



This is a kit that contains the following components:

DURAL 452 MV 1:1 PART A

DURAL 452 MV 1:1 PT B



# SAFETY DATA SHEET

## 1. Identification

**Product identifier:** DURAL 452 MV 1:1 PART A  
**Product Code:** 002DM 02

### 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
Germ Cell Mutagenicity	Category 2
Carcinogenicity	Category 1A

#### Unknown toxicity - Health

Acute toxicity, oral	2.86 %
Acute toxicity, dermal	3.15 %
Acute toxicity, inhalation, vapor	97 %
Acute toxicity, inhalation, dust or mist	91.11 %

### 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	9.55 %
--	--------

Chronic hazards to the aquatic environment 7.34 %

## Label Elements

### Hazard Symbol:



**Signal Word:** Danger

**Hazard Statement:** Causes skin irritation.  
Causes serious eye irritation.  
May cause an allergic skin reaction.  
Suspected of causing genetic defects.  
May cause cancer.  
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/vapors/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 soap and 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	5 - <10%
Titanium dioxide	13463-67-7	1 - <5%
Epichlorohydrin polymer	25085-99-8	1 - <2.5%
Aluminum hydroxide	21645-51-2	0.1 - <1%
Amorphous silica	7631-86-9	0.1 - <1%
Carbon Black	1333-86-4	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

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

<b>Inhalation:</b>	Move to fresh air.
<b>Skin Contact:</b>	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.
<b>Eye contact:</b>	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.
<b>Hazards:</b>	No data available.

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

<b>Treatment:</b>	Symptoms may be delayed.
-------------------	--------------------------

#### 5. Fire-fighting measures

<b>General Fire Hazards:</b>	No unusual fire or explosion hazards noted.
------------------------------	---

##### 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. Wash hands thoroughly after handling. 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 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. Wash hands before breaks and immediately after handling the product. Avoid contact with eyes. Wash contaminated clothing before reuse. Avoid contact with skin. 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
Titanium dioxide	TWA	10 mg/m3	US. ACGIH Threshold Limit Values, as amended (2008)
Titanium dioxide - Total dust.	PEL	15 mg/m3	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/m3	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (03 2016)
Titanium dioxide - Respirable fraction.	TWA	5 mg/m3	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)
Aluminum hydroxide - Respirable fraction.	TWA	1 mg/m3	US. ACGIH Threshold Limit Values, as amended (2011)
	TWA	5 mg/m3	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (03 2016)
Aluminum hydroxide - Total dust.	TWA	15 mg/m3	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (03 2016)
	TWA	50 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (03 2016)
Aluminum hydroxide - 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)
Aluminum hydroxide - Inhalable particles.	TWA	10 mg/m3	US. ACGIH Threshold Limit Values, as amended (01 2021)
Aluminum hydroxide - Respirable particles.	TWA	3 mg/m3	US. ACGIH Threshold Limit Values, as amended (01 2021)
Amorphous silica - Inhalable particles.	TWA	10 mg/m3	US. ACGIH Threshold Limit Values, as amended (01 2021)
Amorphous silica - Respirable particles.	TWA	3 mg/m3	US. ACGIH Threshold Limit Values, as amended (01 2021)
Amorphous silica - Respirable fraction.	TWA	5 mg/m3	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (09 2016)
Amorphous silica - Total dust.	TWA	15 mg/m3	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (09 2016)
	TWA	50 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (09 2016)
Amorphous silica - Respirable fraction.	TWA	15 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (09 2016)
Carbon Black	PEL	3.5 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)
Carbon Black - Inhalable fraction.	TWA	3 mg/m3	US. ACGIH Threshold Limit Values, as amended (12 2010)
Carbon Black - Respirable fraction.	TWA	5 mg/m3	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (09 2016)
	TWA	15 millions of particles per	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (09 2016)



---

		cubic foot of air	
Carbon Black - Total dust.	TWA	50 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (09 2016)
	TWA	15 mg/m3	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (09 2016)



