

CUT+COOL, Cutting foam, 386 g

Version 3.0 Revision Date: 04/10/2023 SDS Number: 10689547-00011 Date of last issue: 02/03/2023
Date of first issue: 02/23/2017

SECTION 1. IDENTIFICATION

Product name : CUT+COOL, Cutting foam, 386 g
Product code : 893.050007
Other means of identification : No data available

Manufacturer or supplier's details

Company name of supplier : Würth Canada Limited
Address : 345 Hanlon Creek Blvd
GUELPH, ON N1C 0A1
Telephone : +1 (905) 564 6225
Telefax : +1 (905) 564 3671
Emergency telephone : Emergencies involving a spill, fire, explosion or exposure:
CHEMTREC (24/7): 1-800-424-9300
Transport related emergencies:
CANUTEC (24/7): 1-613-996-6666 or * 666 (cell)

Urgences impliquant un déversement, incendie, explosion ou exposition:
CHEMTREC (24/7): 1-800-424-9300
Urgences liées au transport:
CANUTEC (24/7): 1-613-996-6666 ou * 666 (cellulaire)

E-mail address : prodsafe@wurth.ca

Recommended use of the chemical and restrictions on use

Recommended use : Processing aid

Restrictions on use : Not applicable


SECTION 2. HAZARDS IDENTIFICATION**GHS classification in accordance with the Hazardous Products Regulations**

Flammable aerosols : Category 1
Gases under pressure : Dissolved gas
Serious eye damage : Category 1
Reproductive toxicity : Category 2

GHS label elements

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Hazard pictograms	:	
Signal Word	:	Danger
Hazard Statements	:	H222 Extremely flammable aerosol. H280 Contains gas under pressure; may explode if heated. H318 Causes serious eye damage. H361d Suspected of damaging the unborn child.
Precautionary Statements	:	<p>Prevention:</p> P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P211 Do not spray on an open flame or other ignition source. P251 Do not pierce or burn, even after use. P280 Wear protective gloves, protective clothing, eye protection and face protection. <p>Response:</p> P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER. P308 + P313 IF exposed or concerned: Get medical attention. <p>Storage:</p> P405 Store locked up. P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C (122 °F). <p>Disposal:</p> P501 Dispose of contents and container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	Common Name/Synonym	CAS-No.	Concentration (% w/w)
Dimethyl ether	Methane, 1,1'-oxybis-	115-10-6	≥ 10 - < 30 *
Poly(oxy-1,2-ethanediyl), α-	No data available	57635-48-0	≥ 1 - < 5 *

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(carboxymethyl)-ω- [[9Z]-9-octadecen-1- yloxy]-			
Diethylene glycol	2,2'- Oxydiethanol	111-46-6	>= 1 - < 5 *
Phosphoric acid	Orthophosphor- ic acid	7664-38-2	>= 1 - < 5 *
Diisopropanolamine	1,1'-Imino-2- propanol	110-97-4	>= 1 - < 5 *
2-Methyl-2,4- pentanediol	Hexylene glycol	107-41-5	>= 1 - < 5 *

* Actual concentration or concentration range is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

- General advice : In the case of accident or if you feel unwell, seek medical advice immediately.
 When symptoms persist or in all cases of doubt seek medical advice.
- If inhaled : If inhaled, remove to fresh air.
 Get medical attention.
- In case of skin contact : In case of contact, immediately flush skin with soap and plenty of water.
 Remove contaminated clothing and shoes.
 Get medical attention.
 Wash clothing before reuse.
 Thoroughly clean shoes before reuse.
- In case of eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.
 If easy to do, remove contact lens, if worn.
 Get medical attention immediately.
- If swallowed : If swallowed, DO NOT induce vomiting.
 Get medical attention.
 Rinse mouth thoroughly with water.
- Most important symptoms and effects, both acute and delayed : Causes serious eye damage.
 Suspected of damaging the unborn child.
- Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).
- Notes to physician : Treat symptomatically and supportively.

SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Water spray
 Alcohol-resistant foam

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- Carbon dioxide (CO₂)
Dry chemical
- Unsuitable extinguishing media : None known.
- Specific hazards during fire fighting : Flash back possible over considerable distance.
Vapors may form explosive mixtures with air.
Exposure to combustion products may be a hazard to health.
If the temperature rises there is danger of the vessels bursting due to the high vapor pressure.
- Hazardous combustion products : Carbon oxides
Oxides of phosphorus
Nitrogen oxides (NO_x)
- Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
Remove undamaged containers from fire area if it is safe to do so.
Evacuate area.
- Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Remove all sources of ignition.
Use personal protective equipment.
Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).
- Environmental precautions : Avoid release to the environment.
Prevent further leakage or spillage if safe to do so.
Prevent spreading over a wide area (e.g., by containment or oil barriers).
Retain and dispose of contaminated wash water.
Local authorities should be advised if significant spillages cannot be contained.
- Methods and materials for containment and cleaning up : Non-sparking tools should be used.
Soak up with inert absorbent material.
Suppress (knock down) gases/vapors/mists with a water spray jet.
For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container.
Clean up remaining materials from spill with suitable absorbent.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.

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Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

SECTION 7. HANDLING AND STORAGE

- | | | |
|---------------------------------|---|--|
| Technical measures | : | See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section. |
| Local/Total ventilation | : | Use only with adequate ventilation.
If advised by assessment of the local exposure potential, use only in an area equipped with explosion-proof exhaust ventilation. |
| Advice on safe handling | : | Avoid inhalation of vapor or mist.
Do not swallow.
Do not get in eyes.
Avoid prolonged or repeated contact with skin.
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment
Keep container tightly closed.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Take precautionary measures against static discharges.
Take care to prevent spills, waste and minimize release to the environment.
Do not spray on an open flame or other ignition source.

Do not breathe decomposition products. |
| Conditions for safe storage | : | Store locked up.
Keep tightly closed.
Keep in a cool, well-ventilated place.
Store in accordance with the particular national regulations.
Do not pierce or burn, even after use.
Keep cool. Protect from sunlight. |
| Materials to avoid | : | Do not store with the following product types:
Self-reactive substances and mixtures
Organic peroxides
Oxidizing agents
Flammable solids
Pyrophoric liquids
Pyrophoric solids
Self-heating substances and mixtures
Substances and mixtures which in contact with water emit flammable gases
Explosives
Gases |
| Recommended storage temperature | : | 15 - 35 °C |
| Storage period | : | >= 24 Months |

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SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Dimethyl ether	115-10-6	TWA	1,000 ppm	CA BC OEL
Phosphoric acid	7664-38-2	TWA	1 mg/m ³	CA AB OEL
		STEL	3 mg/m ³	CA AB OEL
		TWA	1 mg/m ³	CA BC OEL
		STEL	3 mg/m ³	CA BC OEL
		TWAEV	1 mg/m ³	CA QC OEL
		STEV	3 mg/m ³	CA QC OEL
		TWA	1 mg/m ³	ACGIH
		STEL	3 mg/m ³	ACGIH
2-Methyl-2,4-pentanediol	107-41-5	(c)	25 ppm 121 mg/m ³	CA AB OEL
		C	25 ppm 121 mg/m ³	CA QC OEL
		TWA (Vapor)	25 ppm	ACGIH
		STEL (Vapor)	50 ppm	ACGIH
		STEL (Inhalable fraction, Aerosol only)	10 mg/m ³	ACGIH

Occupational exposure limits of decomposition products

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Formaldehyde	50-00-0	TWA	0.75 ppm 0.9 mg/m ³	CA AB OEL
		(c)	1 ppm 1.3 mg/m ³	CA AB OEL
		TWA	0.1 ppm	CA BC OEL
		STEL	0.3 ppm	CA BC OEL
		STEL	1 ppm	CA ON OEL
		C	1.5 ppm	CA ON OEL
		C	2 ppm 3 mg/m ³	CA QC OEL
		TWA	0.1 ppm	ACGIH
STEL	0.3 ppm	ACGIH		
Methanol	67-56-1	TWA	200 ppm 262 mg/m ³	CA AB OEL
		STEL	250 ppm 328 mg/m ³	CA AB OEL
		TWA	200 ppm	CA BC OEL
		STEL	250 ppm	CA BC OEL
		STEV	250 ppm 328 mg/m ³	CA QC OEL

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		TWAEV	200 ppm 262 mg/m ³	CA QC OEL
		TWA	200 ppm	ACGIH
		STEL	250 ppm	ACGIH

Engineering measures : Processing may form hazardous compounds (see section 10).
 Ensure adequate ventilation, especially in confined areas.
 Minimize workplace exposure concentrations.
 If advised by assessment of the local exposure potential, use only in an area equipped with explosion-proof exhaust ventilation.

