DECON-CYCLE®. Also known as: DECON-CYCLE® II

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Issue date: 2/11/2005 Revision date: 4/16/2025 Supersedes: 3/9/2020 Version: 9.0

SECTION 1 Identification

1.1. Product identifier

Product form	:	Mixture
Product name	:	DECON-CYCLE®. Also known as: DECON-CYCLE® II
Product code	:	SDS DCY-98-01

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture	:	Disinfectant
Restrictions on use	:	Product for industrial use only

1.4. Supplier's details

Veltek Associates, Inc.
15 Lee Blvd
Malvern, PA 19355-1234 USA
Telephone: +1 610-644-8335 - Fax: +1 610-644-8336
E-mail: vai@sterile.com

In Canada distributed by:
Canada Clean Room (CCR)
20 Cope Dr.
Kanata, ON K2M 2V8, Canada
Telephone: 1-(888)-595-8070

1.5. Emergency phone number

Emergency number	:	CARECHEM 24: 1-215-207-0061 1-866-928-0789 (toll free USA) Canada: 1-800-579-7421 (toll free) Mexico: +52-55-5004-8763

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture

GHS US classification

Flammable liquid, Category 3	H226	Flammable liquid and vapor.
Skin corrosion/irritation, Category 1	H314	Causes severe skin burns and eye damage.
Serious eye damage/eye irritation, Category 1	H318	Causes serious eye damage.
Skin sensitization, Category 1	H317	May cause an allergic skin reaction.
Carcinogenicity, Category 2	H351	Suspected of causing cancer.
Reproductive toxicity, Category 2	H361	Suspected of damaging fertility or the unborn child.
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	H335	May cause respiratory irritation.
Specific target organ toxicity — Repeated exposure, Category 2	H373	May cause damage to organs (kidneys) through prolonged or repeated exposure.
Hazardous to the aquatic environment — Acute Hazard, Category 2	H401	Toxic to aquatic life.
Hazardous to the aquatic environment — Chronic Hazard, Category 1	H410	Very toxic to aquatic life with long lasting effects.

Full text of H statements : see section 16

2.2. Label elements

GHS US labeling

Hazard pictograms (GHS US) :

Signal word (GHS US) : Danger

Hazard statements (GHS US) : H226 - Flammable liquid and vapor
H314 - Causes severe skin burns and eye damage
H317 - May cause an allergic skin reaction
H335 - May cause respiratory irritation
H351 - Suspected of causing cancer.
H361 - Suspected of damaging fertility or the unborn child
H373 - May cause damage to organs (kidneys) through prolonged or repeated exposure
H401 - Toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements (GHS US) : 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.
P233 - Keep container tightly closed.
P240 - Ground/Bond container and receiving equipment.
P241 - Use explosion-proof electrical, lighting, ventilating equipment.
P242 - Use non-sparking tools.
P243 - Take action to prevent static discharges.
P260 - Do not breathe dusts or mists.
P264 - Wash hands thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.
P272 - Contaminated work clothing should not be allowed out of the workplace.
P273 - Avoid release to the environment.
P280 - Wear protective gloves.
P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 - If exposed or concerned: Get medical advice/attention.
P310 - Immediately call a doctor.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P370+P378 - In case of fire: Use foam, Dry powder, carbon dioxide (CO2), Water spray to extinguish.
P391 - Collect spillage.
P403+P235 - Store in a well-ventilated place. Keep cool.
P405 - Store locked up.
P501 - Dispose of contents/container to an authorized waste collection point.

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

No additional information available

2.5. Unknown acute toxicity

No additional information available

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
2-methylpentane-2,4-diol (hexylene glycol)	CAS-No.: 107-41-5	10 - < 30	Skin Irrit. 2, H315 Eye Irrit. 2A, H319
Citric acid	CAS-No.: 77-92-9	10 - < 30	Eye Irrit. 2A, H319 STOT SE 3, H335
Isopropanol	CAS-No.: 67-63-0	7 - < 13	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336
Biphenyl-2-ol (ortho-phenylphenol)	CAS-No.: 90-43-7	5 - < 10	Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Clorofene (ortho-benzyl-para-chlorophenol)	CAS-No.: 120-32-1	5 - < 10	Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Carc. 2, H351 Repr. 2, H361 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
2,2',2"-nitrilotriethanol	CAS-No.: 102-71-6	1 - < 5	Not classified
Benzenesulfonic acid, C10-16-alkyl derivs.	CAS-No.: 68584-22-5	1 - < 5	Eye Irrit. 2A, H319

Full text of hazard classes and H-statements : see section 16

SECTION 4 First aid measures

4.1. Description of necessary first-aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Remove person to fresh air and keep at rest in a position comfortable for breathing. If symptoms develop obtain medical attention.