Chemical name	Type	Exposure Limit Values	Source
Titanium dioxide - Total dust.	TWA	10 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Biological Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Titanium dioxide - Respirable fraction.	TWA	3 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Biological Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Titanium dioxide	TWA	10 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
Titanium dioxide - Total dust.	TWA	10 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
Aluminum hydroxide - Respirable fraction.	TWA	1 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
Aluminum hydroxide - Inhalable fraction.	TWA	10 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (06 2015)
Aluminum hydroxide - Respirable fraction.	TWA	3 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (06 2015)
Aluminum hydroxide - Total dust.	TWA	10 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
Aluminum hydroxide - Respirable.	TWA	1.0 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Biological Substances, Occupational Health and Safety Regulation 296/97, as amended) (06 2020)
Aluminum hydroxide - Respirable particles.	TWA	3 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (01 2020)
Aluminum hydroxide - Total dust.	TWA	10 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Biological Substances, Occupational Health and Safety Regulation 296/97, as amended) (06 2020)
Aluminum hydroxide - Inhalable particles.	TWA	10 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (01 2020)
Aluminum hydroxide - Respirable fraction.	TWA	3 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Biological Substances, Occupational Health and Safety Regulation 296/97, as amended) (06 2020)
Amorphous silica - Respirable fraction.	TWA	3 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Biological Substances, Occupational Health and Safety Regulation 296/97, as amended) (06 2020)
Amorphous silica - Inhalable fraction.	TWA	10 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (01 2020)
Amorphous silica - Respirable particles.	TWA	3 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (01 2020)
Amorphous silica - Total dust.	TWA	10 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (03 2020)
Amorphous silica - Respirable fraction.	TWA	3 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (01 2020)
Amorphous silica - Total dust.	TWA	10 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Biological Substances, Occupational Health and Safety Regulation 296/97, as amended) (06 2020)



Amorphous silica - Inhalable particles.	TWA	10 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (01 2020)
Carbon Black - Inhalable	TWA	3 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Biological Substances, Occupational Health and Safety Regulation 296/97, as amended) (09 2011)
Carbon Black - Inhalable fraction.	TWA	3 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (06 2015)
Carbon Black - Inhalable dust.	TWA	3 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (03 2020)
Stoddard solvent (Mineral Spirits)	STEL	580 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Biological Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	TWA	290 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Biological Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Stoddard solvent (Mineral Spirits)	TWA	100 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
Stoddard solvent (Mineral Spirits)	TWA	100 ppm 525 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)
Crystalline Silica (Quartz)/ Silica Sand - Respirable fraction.	TWA	0.025 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Biological Substances, Occupational Health and Safety Regulation 296/97, as amended) (06 2020)
1-Methoxy-2-propanol acetate	TWA	50 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Biological Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	STEL	75 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Biological 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), as amended (12 2007)
1,2,4-Trimethylbenzene	TWA	25 ppm 123 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2), as amended (07 2009)
1,2,4-Trimethylbenzene	TWA	25 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Biological Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
1,2,4-Trimethylbenzene	TWA	25 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
1,2,4-Trimethylbenzene	TWA	25 ppm	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (03 2020)

**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 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.
<b>Respiratory Protection:</b>	In case of inadequate ventilation use suitable respirator. Seek advice from local supervisor.
<b>Hygiene measures:</b>	Observe good industrial hygiene practices. Wash hands before breaks and immediately after handling the product. Avoid contact with eyes. Wash contaminated clothing before reuse. Avoid contact with skin. 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>	liquid
<b>Color:</b>	Gray
<b>Odor:</b>	Mild
<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>	> 93 °C > 200 °F (Setaflash Closed Cup)
<b>Evaporation rate:</b>	Slower than Ether
<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>	1.16
<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.

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:	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

Aluminum hydroxide      LD 50 (Rat): > 2,000 mg/kg

Amorphous silica      LD 50 (Rat): > 5,000 mg/kg

Carbon Black      LD 50 (Rat): > 8,000 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

Amorphous silica      LD 50 (Rabbit): > 5,000 mg/kg

**Inhalation**

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

**Specified substance(s):**

Bisphenol A Polyglycidyl Ether Resin      LC 50: > 20 mg/l  
LC 50: > 5 mg/l

o-Cresyl glycidyl ether      LC 50 (Rat): 6,090 mg/m<sup>3</sup>

Aluminum hydroxide      LC 50 (Rat): 7.6 mg/l

Amorphous silica      LC 50 (Rat): > 2.08 mg/l

**Repeated dose toxicity**

**Product:**      No data available.

**Skin Corrosion/Irritation**

**Product:**      No data available.

**Specified substance(s):**

Bisphenol A	in vivo (Rabbit): Moderately irritating , 24 h
Polyglycidyl Ether Resin	
o-Cresyl glycidyl ether	in vivo (Rabbit): Not irritant , 7 d
Aluminum hydroxide	in vivo (Rabbit): Not classified as an Irritant , 24 - 72 h
Amorphous silica	in vivo (Rabbit): Not irritant , 48 h
Carbon Black	in vivo (Rabbit): Not irritant , 120 h