Personal protective equipment

Respiratory protection : If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.

Filter type : Self-contained breathing apparatus

Hand protection

Material : Nitrile rubber
Break through time : > 480 min
Glove thickness : 0.4 mm

Remarks : Choose gloves to protect hands against chemicals depending on the concentration specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.

Eye protection : Wear the following personal protective equipment:
 Chemical resistant goggles must be worn.
 If splashes are likely to occur, wear:
 Face-shield

Skin and body protection : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.
 Wear the following personal protective equipment:
 If assessment demonstrates that there is a risk of explosive atmospheres or flash fires, use flame retardant antistatic protective clothing.
 Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).

Hygiene measures : If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place.
 When using do not eat, drink or smoke.
 Wash contaminated clothing before re-use.

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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Aerosol containing a dissolved gas

Propellant : Dimethyl ether

Color : light yellow

Odor : characteristic

Odor Threshold : No data available

pH : 6 - 8 (20 °C)
Concentration: 100 %

Melting point/freezing point : No data available

Initial boiling point and boiling range : -24 °C

Flash point : Not applicable

Evaporation rate : Not applicable

Flammability (solid, gas) : Extremely flammable aerosol.

Upper explosion limit / Upper flammability limit : 18.6 %(V)
(20 °C) (3500.0 - 5000 hPa)

Lower explosion limit / Lower flammability limit : 3.0 %(V)
(20 °C) (3500.0 - 5000 hPa)

Vapor pressure : Not applicable

Relative vapor density : Not applicable

Density : ca. 0.965 g/cm³ (20 °C)

Solubility(ies)
Water solubility : completely miscible

Partition coefficient: n-octanol/water : Not applicable

Autoignition temperature : 235 °C

Decomposition temperature : No data available

Viscosity

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Viscosity, kinematic	:	Not applicable
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Particle size	:	Not applicable

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Not classified as a reactivity hazard.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Extremely flammable aerosol. Vapors may form explosive mixture with air. If the temperature rises there is danger of the vessels bursting due to the high vapor pressure. Can react with strong oxidizing agents. Hazardous decomposition products will be formed at elevated temperatures.
Conditions to avoid	:	Heat, flames and sparks.
Incompatible materials	:	Oxidizing agents

Hazardous decomposition products

Thermal decomposition	:	Formaldehyde Methanol
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SECTION 11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure**

Inhalation
Skin contact
Ingestion
Eye contact

Acute toxicity

|| Not classified based on available information.

Product:

Acute oral toxicity	:	Acute toxicity estimate: > 2,000 mg/kg Method: Calculation method
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Components:**Dimethyl ether:**

Acute inhalation toxicity	:	LC50 (Rat): 164000 ppm Exposure time: 4 h Test atmosphere: gas
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Poly(oxy-1,2-ethanediyl), α -(carboxymethyl)- ω -[(9Z)-9-octadecen-1-yloxy]-:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg

Diethylene glycol:

Acute oral toxicity : Acute toxicity estimate (Humans): 1,120 mg/kg
Method: Expert judgment

Phosphoric acid:

Acute oral toxicity : LD50 (Rat): 2,000 mg/kg
Method: OECD Test Guideline 423

Acute inhalation toxicity : Assessment: Corrosive to the respiratory tract.

Diisopropanolamine:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 401
Assessment: The substance or mixture has no acute oral toxicity

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

2-Methyl-2,4-pentanediol:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 420

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

|| Not classified based on available information.

Components:**Poly(oxy-1,2-ethanediyl), α -(carboxymethyl)- ω -[(9Z)-9-octadecen-1-yloxy]-:**

Result : Mild skin irritation

Diethylene glycol:

Species : Rabbit
Result : No skin irritation

Phosphoric acid:

Result : Corrosive after 3 minutes to 1 hour of exposure
Remarks : Based on national or regional regulation.

Diisopropanolamine:

Species : Rabbit

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Method : OECD Test Guideline 404
Result : No skin irritation

2-Methyl-2,4-pentanediol:

Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation

Serious eye damage/eye irritation

|| Causes serious eye damage.