First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Obtain immediate medical attention.

First-aid measures after eye contact : Rinse immediately with plenty of water (for at least 15 minutes). Remove contact lenses, if present and easy to do. Continue rinsing. Ensure that folded skin of eyelids is thoroughly washed with water. Obtain immediate medical attention.

First-aid measures after ingestion : Do NOT induce vomiting. Do not give an unconscious person anything to drink. Wash out mouth with water and give 100-200 ml of water to drink. Obtain immediate medical attention.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation	:	May cause respiratory irritation.
Symptoms/effects after skin contact	:	Causes skin irritation. May cause an allergic skin reaction. Skin rash/inflammation.
Symptoms/effects after eye contact	:	Causes serious eye damage.
Symptoms/effects after ingestion	:	Ingestion may cause irritation of the gastrointestinal tract.
Chronic symptoms	:	Suspected of causing cancer. Suspected of damaging fertility or the unborn child. May cause damage to organs (kidneys) through prolonged or repeated exposure.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment	:	Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	:	Alcohol-resistant foam. Dry powder. Carbon dioxide. Water.
Unsuitable extinguishing media	:	Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard	:	Flammable liquid and vapor. Vapors are heavier than air and may travel considerable distance to an ignition source and flash back to source of vapors.
Explosion hazard	:	Containers may rupture when heated.
Hazardous decomposition products in case of fire	:	Carbon dioxide. Carbon monoxide. Chlorine. Hydrocarbons.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions	:	Exercise caution when fighting any chemical fire. Use water for cooling exposed containers. Prevent fire-fighting water from entering environment.
Protection during firefighting	:	Do not enter fire area without proper protective equipment, including respiratory protection. Use self-contained breathing apparatus when in close proximity to fire.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Emergency procedures	:	Ventilate area. Remove all sources of ignition. Do not breathe vapors. Do not get in eyes, on skin, or on clothing. Evacuate unnecessary personnel.

For emergency responders

Protective equipment	:	Equip cleanup crew with proper protection. Use chemically protective clothing.
Emergency procedures	:	Ventilate area. Do not breathe vapors. Remove ignition sources. Use only non-sparking tools. Take precautionary measures against static discharge. Do not get in eyes, on skin, or on clothing.
Environmental precautions	:	Collect spillage. Prevent entry to sewers and public waters. Notify authorities if large amounts of the product enters sewers or public waters.

6.2. Methods and materials for containment and cleaning up

Methods for cleaning up	:	Use non-sparking tools. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

SECTION 8: Exposure controls/personal protection,SECTION 13: Disposal considerations

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Take precautionary measures against static discharge. Use only non-sparking tools. Provide good ventilation in process area to prevent formation of vapor. Do not breathe vapors. Do not get in eyes, on skin, or on clothing.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off immediately all contaminated clothing and wash it before reuse. Contaminated work clothing should not be allowed out of the workplace. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including incompatibilities

Storage conditions : Keep in fireproof place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Protect material from direct sunlight. Store in original container. Keep container tightly closed. Store in a well-ventilated place. Keep cool. Store locked up.

Incompatible materials : Oxidizing agents. Reducing agents. Strong alkalis. Strong acids.

Specific end uses : Product for industrial use only. Disinfectant.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

2-methylpentane-2,4-diol (hexylene glycol) (107-41-5)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Hexylene glycol
ACGIH TWA (ppm)	25 ppm (V - Vapor fraction)
ACGIH OEL STEL	10 mg/m³ (I - Inhalable particulate matter, H - Aerosol only)
ACGIH STEL (ppm)	50 ppm (V - Vapor fraction)
Remark (ACGIH)	TLV® Basis: Eye & URT irr
Regulatory reference	ACGIH 2024

Isopropanol (67-63-0)	
USA - ACGIH - Occupational Exposure Limits	
Local name	2-Propanol
ACGIH TWA (ppm)	200 ppm
ACGIH STEL (ppm)	400 ppm
Remark (ACGIH)	TLV® Basis: Eye & URT irr; CNS impair. Notations: A4 (Not classifiable as a Human Carcinogen); BEI
Regulatory reference	ACGIH 2024
USA - ACGIH - Biological Exposure Indices	
Local name	2-Propanol
BEI (BLV)	40 mg/l Parameter: Acetone - Medium: urine - Sampling time: End of shift at end of workweek - Notations: B, Ns

Isopropanol (67-63-0)	
Regulatory reference	ACGIH 2024
USA - OSHA - Occupational Exposure Limits	
Local name	Isopropyl alcohol
OSHA PEL (TWA) (mg/m³)	980 mg/m³
OSHA PEL TWA	400 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

