



EUCLID CHEMICAL

Version: 2.0
Revision Date: 02/08/2018

This is a kit that contains the following components:

DURAL AQUATIGHT 100 - PT A

DURAL AQUATIGHT 100 - PT B



SAFETY DATA SHEET

1. Identification

Product identifier: DURAL AQUATIGHT 100 - PT A
Product Code: 044MMS 03

Recommended use and restriction on use

Recommended use: Coatings
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 2B
Skin sensitizer	Category 1
Germ Cell Mutagenicity	Category 2

Unknown toxicity - Health

Acute toxicity, oral	27.96 %
Acute toxicity, dermal	27.96 %
Acute toxicity, inhalation, vapor	100 %
Acute toxicity, inhalation, dust or mist	84.1 %

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	44.15 %
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Chronic hazards to the aquatic environment 44.15 %

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 44.15 %

Chronic hazards to the aquatic environment 44.15 %

Label Elements**Hazard Symbol:**

Signal Word: Warning

Hazard Statement: Causes skin and eye irritation.
May cause an allergic skin reaction.
Suspected of causing genetic defects.
Toxic to aquatic life with long lasting effects.

Precautionary Statements

Prevention: Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapours/spray. 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. Avoid release to the environment.

Response: 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. IF ON SKIN: Wash with plenty of water/... If skin irritation or rash occurs: Get medical advice/attention. IF exposed or concerned: Get medical advice/attention. 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 (%)*
Bisphenol A Polyglycidyl Ether Resin	25068-38-6	50 - <100%
o-Cresyl glycidyl ether	2210-79-9	10 - <20%
Aromatic petroleum distillates	64742-95-6	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

Ingestion:

Call a POISON CENTRE/doctor if you feel unwell. Rinse mouth.

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.

Most important symptoms/effects, acute and delayed

Symptoms:

Not applicable.

Hazards:

No data available.

Indication of immediate medical attention and special treatment needed

Treatment:

No data available.

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.

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.

Notification Procedures: In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable 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

Precautions for safe handling: Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Wash hands thoroughly after handling. Avoid contact with eyes. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required. Avoid contact with skin. Avoid contact with eyes, skin, and clothing.

Conditions for safe storage, including any incompatibilities: Store locked up.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
Aromatic petroleum distillates	PEL	100 ppm 400 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)



Chemical name	Type	Exposure Limit Values	Source
Aromatic petroleum distillates	TWA	400 ppm 1,590 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (11 2011)
1-Methoxy-2-propanol acetate	TWA	50 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	STEL	75 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
1-Methoxy-2-propanol acetate	TWA	50 ppm 270 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Epichlorohydrin	TWA	0.1 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Epichlorohydrin	TWA	0.5 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Epichlorohydrin	TWA	2 ppm 7.6 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
2-Methoxy-1-propanol acetate	TWA	20 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	STEL	40 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)

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. 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
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:	1.149
Solubility(ies)	
Solubility in water:	Soluble
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: Strong acids. Strong bases.

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 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: Not classified for acute toxicity based on available data.

Specified substance(s):

Bisphenol A Polyglycidyl Ether Resin LD 50 (Rat): > 2,000 mg/kg

o-Cresyl glycidyl ether LD 50 (Rat): > 5,000 mg/kg

Aromatic petroleum distillates LD 50 (Rat): > 5,000 mg/kg

Dermal

Product: Not classified for acute toxicity based on available data.

**Specified substance(s):**

Bisphenol A Polyglycidyl Ether Resin LD 50 (Rat): > 2,000 mg/kg

o-Cresyl glycidyl ether LD 50 (Rat): > 2,000 mg/kg

Aromatic petroleum distillates LD 50 (Rabbit): > 2,000 mg/kg

Inhalation**Product:**

Not classified for acute toxicity based on available data.

Specified substance(s):

o-Cresyl glycidyl ether LC 50 (Rat): 6,090 mg/m3

Repeated dose toxicity**Product:**

No data available.

Skin Corrosion/Irritation**Product:**

No data available.

Specified substance(s):

Bisphenol A Polyglycidyl Ether Resin in vivo (Rabbit): Slightly irritating Experimental result, Key study Irritating.

o-Cresyl glycidyl ether in vivo (Rabbit): Moderately irritating Experimental result, Supporting study

Aromatic petroleum distillates in vivo (Rabbit): Irritating Experimental result, Key study

Serious Eye Damage/Eye Irritation**Product:**

No data available.