Components:**Poly(oxy-1,2-ethanediyl), α -(carboxymethyl)- ω -[(9Z)-9-octadecen-1-yloxy]-:**

Result : Irreversible effects on the eye

Diethylene glycol:

Species : Rabbit
Result : No eye irritation

Phosphoric acid:

Species : Rabbit
Result : Irreversible effects on the eye

Diisopropanolamine:

Species : Rabbit
Result : Irritation to eyes, reversing within 21 days
Method : OECD Test Guideline 405

2-Methyl-2,4-pentanediol:

Species : Rabbit
Result : No eye irritation
Method : OECD Test Guideline 405

Respiratory or skin sensitization**Skin sensitization**

|| Not classified based on available information.

Respiratory sensitization

|| Not classified based on available information.

Components:**Diethylene glycol:**

Test Type : Maximization Test
Routes of exposure : Skin contact
Species : Guinea pig
Method : Directive 67/548/EEC, Annex V, B.6.
Result : negative

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Diisopropanolamine:

Test Type	:	Buehler Test
Routes of exposure	:	Skin contact
Species	:	Guinea pig
Result	:	negative

2-Methyl-2,4-pentanediol:

Test Type	:	Maximization Test
Routes of exposure	:	Skin contact
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	negative

Germ cell mutagenicity

|| Not classified based on available information.

Components:
Dimethyl ether:

Genotoxicity in vitro	:	Test Type: Bacterial reverse mutation assay (AMES) Method: OECD Test Guideline 471 Result: negative
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	:	Test Type: Chromosome aberration test in vitro Method: OECD Test Guideline 473 Result: negative
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	:	Test Type: In vitro mammalian cell gene mutation test Method: OECD Test Guideline 476 Result: negative
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Genotoxicity in vivo	:	Test Type: Sex-linked recessive lethal test in <i>Drosophila melanogaster</i> (in vivo) Application Route: inhalation (gas) Result: negative
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Diethylene glycol:

Genotoxicity in vitro	:	Test Type: Bacterial reverse mutation assay (AMES) Method: OECD Test Guideline 471 Result: negative
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	:	Test Type: Chromosome aberration test in vitro Result: negative
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	:	Test Type: In vitro sister chromatid exchange assay in mammalian cells Result: negative
--	---	--

Genotoxicity in vivo	:	Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay) Species: Mouse Application Route: Intraperitoneal injection Method: OECD Test Guideline 474
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Result: negative

Phosphoric acid:

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative

Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative

Diisopropanolamine:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative

Test Type: Chromosome aberration test in vitro
Method: Directive 67/548/EEC, Annex V, B.10.
Result: negative

2-Methyl-2,4-pentanediol:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative

Test Type: Chromosome aberration test in vitro
Result: negative

Carcinogenicity

|| Not classified based on available information.

Components:**Dimethyl ether:**

Species : Rat
Application Route : inhalation (vapor)
Exposure time : 2 Years
Result : negative

Diethylene glycol:

Species : Rat

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Application Route : Ingestion
Exposure time : 108 weeks
Result : negative

Diisopropanolamine:

Species : Rat
Application Route : Ingestion
Exposure time : 94 weeks
Result : negative

Reproductive toxicity

|| Suspected of damaging the unborn child.

Components:**Dimethyl ether:**

Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: inhalation (vapor)
Result: negative

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat
Application Route: inhalation (vapor)
Result: negative

Diethylene glycol:

Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Mouse
Application Route: Ingestion
Result: negative

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rabbit
Application Route: Ingestion
Method: OECD Test Guideline 414
Result: negative

Phosphoric acid:

Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative

Effects on fetal development : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422

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Result: negative

Diisopropanolamine:

Effects on fertility : Test Type: One-generation reproduction toxicity study
 Species: Rat
 Application Route: Ingestion
 Method: OECD Test Guideline 422
 Result: negative
 Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Embryo-fetal development
 Species: Rat
 Application Route: Ingestion
 Result: negative

2-Methyl-2,4-pentandiol:

Effects on fertility : Test Type: One-generation reproduction toxicity study
 Species: Rat
 Application Route: Ingestion
 Method: OECD Test Guideline 443
 Result: negative

Effects on fetal development : Test Type: One-generation reproduction toxicity study
 Species: Rat
 Application Route: Ingestion
 Method: OECD Test Guideline 443
 Result: positive

Reproductive toxicity - Assessment : Some evidence of adverse effects on development, based on animal experiments.