2,2',2''-nitrilotriethanol (102-71-6)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Triethanolamine
ACGIH TWA (mg/m³)	5 mg/m³
Remark (ACGIH)	Eye & skin irr
Regulatory reference	ACGIH 2024

8.2. Appropriate engineering controls

Appropriate engineering controls : Provide good ventilation in process area to prevent formation of vapor. Ensure exposure is below occupational exposure limits (where available). Local exhaust ventilation (LEV) may be required to control inhalation exposure. Emergency eye wash stations should be available in the immediate vicinity of any potential exposure.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:

Wear suitable gloves resistant to chemical penetration. Hand Protection in accordance with 29 CFR 1910.138 & ANSI/ISEA 105-2016. Gloves should be removed and replaced if there are any signs of degradation or breakthrough. The exact breakthrough time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:

Chemical goggles or safety glasses. Eye Protection in accordance with 29 CFR 1910.133 & ANSI/ISEA Z87.1-2020

Skin and body protection:

Wear chemically protective gloves, lab coat or apron to prevent prolonged or repeated skin contact

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. Respiratory protection in accordance with 29 CFR 1910.134 & ANSI Z88.2 / ANSI Z88.6. Employers must select and provide National Institute for Occupational Safety and Health (NIOSH)-approved respiratory protection when employees are exposed to airborne hazards exceeding the Permissible Exposure Limits (PEL), listed in the OSHA air contaminants standard 29 CFR 1910.1000.

Thermal hazard protection:

Not required for normal conditions of use.

Other information:

Do not eat, drink or smoke during use.

SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	Clear.
Color	:	Amber
Odor	:	Alcohol
Odor threshold	:	No data available
pH	:	1.5 – 2.5 (Concentrate)
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	100 °C
Flash point	:	41.6 °C
Flammability (solid, gas)	:	Not applicable.
Vapor pressure	:	No data available
Relative vapor density at 20°C	:	No data available
Relative density	:	1.092 +/-0.01 (25 °C) (Water = 1)
Solubility	:	Water: Miscible
Log Pow	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, kinematic	:	No data available
Explosion limits	:	No data available
Explosive properties	:	Vapors may form explosive mixture with air.
Oxidizing properties	:	Not oxidizing.
Particle characteristics	:	No data available

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10 Stability and reactivity

10.1. Reactivity

Stable under recommended handling and storage conditions (see section 7).

10.2. Chemical stability

Stable under recommended handling and storage conditions (see section 7).

10.3. Possibility of hazardous reactions

Under fire conditions closed containers may rupture or explode.

10.4. Conditions to avoid

Keep away from open flames, hot surfaces and sources of ignition. Extremely high or low temperatures. Direct sunlight.

10.5. Incompatible materials

Oxidizing agents. Reducing agents. Strong alkalis. Strong acids.

10.6. Hazardous decomposition products

Fire may produce irritating, corrosive and/or toxic gases. Chlorine. Carbon monoxide. Carbon dioxide. Hydrocarbons.

SECTION 11 Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

DECON-CYCLE®. Also known as: DECON-CYCLE® II	
LD50 oral, rat	> 500 – < 5000 mg/kg EPA OPP 81-1: Acute toxicity (oral), Rat, male/female, experimental Value, Oral
LC50 inhalation, rat (mg/l)	> 2.3 mg/l EPA OPP 81-3: Acute toxicity (Inhalation), Rat, male/female, experimental Value, Inhalation

2-methylpentane-2,4-diol (hexylene glycol) (107-41-5)	
LD50 oral, rat	> 2000 mg/kg (OECD 420 method)
LD50 dermal, rabbit	> 2000 mg/kg (OECD 402 method)
LC50 inhalation, rat (mg/l)	> 60 ml/m³ - 8 Hours

Isopropanol (67-63-0)	
LD50 oral, rat	5840 mg/kg
LD50 dermal, rat	16.4 ml/kg
LC50 inhalation, rat (ppm)	> 10000 ppm - 6 Hours
ATE US (oral)	5840 mg/kg body weight
ATE US (dermal)	16400 mg/kg body weight

Citric acid (77-92-9)	
LD50 oral, rat	5400 mg/kg (OECD 401 method)
LD50 dermal, rat	> 2000 mg/kg (OECD 402 method)
ATE US (oral)	5400 mg/kg body weight

Biphenyl-2-ol (ortho-phenylphenol) (90-43-7)	
LD50 oral, rat	2733 mg/kg
LD50 dermal, rabbit	> 2000 mg/kg
LC50 inhalation, rat (mg/l)	> 949 mg/m³ - 1 Hours
ATE US (oral)	2733 mg/kg body weight