Specified substance(s):

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

Aromatic petroleum distillates Rabbit, 24 - 72 hrs: Not 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):
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): 2 mg/l Experimental result, Key study

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

Bisphenol A Polyglycidyl Ether Resin EC 50 (Daphnia magna, 48 h): 1.8 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 NOEC (Daphnia magna, 21 d): 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 instructions: 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:

UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol A Epoxy Resin), 9, PG III

CFR / DOT:

UN3082, Environmentally hazardous substance, liquid, n.o.s. (Bisphenol A Epoxy Resin), 9, PG III

IMDG:

UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol A Epoxy Resin), 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. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

<u>Chemical Identity</u>	<u>Reportable quantity</u>
Epichlorohydrin	100 lbs.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

- Immediate (Acute) Health Hazards
- Delayed (Chronic) Health Hazard
- Skin Corrosion or Irritation
- Serious eye damage or eye irritation
- Respiratory or Skin Sensitization
- Germ Cell Mutagenicity



SARA 302 Extremely Hazardous Substance

<u>Chemical Identity</u>	<u>Reportable quantity</u>	<u>Threshold Planning Quantity</u>
Epichlorohydrin	100 lbs.	1000 lbs.

SARA 304 Emergency Release Notification

<u>Chemical Identity</u>	<u>Reportable quantity</u>
Epichlorohydrin	100 lbs.

SARA 311/312 Hazardous Chemical

<u>Chemical Identity</u>	<u>Threshold Planning Quantity</u>
Epichlorohydrin	500lbs
Bisphenol A Polyglycidyl	10000 lbs
Ether Resin	
o-Cresyl glycidyl ether	10000 lbs
Aromatic petroleum distillates	10000 lbs

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)

<u>Chemical Identity</u>	<u>Reportable quantity</u>
Epichlorohydrin	lbs

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

This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm.

Epichlorohydrin	Carcinogenic. 09 2011
Epichlorohydrin	Male reproductive toxin. 09 2011

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

<u>Chemical Identity</u>
Epichlorohydrin

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:

Regulatory VOC (less water and
exempt solvent) : 3 g/l

VOC Method 310 : 0.28 %

**Inventory Status:**

Australia AICS:	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.
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:	All components in this product are 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.

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



EUCLID CHEMICAL

Version: 2.0
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Revision Date: 02/08/2018

Version #: 2.0

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 AQUATIGHT 100 - PT B
Product Code: 044MMS 03

Recommended use and restriction on use

Recommended use: Coatings
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 (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

Unknown toxicity - Health

Acute toxicity, oral	14.32 %
Acute toxicity, dermal	22.78 %
Acute toxicity, inhalation, vapor	65.72 %
Acute toxicity, inhalation, dust or mist	40.4 %

Environmental Hazards

Acute hazards to the aquatic environment	Category 2
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Unknown toxicity - Environment

Acute hazards to the aquatic environment	58.36 %
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Chronic hazards to the aquatic environment 100 %

Environmental Hazards

Acute hazards to the aquatic environment Category 2

Acute hazards to the aquatic environment 58.36 %

Chronic hazards to the aquatic environment 100 %

Label Elements

Hazard Symbol:



Signal Word: Danger

Hazard Statement: Harmful if swallowed or if inhaled
Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
Suspected of damaging fertility or the unborn child.
Toxic to aquatic life.

Precautionary Statements

Prevention: Use only outdoors or in a well-ventilated area. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Do not breathe dust/fume/gas/mist/vapours/spray. 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. 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: Call a POISON CENTRE/doctor/... if you feel unwell. Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor. Specific treatment (see on this label). Wash contaminated clothing before reuse.

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 (%)*
Benzyl alcohol	100-51-6	25 - <50%
Isophoronediamine	2855-13-2	10 - <25%
2-Methyl-1,5-pentanediamine	15520-10-2	10 - <25%
4-Nonylphenol	84852-15-3	5 - <10%
Triethylenetetramine	112-24-3	1 - <5%
Tris(dimethylaminomethyl)phenol	90-72-2	1 - <3%
m-Xylenediamine	1477-55-0	0.1 - <1%
4-tert-Butylphenol	98-54-4	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

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.

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: 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.

Most important symptoms/effects, acute and delayed

Symptoms: Not applicable.

Hazards: No data available.

Indication of immediate medical attention and special treatment needed



Treatment: No data available.

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.

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.

Notification Procedures: In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable 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

Precautions for safe handling: 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.



