aquatic organisms.

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:**

UN1760, CORROSIVE LIQUID, N.O.S. (Alkaline Amine), 8, PG III



CFR / DOT:

UN1760, Corrosive liquids, n.o.s. (Alkaline Amine), 8, PG III

IMDG:

UN1760, CORROSIVE LIQUID, N.O.S. (Alkaline Amine, 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 1910.1001-1050), as amended

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

Chemical Identity

Phenol

Reportable quantity

1000 lbs.

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
- Specific target organ toxicity (single or repeated exposure)

SARA 302 Extremely Hazardous Substance

Chemical Identity

Phenol

Reportable quantity

1000 lbs.

Threshold Planning Quantity

SARA 304 Emergency Release Notification

Chemical Identity

Phenol

Reportable quantity

1000 lbs.

**SARA 311/312 Hazardous Chemical**

<u>Chemical Identity</u>	<u>Threshold Planning Quantity</u>
Phenol	500lbs
4-Nonylphenol	10000 lbs
Benzyl alcohol	10000 lbs
Proprietary mixed cycloaliphatic amines in SAP 12837 (Ancamide 2353)	10000 lbs
Heavy aromatic naphtha	10000 lbs
Proprietary tertiary amine in SAP 12837 (Ancamide 2353)	10000 lbs
Triethylenetetramine	10000 lbs
Tris(dimethylaminomethyl)phenol	10000 lbs

SARA 313 (TRI Reporting)Chemical Identity

4-Nonylphenol

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**

No ingredient requiring a warning under CA Prop 65.

US. New Jersey Worker and Community Right-to-Know ActChemical IdentityHeavy aromatic naphtha
Triethylenetetramine
Phenol**US. Massachusetts RTK - Substance List**Chemical Identity4-Nonylphenol
Benzyl alcohol
Heavy aromatic naphtha
Triethylenetetramine
Phenol**US. Pennsylvania RTK - Hazardous Substances**Chemical Identity4-Nonylphenol
Benzyl alcohol
Heavy aromatic naphtha
Triethylenetetramine**US. Rhode Island RTK**Chemical Identity

Heavy aromatic naphtha



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:
97 g/l

Regulatory VOC (less water and exempt solvent) : 687 g/l

VOC Method 310 : 55.81 %

**Inventory Status:**

Australia AICS:	One or more components in this product are not listed on or exempt from the Inventory.
Canada DSL Inventory List:	One or more components in this product are not listed on or exempt from the Inventory.
EINECS, ELINCS or NLP:	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.
US TSCA Inventory:	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.

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

Revision Date:	04/02/2021
Version #:	3.0
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.