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

Aluminum hydroxide	Rabbit, 24 - 72 hrs: Not irritant
Amorphous silica	Rabbit, 24 - 72 hrs: Not irritant
Carbon Black	Rabbit, 24 - 72 hrs: Not irritant

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

Carbon Black	Overall evaluation: Possibly carcinogenic to humans.
--------------	--

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

Carbon Black	Known To Be Human Carcinogen.
--------------	-------------------------------

**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:**

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):**

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

o-Cresyl glycidyl ether LC 50 (Oncorhynchus mykiss, 96 h): 2.8 - 5.1 mg/l Experimental result, Key study

Aluminum hydroxide LC 50 (Oncorhynchus mykiss, 96 h): 7.4 mg/l Experimental result, Weight of Evidence study

**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 Experimental result, Key study

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

Aluminum hydroxide	EC 50 (Ceriodaphnia dubia, 48 h): 1.5 mg/l experimental result Experimental result, Weight of Evidence study
Carbon Black	LC 50 (Daphnia sp., 48 h): 164 mg/l QSAR QSAR, Key study

#### Chronic hazards to the aquatic environment:

##### Fish

**Product:** No data available.

**Specified substance(s):**

Aluminum hydroxide NOAEL (Pimephales promelas): 0.16 mg/l read-across based on grouping of substances (category approach) Read-across based on grouping of substances (category approach), Weight of Evidence study

##### Aquatic Invertebrates

**Product:** No data available.

**Specified substance(s):**

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

Aluminum hydroxide NOAEL (Daphnia magna): 0.076 mg/l experimental result Experimental result, Weight of Evidence study

Carbon Black EC 50 (Daphnia sp.): 4.9 mg/l QSAR QSAR, Key study

##### Toxicity to Aquatic Plants

**Product:** No data available.

#### Persistence and Degradability

##### Biodegradation

**Product:** No data available.

**Specified substance(s):**

Bisphenol A Polyglycidyl Ether Resin 82 % 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.

**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:**

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, MARINE POLLUTANT

**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. 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**

<u>Chemical Identity</u>	<u>OSHA hazard(s)</u>
Crystalline Silica (Quartz)/ Silica Sand	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  
Skin Corrosion or Irritation  
Serious eye damage or eye irritation  
Respiratory or Skin Sensitization  
Germ Cell Mutagenicity  
Carcinogenicity

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

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

<u>Chemical Identity</u>	<u>% by weight</u>
--------------------------	--------------------

**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:  
104 g/l

Regulatory VOC (less water and  
exempt solvent) : 1 g/l

VOC Method 310 : 0.04 %

**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.

<b>16. Other information, including date of preparation or last revision</b>
--

**Revision Date:** 11/17/2022

**Version #:** 3.2

**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 452 MV 1:1 PT B  
**Product Code:** 002DM 02

### 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 (Oral)	Category 4
Acute toxicity (Inhalation - vapor)	Category 4
Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 1
Toxic to reproduction	Category 2

#### Unknown toxicity - Health

Acute toxicity, oral	9.75 %
Acute toxicity, dermal	35.33 %
Acute toxicity, inhalation, vapor	88.94 %
Acute toxicity, inhalation, dust or mist	86.85 %

### Environmental Hazards

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

#### Unknown toxicity - Environment

Acute hazards to the aquatic environment	63.39 %
Chronic hazards to the aquatic environment	100 %

## Label Elements

### Hazard Symbol:



### Signal Word:

Danger

### Hazard Statement:

Harmful if swallowed or if inhaled.  
Causes skin irritation.  
Causes serious eye damage.  
Suspected of damaging fertility or the unborn child.  
Toxic to aquatic life.

### Precautionary Statements

#### Prevention:

Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. 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: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth. Immediately call a POISON CENTER/doctor. Specific treatment (see on this label). Take off contaminated clothing.