Clorofene (ortho-benzyl-para-chlorophenol) (120-32-1)	
LD50 oral, rat	4147 mg/kg (OECD 401 method)
LD50 dermal, rat	> 2000 mg/kg (OECD 402 method)
LC50 inhalation, rat (mg/l)	2.5 mg/l - 4 Hours (OECD 403 method)
ATE US (oral)	4147 mg/kg body weight
ATE US (gases)	4500 ppmV/4h
ATE US (vapors)	2.5 mg/l/4h
ATE US (dust, mist)	2.5 mg/l/4h

2,2',2''-nitrilotriethanol (102-71-6)	
LD50 oral, rat	4200 – 11300 mg/kg
LD50 dermal, rat	> 2000 mg/kg (OECD 402 method)
ATE US (oral)	4200 mg/kg body weight

Benzenesulfonic acid, C10-16-alkyl derivs. (68584-22-5)	
LD50 oral, rat	> 5000 mg/kg (OECD 401 method) (Read-across)

Skin corrosion/irritation : Causes severe skin burns.
pH: 1.5 – 2.5 (Concentrate)

2,2',2''-nitrilotriethanol (102-71-6)	
pH	10.5

Serious eye damage/irritation : Causes serious eye damage.
pH: 1.5 – 2.5 (Concentrate)

2,2',2''-nitrilotriethanol (102-71-6)	
pH	10.5

Respiratory or skin sensitization : May cause an allergic skin reaction.

Germ cell mutagenicity : Not classified

Carcinogenicity : Suspected of causing cancer.

Isopropanol (67-63-0)	
IARC group	3 - Not classifiable

Biphenyl-2-ol (ortho-phenylphenol) (90-43-7)	
IARC group	3 - Not classifiable

2,2',2''-nitrilotriethanol (102-71-6)	
IARC group	3 - Not classifiable

Reproductive toxicity : Suspected of damaging fertility or the unborn child.

STOT-single exposure : May cause respiratory irritation.

Isopropanol (67-63-0)	
STOT-single exposure	May cause drowsiness or dizziness.

Citric acid (77-92-9)	
STOT-single exposure	May cause respiratory irritation.

Biphenyl-2-ol (ortho-phenylphenol) (90-43-7)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : May cause damage to organs (kidneys) through prolonged or repeated exposure.

Clorofene (ortho-benzyl-para-chlorophenol) (120-32-1)	
STOT-repeated exposure	May cause damage to organs (kidneys) through prolonged or repeated exposure.

Aspiration hazard : Not classified

Symptoms/effects after inhalation : May cause respiratory irritation.

Symptoms/effects after skin contact : Causes skin irritation. May cause an allergic skin reaction. Skin rash/inflammation.

Symptoms/effects after eye contact : Causes serious eye damage.

Symptoms/effects after ingestion : Ingestion may cause irritation of the gastrointestinal tract.

Chronic symptoms : Suspected of causing cancer. Suspected of damaging fertility or the unborn child. May cause damage to organs (kidneys) through prolonged or repeated exposure.

SECTION 12 Ecological information

12.1. Ecotoxicity

Hazardous to the aquatic environment, short–term (acute) : Toxic to aquatic life.

Hazardous to the aquatic environment, long–term (chronic) : Very toxic to aquatic life with long lasting effects.

DECON-CYCLE®. Also known as: DECON-CYCLE® II	
LC50 fish	2.96 mg/l acute (calculated value)
EC50 72h - Algae [1]	1.73 mg/l Chronic (calculated value)

2-methylpentane-2,4-diol (hexylene glycol) (107-41-5)	
LC50 fish	8510 mg/l - 96 Hours (Gambusia affinis)
EC50 Daphnia	2800 mg/l 48 Hours (Ceriodaphnia sp.)
NOEC chronic algae	429 mg/l - 72 Hours (Raphidocelis subcapitata) (OECD 201 method)

Isopropanol (67-63-0)	
LC50 fish	9640 mg/l
EC50 Daphnia	> 10000 mg/l - 48 Hours (Daphnia magna)
NOEC chronic algae	1800 mg/l - 7 days (Scenedesmus quadricauda)

Citric acid (77-92-9)	
LC50 fish	48 mg/l (Source: ECOTOX)
EC50 Daphnia	1535 mg/l 24 Hours - Daphnia magna
NOEC chronic algae	425 mg/l 8d - Scenedesmus quadricauda