STOT-single exposure

|| Not classified based on available information.

Components:**Dimethyl ether:**

Assessment : May cause drowsiness or dizziness.

STOT-repeated exposure

|| Not classified based on available information.

Repeated dose toxicity**Components:****Dimethyl ether:**

Species : Rat
 NOAEL : 47.11 mg/l
 Application Route : inhalation (vapor)
 Exposure time : 2 y

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Diethylene glycol:

Species : Rat
NOAEL : 300 mg/kg
Application Route : Ingestion
Exposure time : 98 Days

Species : Dog
NOAEL : 2,220 mg/kg
Application Route : Skin contact
Exposure time : 4 Weeks
Method : OECD Test Guideline 410
Remarks : Based on data from similar materials

Phosphoric acid:

Species : Rat
NOAEL : 250 mg/kg
Application Route : Ingestion
Exposure time : 40 - 52 Days
Method : OECD Test Guideline 422

Diisopropanolamine:

Species : Rat, male
NOAEL : 100 mg/kg
LOAEL : 500 mg/kg
Application Route : Ingestion
Exposure time : 90 Days
Method : OECD Test Guideline 408

2-Methyl-2,4-pentanediol:

Species : Rat
NOAEL : ≥ 450 mg/kg
Application Route : Ingestion
Exposure time : 13 Weeks
Method : OECD Test Guideline 408

Aspiration toxicity

|| Not classified based on available information.

Experience with human exposure**Components:****2-Methyl-2,4-pentanediol:**

Eye contact : Target Organs: Eyes
Symptoms: Irritation

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SECTION 12. ECOLOGICAL INFORMATION
Ecotoxicity
Components:
Dimethyl ether:

- Toxicity to fish : LC50 (Poecilia reticulata (guppy)): > 4,100 mg/l
Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 4,400 mg/l
Exposure time: 48 h
- Toxicity to microorganisms : EC10 (Pseudomonas putida): > 1,600 mg/l

Poly(oxy-1,2-ethanediyl), α -(carboxymethyl)- ω -[(9Z)-9-octadecen-1-yloxy]-:

- Toxicity to fish : LC50 (Danio rerio (zebra fish)): 5 - 10 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Diethylene glycol:

- Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 75,200 mg/l
Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 10,000 mg/l
Exposure time: 24 h
Method: DIN 38412
- Toxicity to algae/aquatic plants : NOEC (Pseudokirchneriella subcapitata (green algae)): > 1 mg/l
Exposure time: 72 h
Remarks: Based on data from similar materials
- Toxicity to fish (Chronic toxicity) : NOEC (Pimephales promelas (fathead minnow)): > 1 mg/l
Exposure time: 7 d
Remarks: Based on data from similar materials
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): > 1 mg/l
Exposure time: 21 d
Remarks: Based on data from similar materials

Phosphoric acid:

- Toxicity to fish : LC50 (Oryzias latipes (Japanese medaka)): > 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
- Toxicity to algae/aquatic plants : ErC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l
Exposure time: 72 h

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Method: OECD Test Guideline 201

NOEC (Desmodesmus subspicatus (green algae)): > 100 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Toxicity to microorganisms : EC50: > 100 mg/l
 Exposure time: 3 h
 Method: OECD Test Guideline 209
 Remarks: Based on data from similar materials

Diisopropanolamine:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 1,466 mg/l
 Exposure time: 96 h
 Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 277.7 mg/l
 Exposure time: 48 h

Toxicity to algae/aquatic plants : ErC50 (Desmodesmus subspicatus (green algae)): 339 mg/l
 Exposure time: 72 h

EC10 (Desmodesmus subspicatus (green algae)): 219 mg/l
 Exposure time: 72 h

Toxicity to microorganisms : EC10: > 1,995 mg/l
 Exposure time: 30 min
 Method: ISO 8192

2-Methyl-2,4-pentanediol:

Toxicity to fish : LC50 (Gambusia affinis (Mosquito fish)): 8,510 mg/l
 Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Ceriodaphnia dubia (water flea)): 2,800 mg/l
 Exposure time: 48 h