#### 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 (%)*
1,2-Cyclohexanediamine	694-83-7	25 - <50%
4-Nonylphenol	84852-15-3	10 - <25%
Benzyl alcohol	100-51-6	10 - <20%
4-tert-Butylphenol	98-54-4	3 - <5%
m-Xylenediamine	1477-55-0	1 - <3%
1,3-Cyclohexanedimethanamine	2579-20-6	1 - <3%

\* 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>	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash contaminated clothing before reuse. Get medical attention.
<b>Eye contact:</b>	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>	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.
-------------------	--------------------------

#### 5. Fire-fighting measures

<b>General Fire Hazards:</b>	No unusual fire or explosion hazards noted.
------------------------------	---

##### 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. Do not taste or swallow. 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. Avoid contact with skin.

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

**Hygiene measures:** 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. Avoid contact with skin. Wash hands before breaks and immediately after handling the product.

### 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
m-Xylenediamine	Ceiling	0.018 ppm	US. ACGIH Threshold Limit Values, as amended (02 2020)

None of the components have assigned exposure limits.

Chemical name	Type	Exposure Limit Values	Source
m-Xylenediamine	CEILING	0.1 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Biological Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
m-Xylenediamine	CEV	0.1 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (01 2020)
m-Xylenediamine	CEILING	0.1 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (03 2020)
Hexamethylenediamine	TWA	0.5 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Biological Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Hexamethylenediamine	TWA	0.5 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
Hexamethylenediamine	TWA	0.5 ppm 2.3 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
Stoddard solvent (Mineral Spirits)	STEL	580 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Biological Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	TWA	290 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Biological Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Stoddard solvent (Mineral Spirits)	TWA	100 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
Stoddard solvent (Mineral Spirits)	TWA	100 ppm 525 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
1-Methoxy-2-propanol acetate	TWA	50 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Biological Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	STEL	75 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Biological 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), as amended (12 2007)
1,2,4-Trimethylbenzene	TWA	25 ppm 123 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2), as amended (07 2009)
1,2,4-Trimethylbenzene	TWA	25 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Biological Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
1,2,4-Trimethylbenzene	TWA	25 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
1,2,4-Trimethylbenzene	TWA	25 ppm	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (03 2020)

**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 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. 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. Avoid contact with skin. Wash hands before breaks and immediately after handling the product.

**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.



<b>Melting point/freezing point:</b>	No data available.
<b>Initial boiling point and boiling range:</b>	No data available.
<b>Flash Point:</b>	> 93 °C > 200 °F (Setaflash Closed Cup)
<b>Evaporation rate:</b>	Slower than Ether
<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>	1.013 - 1.037
<b>Solubility(ies)</b>	
<b>Solubility in water:</b>	Practically Insoluble
<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>	Avoid contact with acids.
<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.
<b>Skin Contact:</b>	May be harmful in contact with skin. Causes skin irritation.
<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: 1,925.44 mg/kg
<b>Dermal</b>	
<b>Product:</b>	ATEmix: 3,888.29 mg/kg
<b>Inhalation</b>	
<b>Product:</b>	ATEmix: 11.03 mg/l ATEmix : 7.21 mg/l

### Repeated dose toxicity

<b>Product:</b>	No data available.
-----------------	--------------------

### Skin Corrosion/Irritation

<b>Product:</b>	No data available.
-----------------	--------------------

#### Specified substance(s):

4-Nonylphenol	in vivo (Rabbit): Irritating , 1 - 8 d
Benzyl alcohol	in vivo (Rabbit): Slightly irritating
4-tert-Butylphenol	in vivo (Rabbit): Not Classified , 7 - 10 d
m-Xylenediamine	in vivo (Mouse): Corrosive , 4 h
1,3-Cyclohexanedimethanamine	in vivo (Rabbit): Corrosive , 1 h

### Serious Eye Damage/Eye Irritation

<b>Product:</b>	No data available.
-----------------	--------------------

#### Specified substance(s):

4-Nonylphenol	Rabbit, 24 - 72 hrs: 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), 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.