Biphenyl-2-ol (ortho-phenylphenol) (90-43-7)	
LC50 fish	4.5 mg/l - 96 Hours (Danio rerio)
EC50 Daphnia	1.5 mg/l
EC50 72h - Algae [1]	5 mg/l
ErC50 algae	3.57 mg/l - 72 Hours (Pseudokirchneriella subcapitata, Growth rate), (OECD 201 method)
NOEC (chronic)	0.009 mg/l - 21 days (Daphnia magna, reproduction), (OECD 211 method)
NOEC chronic fish	0.036 mg/l - 21 days (Pimephales promelas, reproduction)
NOEC chronic algae	0.468 mg/l - 72 Hours (Pseudokirchneriella subcapitata, Growth rate), (OECD 201 method)

Clorofene (ortho-benzyl-para-chlorophenol) (120-32-1)	
LC50 fish	1.5 mg/l - 96 Hours (Danio rerio)
EC50 Daphnia	0.655 mg/l - 48 Hours (Daphnia magna)(OECD 202 method)
EC50 - Other aquatic organisms [1]	0.089 mg/l - 96 Hours (Americamysis bahia)(EPA OPPTS 850.1035)
ErC50 algae	0.435 mg/l - 72 Hours (Navicula pelliculosa, Growth rate)(OCSPP 850.4500)
ErC50 other aquatic plants	0.155 mg/l - 96 Hours (Skeletonema costatum, Growth rate)((OECD 201 method)

Clorofene (ortho-benzyl-para-chlorophenol) (120-32-1)	
NOEC chronic fish	0.0095 mg/l - 30 days (Danio rerio) (OECD 210 method)
NOEC chronic crustacea	0.0067 mg/l - 21 days (Daphnia magna, reproduction)

2,2',2''-nitrilotriethanol (102-71-6)	
LC50 fish	11800 mg/l
EC50 Daphnia	609.98 mg/l
EC50 72h - Algae [1]	216 mg/l - 72 Hours (Desmodesmus subspicatus, Growth rate)(DIN 38412, 9)
ErC50 algae	169 mg/l
NOEC (acute)	16 mg/l 21 days - Daphnia magna
NOEC chronic crustacea	16 mg/l - 21 days (Daphnia magna)

Benzenesulfonic acid, C10-16-alkyl derivs. (68584-22-5)	
LC50 fish	> 10000 mg/l 96h (OECD 203 method) - Cyprinodon variegatus
EC50 Daphnia	> 1000 mg/l 48h - Daphnia magna
EC50 96h - Algae [1]	> 1000 Raphidocelis subcapitata

12.2. Persistence and degradability

DECON-CYCLE®. Also known as: DECON-CYCLE® II	
Persistence and degradability	Readily biodegradable.
Biodegradation	74 % - 28 days

2-methylpentane-2,4-diol (hexylene glycol) (107-41-5)	
Persistence and degradability	Readily biodegradable.
Biodegradation	81 % 28d (OECD 301F method)

Isopropanol (67-63-0)	
Persistence and degradability	Readily biodegradable.
Biochemical oxygen demand (BOD)	1.19 g O2/g substance - 5 days (Test method EU C.5)
Chemical oxygen demand (COD)	2.23 g O2/g substance (Test method EU C.6)
Biodegradation	53 % - 5 days

Citric acid (77-92-9)	
Persistence and degradability	Readily biodegradable.

Biphenyl-2-ol (ortho-phenylphenol) (90-43-7)	
Persistence and degradability	Readily biodegradable.
Biodegradation	70.8 – 75.7 % - 28 days (OECD 301B method)

Clorofene (ortho-benzyl-para-chlorophenol) (120-32-1)	
Persistence and degradability	Inherently biodegradable, Not readily biodegradable.

2,2',2''-nitrilotriethanol (102-71-6)	
Persistence and degradability	Rapidly degradable.
Additional information	(marine water) :. Not readily biodegradable

Benzenesulfonic acid, C10-16-alkyl derivs. (68584-22-5)	
Persistence and degradability	Not readily biodegradable.
Chemical oxygen demand (COD)	8 % ThOD 28d (OECD 301D method)

12.3. Bioaccumulative potential

DECON-CYCLE®. Also known as: DECON-CYCLE® II	
Bioaccumulative potential	No information available.

2-methylpentane-2,4-diol (hexylene glycol) (107-41-5)	
Log Pow	0.58 Source: HSDB
Log Kow	≤ 3
Bioaccumulative potential	Low bioaccumulation potential.

Isopropanol (67-63-0)	
Log Pow	0.05 (25°C)
Bioaccumulative potential	Based on the n-octanol/water partition coefficient accumulation in organisms is not expected.

Citric acid (77-92-9)	
Log Pow	-1.7 Source: ICSC
Log Kow	≤ 3
Bioaccumulative potential	Low bioaccumulation potential.