Conditions for safe storage, including any incompatibilities: Store locked up.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
m-Xylenediamine	Ceiling	0.1 mg/m ³	US. ACGIH Threshold Limit Values (2011)

Chemical name	Type	Exposure Limit Values	Source
Triethylenetetramine	TWA	0.5 ppm 3 mg/m ³	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
m-Xylenediamine	CEILING	0.1 mg/m ³	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
m-Xylenediamine	CEV	0.1 mg/m ³	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
m-Xylenediamine	CEILING	0.1 mg/m ³	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)

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: 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:	liquid
Color:	Yellow
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
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:	0.989
Solubility(ies)	
Solubility in water:	Soluble
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:	Strong acids. Strong bases.
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 severe skin burns. May cause an allergic skin reaction.
Eye contact:	Causes serious eye damage.
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: 1,314.19 mg/kg
Dermal Product:	ATEmix: 8,324.86 mg/kg
Inhalation Product:	ATEmix: 11 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):**

Benzyl alcohol	in vivo (Rabbit): Not irritant Experimental result, Key study
2-Methyl-1,5-pentanediamine	in vivo (Rabbit): Category 1A Experimental result, Key study
4-Nonylphenol	in vivo (Rabbit): Category 1B Experimental result, Weight of Evidence study
Tris(dimethylaminomethyl)phenol	in vivo (Rabbit): Corrosive Experimental result, Key study
m-Xylenediamine	in vivo (Rat): Corrosive Experimental result, Weight of Evidence study
4-tert-Butylphenol	in vivo (Rabbit): Highly irritating Experimental result, Key study

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

4-Nonylphenol	Rabbit, 24 - 72 hrs: Corrosive
Tris(dimethylaminomethyl)phenol	Rabbit, 3 d: Corrosive
4-tert-Butylphenol	Rabbit, 24 hrs: 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:**

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):

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):

Benzyl alcohol LC 50 (Fathead minnow (Pimephales promelas), 96 h): 460 mg/l Mortality

4-Nonylphenol LC 50 (Fathead minnow (Pimephales promelas), 96 h): 0.13825 mg/l Mortality

4-tert-Butylphenol LC 50 (Fathead minnow (Pimephales promelas), 96 h): 4.71 - 5.62 mg/l Mortality

Aquatic Invertebrates

Product: No data available.

Specified substance(s):

Benzyl alcohol EC 50 (Daphnia magna, 48 h): 230 mg/l Experimental result, Key study



Isophoronediamine EC 50 (Water flea (Daphnia magna), 24 h): 31.9 - 45.8 mg/l Intoxication

Triethylenetetramine LC 50 (Water flea (Daphnia magna), 48 h): 33.9 mg/l Intoxication

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

Aquatic Invertebrates

Product: No data available.

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):

4-Nonylphenol Fathead minnow (Pimephales promelas), Bioconcentration Factor (BCF): 988 (Flow through)

Partition Coefficient n-octanol / water (log Kow)

Product: No data available.

Specified substance(s):

Benzyl alcohol Log Kow: 1.10

Mobility in soil: No data available.

Other adverse effects: Toxic to aquatic organisms.

13. Disposal considerations**Disposal instructions:**

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. (Isophorone Diamine, 2-Methyl-1,5-pentanediamine), 8, PG II

CFR / DOT:

UN2735, Amines, liquid, corrosive, n.o.s. (Isophorone Diamine, 2-Methyl-1,5-pentanediamine), 8, PG II

IMDG:

UN2735, AMINES, LIQUID, CORROSIVE, N.O.S. (Isophorone Diamine, 2-Methyl-1,5-pentanediamine), 8, PG II

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. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

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
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

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>
Benzyl alcohol	10000 lbs
Isophoronediamine	10000 lbs
2-Methyl-1,5-pentanediamine	10000 lbs
4-Nonylphenol	10000 lbs
Triethylenetetramine	10000 lbs
Tris(dimethylaminomethyl)phenol	10000 lbs
m-Xylenediamine	10000 lbs
4-tert-Butylphenol	10000 lbs

SARA 313 (TRI Reporting)

<u>Chemical Identity</u>
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 regulated by CA Prop 65 present.

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

<u>Chemical Identity</u>
Isophoronediamine
Triethylenetetramine

US. Massachusetts RTK - Substance List

<u>Chemical Identity</u>
Benzyl alcohol
4-Nonylphenol
Triethylenetetramine

US. Pennsylvania RTK - Hazardous Substances

<u>Chemical Identity</u>
Benzyl alcohol
4-Nonylphenol
Triethylenetetramine

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:

Regulatory VOC (less water and
exempt solvent) : 420 g/l

VOC Method 310 : 42.46 %

**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:	All components in this product are 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.

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



EUCLID CHEMICAL

Version: 2.0
Revision Date: 02/08/2018

Revision Date: 02/08/2018

Version #: 2.0

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.