<b>12. Ecological information</b>
-----------------------------------

**Ecotoxicity:**

**Acute hazards to the aquatic environment:**

#### **Fish**

**Product:** No data available.

**Specified substance(s):**

1,2-Cyclohexanediamine	LC 50 (Pimephales promelas, 96 h): 1,825 mg/l Read-across based on grouping of substances (category approach), Key study
4-Nonylphenol	EC 50 (Pimephales promelas, 96 h): 96 µg/l Experimental result, Key study
Benzyl alcohol	LC 50 (Pimephales promelas, 96 h): 460 mg/l Experimental result, Key study
4-tert-Butylphenol	LC 50 (Fathead minnow (Pimephales promelas), 96 h): 4.71 - 5.62 mg/l Mortality
m-Xylenediamine	LC 50 (Oryzias latipes, 96 h): 87.6 mg/l Experimental result, Key study
1,3-Cyclohexanedimethanamine	LC 50 (Leuciscus idus, 96 h): 130 mg/l Experimental result, Key study

#### **Aquatic Invertebrates**

**Product:** No data available.

**Specified substance(s):**

1,2-Cyclohexanediamine	EC 50 (Daphnia magna, 48 h): 19.8 mg/l read-across based on grouping of substances (category approach) Read-across based on grouping of substances (category approach), Key study
4-Nonylphenol	EC 50 (Daphnia magna, 48 h): 84.4 µg/l experimental result Experimental result, Key study
Benzyl alcohol	EC 50 (Daphnia magna, 48 h): 230 mg/l experimental result Experimental result, Key study
4-tert-Butylphenol	EC 50 (Daphnia magna, 48 h): 4.8 mg/l experimental result Experimental result, Key study
m-Xylenediamine	EC 50 (Daphnia magna, 48 h): 15.2 mg/l experimental result Experimental result, Key study
1,3-Cyclohexanedimethanamine	EC 50 (Daphnia magna, 48 h): 33.1 mg/l experimental result Experimental result, Key study

#### **Chronic hazards to the aquatic environment:**

#### **Fish**

**Product:** No data available.

**Specified substance(s):**

4-Nonylphenol	NOAEL (Oncorhynchus mykiss): 0.006 mg/l experimental result Experimental result, Key study
4-tert-Butylphenol	NOAEL (Pimephales promelas): 10 µg/l experimental result Experimental result, Key study

#### **Aquatic Invertebrates**

**Product:** No data available.

**Specified substance(s):**

1,2-Cyclohexanediamine	NOAEL (Daphnia magna): 4.16 mg/l read-across based on grouping of substances (category approach) Read-across based on grouping of substances (category approach), Key study
4-Nonylphenol	NOAEL (Daphnia magna): 0.024 mg/l experimental result Experimental result, Key study
Benzyl alcohol	NOAEL (Daphnia magna): 51 mg/l experimental result Experimental result, Key study
4-tert-Butylphenol	NOAEL (Daphnia magna): 0.73 mg/l experimental result Experimental result, Key study
m-Xylenediamine	NOAEL (Daphnia magna): 4.7 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):**

1,2-Cyclohexanediamine	100 % Detected in water. Experimental result, Key study
4-Nonylphenol	48.2 % (35 d) Detected in water. Experimental result, Key study
Benzyl alcohol	97 % (21 d) Detected in water. Experimental result, Key study
4-tert-Butylphenol	60 % (28 d) Detected in water. Experimental result, Key study
m-Xylenediamine	49 % (28 d) Detected in water. Experimental result, Key study
1,3-Cyclohexanedimethanamine	29 % (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.

**Specified substance(s):**

4-Nonylphenol Pimephales promelas, Bioconcentration Factor (BCF): 740 Aquatic sediment  
Experimental result, Key study

4-tert-Butylphenol Cyprinus carpio, Bioconcentration Factor (BCF): 44 - 48 Aquatic sediment  
Experimental result, Key study

**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 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:**

UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Nonylphenol), 9, PG III

**CFR / DOT:**

UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Nonylphenol), 9, PG III,  
MARINE POLLUTANT

**IMDG:**

UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Nonylphenol), 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)****Chemical Identity**

4-Nonylphenol

**Reportable quantity**

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

Nonyl Phenol

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):**

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  
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**

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

<u>Chemical Identity</u>	<u>% by weight</u>
4-Nonylphenol	1.0%
Nonyl Phenol	

**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.

**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:  
104 g/l

Regulatory VOC (less water and  
exempt solvent) : 191 g/l

VOC Method 310 : 18.88 %

**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.
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.
Ontario Inventory:	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.

Taiwan Chemical Substance Inventory: 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.

<b>16. Other information, including date of preparation or last revision</b>
--

**Revision Date:** 11/17/2022

**Version #:** 3.2

**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.