Biphenyl-2-ol (ortho-phenylphenol) (90-43-7)	
BCF - Fish [1]	21.7 (Danio rerio)
Log Pow	3.09
Bioaccumulative potential	Not expected to bioaccumulate.

Clorofene (ortho-benzyl-para-chlorophenol) (120-32-1)	
Log Pow	4.18
Bioaccumulative potential	No significant bioaccumulation potential (OECD 305).

2,2',2''-nitrilotriethanol (102-71-6)	
BCF - Fish [1]	3.9 l/kg (OECD 305 method) - Cyprinus carpio
Log Pow	-1.59
Bioaccumulative potential	Bioaccumulation unlikely.

Benzenesulfonic acid, C10-16-alkyl derivs. (68584-22-5)	
Log Pow	2
Bioaccumulative potential	Not expected to bioaccumulate.

12.4. Mobility in soil

DECON-CYCLE®. Also known as: DECON-CYCLE® II	
Ecology - soil	Miscible with water.

2-methylpentane-2,4-diol (hexylene glycol) (107-41-5)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0.001
Ecology - soil	Not expected to adsorb to soil.

Isopropanol (67-63-0)	
Ecology - soil	Miscible with water.

Biphenyl-2-ol (ortho-phenylphenol) (90-43-7)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.4 – 2.6 (20 °C)

Clorofene (ortho-benzyl-para-chlorophenol) (120-32-1)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	3.43 (OECD 121 method)

2,2',2''-nitrilotriethanol (102-71-6)	
Ecology - soil	Expected to adsorb to soil.

Benzenesulfonic acid, C10-16-alkyl derivs. (68584-22-5)	
Mobility in soil	1064

12.5. Other adverse effects

Ozone : Not classified

Fluorinated greenhouse gases : No

Other information : Avoid release to the environment.

SECTION 13 Disposal considerations

Waste disposal recommendations : Dispose of this product and its container in a safe manner in accordance with local/national regulations.

Additional information : Handle empty containers with care because residual vapors are flammable. Empty containers should be taken for recycling, recovery or waste in accordance with local regulation.

Ecology - waste materials : Avoid release to the environment.

SECTION 14 Transport information

In accordance with DOT / TDG / IMDG / IATA

14.1. UN number

UN-No. (DOT) : UN2924

UN-No. (TDG) : UN2924

UN-No. (IMDG) : 2924

UN-No. (IATA) : 2924

14.2. UN Proper Shipping Name

Proper Shipping Name (DOT) : Flammable liquids, corrosive, n.o.s. (Isopropanol ; Citric acid)

Proper Shipping Name (TDG) : FLAMMABLE LIQUID, CORROSIVE, N.O.S. (Isopropanol ; Citric acid)

Proper Shipping Name (IMDG) : FLAMMABLE LIQUID, CORROSIVE, N.O.S. (Isopropanol ; Citric acid)

Proper Shipping Name (IATA) : Flammable liquid, corrosive, n.o.s. (Isopropanol ; Citric acid)

14.3. Transport hazard class(es)

DOT

Transport hazard class(es) (DOT) : 3 (8)

Hazard labels (DOT) : 3, 8

TDG

Transport hazard class(es) (TDG) : 3 (8)

Hazard labels (TDG) : 3, 8

IMDG

Transport hazard class(es) (IMDG) : 3 (8)

Hazard labels (IMDG) : 3, 8

IATA

Transport hazard class(es) (IATA) : 3 (8)

Hazard labels (IATA) : 3, 8

14.4. Packing group

Packing group (DOT) : III

Packing group (TDG) : III

Packing group (IMDG) : III

Packing group (IATA) : III

14.5. Environmental hazards

Dangerous for the environment : Yes

Marine pollutant : Yes

Other information : No supplementary information available.

14.6. Transport in bulk

Not applicable

14.7. Special precautions for user

Special transport precautions	:	DOT: §172.322(d): Environmentally hazardous substances derogation applies (quantity of liquids ≤ 5 litres or net mass of solids ≤ 5 kg) TDG 4.22: Environmentally hazardous substances derogation applies (quantity of liquids ≤ 5 litres or net mass of solids ≤ 5 kg) IMDG 2.10.2.7: Environmentally hazardous substances derogation applies (quantity of liquids ≤ 5 litres or net mass of solids ≤ 5 kg)