Toxicity to algae/aquatic plants : ErC50 (Raphidocelis subcapitata (freshwater green alga)): > 429 mg/l
 Exposure time: 72 h
 Method: OECD Test Guideline 201

EC10 (Raphidocelis subcapitata (freshwater green alga)): > 429 mg/l
 Exposure time: 72 h
 Method: OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 25 mg/l
 Exposure time: 21 d
 Method: OECD Test Guideline 211

Toxicity to microorganisms : NOEC (Bacteria): 200 mg/l
 Exposure time: 10 d

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Persistence and degradability**Components:****Dimethyl ether:**

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 5 %
Exposure time: 28 d
Method: OECD Test Guideline 301D

Poly(oxy-1,2-ethanediyl), α -(carboxymethyl)- ω -[(9Z)-9-octadecen-1-yloxy]-:

Biodegradability : Result: Readily biodegradable.
Remarks: Based on data from similar materials

Diethylene glycol:

Biodegradability : Result: Readily biodegradable.

Diisopropanolamine:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 94 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

2-Methyl-2,4-pentanediol:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 81 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

Bioaccumulative potential**Components:****Dimethyl ether:**

Partition coefficient: n-octanol/water : log Pow: 0.2

Diethylene glycol:

Partition coefficient: n-octanol/water : log Pow: -1.98
Remarks: Calculation

Diisopropanolamine:

Partition coefficient: n-octanol/water : log Pow: -0.79

2-Methyl-2,4-pentanediol:

Partition coefficient: n-octanol/water : log Pow: < 4
Remarks: Calculation

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Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

- Waste from residues : Dispose of in accordance with local regulations.
Do not dispose of waste into sewer.
- Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.
Empty containers retain residue and can be dangerous.
Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death.
If not otherwise specified: Dispose of as unused product.
Please ensure aerosol cans are sprayed completely empty (including propellant)

SECTION 14. TRANSPORT INFORMATION**International Regulations****UNRTDG**

- UN number : UN 1950
Proper shipping name : AEROSOLS
Class : 2.1
Packing group : Not assigned by regulation
Labels : 2.1

IATA-DGR

- UN/ID No. : UN 1950
Proper shipping name : Aerosols, flammable
Class : 2.1
Packing group : Not assigned by regulation
Labels : Flammable Gas
Packing instruction (cargo aircraft) : 203
Packing instruction (passenger aircraft) : 203

IMDG-Code

- UN number : UN 1950
Proper shipping name : AEROSOLS
- Class : 2.1
Packing group : Not assigned by regulation
Labels : 2.1
EmS Code : F-D, S-U
Marine pollutant : no

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Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation
TDG

UN number : UN 1950
 Proper shipping name : AEROSOLS

Class : 2.1
 Packing group : Not assigned by regulation
 Labels : 2.1
 ERG Code : 126
 Marine pollutant : no

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

Volatile organic compounds (VOC) content : CANADIAN ENVIRONMENTAL PROTECTION ACT, 1999 - Guidelines for VOC in Consumer Products
 VOC content: 51.78 % / 499.6 g/l

The ingredients of this product are reported in the following inventories:

DSL : All chemical substances in this product comply with the CEPA 1999 and NSNR and are on or exempt from listing on the Canadian Domestic Substances List (DSL).

SECTION 16. OTHER INFORMATION
Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
 CA AB OEL : Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
 CA BC OEL : Canada. British Columbia OEL
 CA ON OEL : Ontario Table of Occupational Exposure Limits made under the Occupational Health and Safety Act.
 CA QC OEL : Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
 ACGIH / TWA : 8-hour, time-weighted average
 ACGIH / STEL : Short-term exposure limit
 CA AB OEL / TWA : 8-hour Occupational exposure limit
 CA AB OEL / STEL : 15-minute occupational exposure limit
 CA AB OEL / (c) : ceiling occupational exposure limit
 CA BC OEL / TWA : 8-hour time weighted average
 CA BC OEL / STEL : short-term exposure limit
 CA ON OEL / C : Ceiling Limit (C)
 CA ON OEL / STEL : Short-Term Exposure Limit (STEL)

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CA QC OEL / TWAEV	:	Time-weighted average exposure value
CA QC OEL / STEV	:	Short-term exposure value
CA QC OEL / C	:	Ceiling

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECl - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Sources of key data used to compile the Material Safety Data Sheet	:	Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/
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Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their

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intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

CA / Z8