DOT

UN-No. (DOT)	:	UN2924
DOT Special Provisions (49 CFR 172.102)	:	B1 - If the material has a flash point at or above 38 C (100 F) and below 93 C (200 F), then the bulk packaging requirements of 173.241 of this subchapter are applicable. If the material has a flash point of less than 38 C (100 F), then the bulk packaging requirements of 173.242 of this subchapter are applicable. IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672). T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3) TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = 97 / 1 + a (tr - tf) Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling. TP28 - A portable tank having a minimum test pressure of 2.65 bar (265 kPa) may be used provided the calculated test pressure is 2.65 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.
DOT Packaging Exceptions (49 CFR 173.xxx)	:	150
DOT Packaging Non Bulk (49 CFR 173.xxx)	:	203
DOT Packaging Bulk (49 CFR 173.xxx)	:	242
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	:	5 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	:	60 L
DOT Vessel Stowage Location	:	A - The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel and on a passenger vessel.
DOT Vessel Stowage Other	:	40 - Stow ‘‘clear of living quarters’’

TDG

UN-No. (TDG)	:	UN2924

TDG Special Provisions	:	16 - (1) The technical name of at least one of the most dangerous substances that predominantly contributes to the danger or dangers posed by the dangerous goods must be shown, in parentheses, on the shipping document following the shipping name in accordance with clause 3.5(1)(c)(ii)(A). The technical name must also be shown, in parentheses, on a small means of containment or on a tag following the shipping name in accordance with subsections 4.11(2) and (3). (2) Despite subsection (1), the technical name for the following dangerous goods is not required to be shown on a shipping document or on a small means of containment when Canadian law for domestic transport or an international convention for international transport prohibits the disclosure of the technical name: (a) UN1544, ALKALOID SALTS, SOLID, N.O.S. or ALKALOIDS, SOLID, N.O.S; (b) UN1851, MEDICINE, LIQUID, TOXIC, N.O.S; (c) UN3140, ALKALOID SALTS, LIQUID, N.O.S. or ALKALOIDS, LIQUID, N.O.S; (d) UN3248, MEDICINE, LIQUID, FLAMMABLE, TOXIC, N.O.S; or (e) UN3249, MEDICINE, SOLID, TOXIC, N.O.S. (3) Despite subsection (1), the technical name for the following dangerous goods is not required to be shown on a small means of containment: (a) UN2814, INFECTIOUS SUBSTANCE, AFFECTING HUMANS; or (b) UN2900, INFECTIOUS SUBSTANCE, AFFECTING ANIMALS.
Explosive Limit and Limited Quantity Index	:	5 L
Excepted quantities (TDG)	:	E1
Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index	:	5 L
Emergency Response Guide (ERG) Number	:	132

IMDG

EmS-No. (Fire)	:	F-E - FIRE SCHEDULE Echo - NON-WATER-REACTIVE FLAMMABLE LIQUIDS
EmS-No. (Spillage)	:	S-C - SPILLAGE SCHEDULE Charlie - FLAMMABLE CORROSIVE LIQUIDS

IATA

No data available

SECTION 15 Regulatory information

15.1. Federal regulations

DECON-CYCLE®. Also known as: DECON-CYCLE® II	
SARA Section 311/312 Hazard Classes	Physical hazard - Flammable (gases, aerosols, liquids, or solids) Health hazard - Skin corrosion or Irritation Health hazard - Serious eye damage or eye irritation Health hazard - Respiratory or skin sensitization Health hazard - Carcinogenicity Health hazard - Reproductive toxicity Health hazard - Specific target organ toxicity (single or repeated exposure)

Commercial status of components according to the United States Environmental Protection Agency's Toxic Substances Control Act (TSCA):

Name	CAS-No.	Listing	Commercial status	Flags
2-methylpentane-2,4-diol (hexylene glycol)	107-41-5	Present	Active	
Isopropanol	67-63-0	Present	Active	
Citric acid	77-92-9	Present	Active	
Biphenyl-2-ol (ortho-phenylphenol)	90-43-7	Present	Active	
Clorofene (ortho-benzyl-para-chlorophenol)	120-32-1	Present	Active	
2,2',2"-nitrilotriethanol	102-71-6	Present	Active	

Name	CAS-No.	Listing	Commercial status	Flags
Benzenesulfonic acid, C10-16-alkyl derivs.	68584-22-5	Present	Active	

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.		
Isopropanol	CAS-No. 67-63-0	7 - < 13%
Biphenyl-2-ol (ortho-phenylphenol)	CAS-No. 90-43-7	5 - < 10%

15.2. International regulations

CANADA

2-methylpentane-2,4-diol (hexylene glycol) (107-41-5)

Listed on the Canadian DSL (Domestic Substances List)

Isopropanol (67-63-0)

Listed on the Canadian DSL (Domestic Substances List)

Citric acid (77-92-9)

Listed on the Canadian DSL (Domestic Substances List)

Biphenyl-2-ol (ortho-phenylphenol) (90-43-7)

Listed on the Canadian DSL (Domestic Substances List)

Clorofene (ortho-benzyl-para-chlorophenol) (120-32-1)

Listed on the Canadian DSL (Domestic Substances List)

2,2',2''-nitrilotriethanol (102-71-6)

Listed on the Canadian DSL (Domestic Substances List)

Benzenesulfonic acid, C10-16-alkyl derivs. (68584-22-5)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

2-methylpentane-2,4-diol (hexylene glycol) (107-41-5)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Isopropanol (67-63-0)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Citric acid (77-92-9)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Biphenyl-2-ol (ortho-phenylphenol) (90-43-7)
Listed on INSQ (Mexican National Inventory of Chemical Substances)

Clorofene (ortho-benzyl-para-chlorophenol) (120-32-1)
Listed on INSQ (Mexican National Inventory of Chemical Substances)

2,2',2''-nitrilotriethanol (102-71-6)
Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. State regulations

WARNING: This product can expose you to o-Phenylphenol, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Component	State or local regulations
2-methylpentane-2,4-diol (hexylene glycol)(107-41-5)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
Isopropanol(67-63-0)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
Biphenyl-2-ol (ortho-phenylphenol)(90-43-7)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
2,2',2"-nitrilotriethanol(102-71-6)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16 Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date : 4/16/2025

Issue date : 2/11/2005

Data sources : US OSHA HazCom (GHS) 25 May 2012.

Other information : This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law (FIFRA). These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals.

Full text of hazard classes and H-statements	
H225	Highly flammable liquid and vapor
H226	Flammable liquid and vapor
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H319	Causes serious eye irritation
H332	Harmful if inhaled

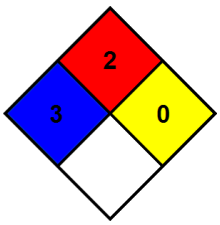
Full text of hazard classes and H-statements	
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H351	Suspected of causing cancer.
H361	Suspected of damaging fertility or the unborn child
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H401	Toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

Abbreviations and acronyms	
	ATE (Acute Toxicity Estimate)
	CAS (Chemical Abstracts Service) number
	DNEL (Derived No Effect Level)
	EC50 (Effective Concentration 50%)
	IARC (International Agency for Research on Cancer)
	IATA (International Air Transport Association)
	IMDG (International Maritime Dangerous Goods Code)
	IMO (International Maritime Organisation)
	LC50 (Lethal Concentration 50%)
	LD50 (Lethal Dose 50%)
	OECD (Organisation for Economic Co-operation and Development)
	PBT (Persistent, Bioaccumulative and Toxic)
	PNEC (Predicted No Effect Concentration)
	STEL (Short Term Exposure Limit)
	TSCA (Toxic Substances Control Act) (US)
	TWA (Time Weighted Average)
	UNxxxx (Number assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods)
	vPvB (very Persistent and very Bioaccumulative)

NFPA health hazard : 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

NFPA fire hazard : 2 - Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



Hazard Rating

Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

: * - Chronic (long-term) health effects may result from repeated overexposure

Flammability	:	2 Moderate Hazard - Materials which must be moderately heated or exposed to high ambient temperatures before ignition will occur. Includes liquids having a flash point at or above 100 F but below 200 F. (Classes II IIIA)
Physical	:	0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.
Personal protection	:	G - Safety glasses, Gloves, Vapor respirator

Indication of changes:		
Section	**Changed item**	**Comments**
1	Identification	**Modified**
2	Hazards identification	**Modified**
3	Composition/Information on ingredients	**Modified**
4	First aid measures	**Modified**
5	Fire fighting measures	**Modified**
6	Accidental release measures	**Modified**
7	Handling and storage	**Modified**
8	Exposure controls / Personal protection equipment	**Modified**
9	Physical and chemical properties	**Modified**
10	Stability and reactivity	**Modified**
11	Toxicological information	**Modified**
12.	Ecological information	**Modified**
13	Disposal considerations	**Modified**
14	Transport information	**Modified**
15	Regulatory information	**Modified**
16	Other information	**Modified**

Information contained in this publication or as otherwise supplied to Users is believed to be accurate and is given in good faith, but it is for the Users to satisfy themselves of the suitability of the product for their own particular purpose. Veltek Associates, Inc. gives no warranty as to the fitness of the product for any particular purpose and any implied warranty or condition (statutory or otherwise) is excluded except to the extent that exclusion is prevented by law. Veltek Associates, Inc. accepts no liability for loss or damage resulting from reliance on this information. Freedom under Patents, Copyright and Designs cannot be assumed.

This SDS has been translated into the official language of the country/region in which the product is to be placed on the market. Where no official translation exists, the regulatory text is reported in English, as it appears in the relevant regulatory text.