VELTEK ASSOCIATES, INC.

DECON-CYCLE® (0.8% Dilution after mixing). Also known as: DECON-CYCLE® II

Safety Data Sheet

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

Date of issue: 04/16/2018 Revision date: 10/08/2019 Supersedes: 04/17/2018 Version: 1.2

SECTION 1: Identification

1.1. Identification

Product form : Mixture

Product name : DECON-CYCLE® (0.8% Dilution after mixing). Also known as: DECON-CYCLE® II

Product code : SDS VEL-134

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Disinfectant

1.3. Supplier

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: (888)595-8070

1.4. Emergency telephone number

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

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Hazardous to the aquatic environment - Chronic Hazard Category 2 H411 Toxic to aquatic life with long lasting effects

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :

Hazard statements (GHS US) : H411 - Toxic to aquatic life with long lasting effects

Precautionary statements (GHS US) : P273 - Avoid release to the environment.
P391 - Collect spillage.
P501 - Dispose of contents/container to an authorized waste collection point

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

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	0.08 - 0.25	Skin Irrit. 2, H315 Eye Irrit. 2A, H319
Isopropanol	(CAS-No.) 67-63-0	0.06 - 0.11	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336
Biphenyl-2-ol (ortho-phenylphenol)	(CAS-No.) 90-43-7	0.04 - 0.08	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	0.04 - 0.08	Acute Tox. 4 (Inhalation), 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 (M = 100)
2,2',2''-nitrilotriethanol	(CAS-No.) 102-71-6	0.01 - 0.04	Not classified
Disodium oxybis[decylbenzenesulphonate]	(CAS-No.) 70146-13-3	0.01 - 0.04	Eye Dam. 1, H318

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

SECTION 4: First-aid measures

4.1. Description of 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. If symptoms develop, obtain medical attention.

First-aid measures after eye contact : Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. If symptoms develop, obtain 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. If symptoms develop, obtain medical attention.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects : Not expected to present a significant hazard under anticipated conditions of normal use.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Explosion hazard : On heating, there is a risk of bursting due to internal pressure build-up. Cool down the containers exposed to heat with a water spray.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. 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

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate area. Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection. Use chemically protective clothing.

Emergency procedures : Ventilate area. Avoid inhalation of vapors. Avoid contact with eyes, skin and clothing.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if large amounts of the product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

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

6.4. Reference to other sections

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 : Provide good ventilation in process area to prevent formation of vapor. Avoid inhalation of vapors. Avoid contact with skin, eyes and 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 contaminated clothing and wash before reuse. 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 any incompatibilities

Storage conditions : Store in original container. Keep container tightly closed. Store in a well-ventilated place. Keep cool.

Incompatible materials : Oxidizing agents. Reducing agents.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

2-methylpentane-2,4-diol (hexylene glycol) (107-41-5)		
ACGIH	Local name	Hexylene glycol
ACGIH	ACGIH TWA (ppm)	25 ppm
ACGIH	ACGIH STEL (mg/m³)	10 mg/m³
ACGIH	ACGIH STEL (ppm)	50 ppm
ACGIH	Remark (ACGIH)	Eye & URT irr
ACGIH	Regulatory reference	ACGIH 2019

Isopropanol (67-63-0)		
ACGIH	Local name	2-Propanol
ACGIH	ACGIH TWA (ppm)	200 ppm
ACGIH	ACGIH STEL (ppm)	400 ppm
ACGIH	Remark (ACGIH)	Eye & URT irr; CNS impair
ACGIH	Biological Exposure Indices (BEI)	40 mg/l Parameter: Acetone - Medium: urine - Sampling time: End of shift at end of workweek - Notations: B, Ns
ACGIH	Regulatory reference	ACGIH 2019
OSHA	OSHA PEL (TWA) (mg/m³)	980 mg/m³
OSHA	OSHA PEL (TWA) (ppm)	400 ppm
OSHA	Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

2,2',2''-nitrilotriethanol (102-71-6)		
ACGIH	Local name	Triethanolamine
ACGIH	ACGIH TWA (mg/m³)	5 mg/m³
ACGIH	Remark (ACGIH)	Eye & skin irr

2,2',2''-nitrilotriethanol (102-71-6)		
ACGIH	Regulatory reference	ACGIH 2019

8.2. Appropriate engineering controls

Appropriate engineering controls : Provide good ventilation in process area to prevent formation of vapor.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:

Wear chemically resistant protective gloves. 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:

Wear goggles or safety glasses with side shields if contact with the eyes is possible

Skin and body protection:

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

Respiratory protection:

Not required for normal conditions of use. In case of insufficient ventilation, wear suitable respiratory equipment.

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. Information on basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	Clear.
Color	:	Amber
Odor	:	Alcohol
Odor threshold	:	No data available
pH	:	2.2 - 3
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	≈ 100 °C
Flash point	:	No data available
Relative evaporation rate (butyl acetate=1)	:	No data available
Flammability (solid, gas)	:	Not applicable.
Vapor pressure	:	No data available
Relative vapor density at 20 °C	:	No data available
Relative density	:	≈ 1 (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
Viscosity, dynamic	:	No data available
Explosion limits	:	No data available

Explosive properties : Not explosive.

Oxidizing properties : Not oxidizing.

9.2. Other information

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

Extremely high or low temperatures. Direct sunlight.

10.5. Incompatible materials

Oxidizing agents. Reducing agents.

10.6. Hazardous decomposition products

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

2-methylpentane-2,4-diol (hexylene glycol) (107-41-5)	
LD50 oral, rat	> 2000 mg/kg
LD50 dermal, rabbit	> 2000 mg/kg
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

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

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)

2,2',2''-nitrilotriethanol (102-71-6)	
LD50 oral, rat	6400 mg/kg (OECD 401 method)
LD50 dermal, rat	> 2000 mg/kg (OECD 402 method)

Skin corrosion/irritation : Not classified
pH: 2.2 - 3

Serious eye damage/irritation : Not classified
pH: 2.2 - 3

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

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 : Not classified

STOT-single exposure : Not classified

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

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

STOT-repeated exposure : Not classified

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

Viscosity, kinematic : No data available

Symptoms/effects : Not expected to present a significant hazard under anticipated conditions of normal use.

SECTION 12: Ecological information

12.1. Toxicity

2-methylpentane-2,4-diol (hexylene glycol) (107-41-5)	
LC50 fish	10000 mg/l 96 Hours - Lepomis macrochirus
EC50 Daphnia	2700 - 3700 mg/l 48 Hours - Daphnia magna

Isopropanol (67-63-0)	
LC50 fish	9640 mg/l - 96 Hours (Pimephales promelas)
EC50 Daphnia	> 10000 mg/l - 48 Hours (Daphnia magna)
NOEC chronic algae	1800 mg/l - 7 days (Scenedesmus quadricauda)

Biphenyl-2-ol (ortho-phenylphenol) (90-43-7)	
LC50 fish	4.5 mg/l - 96 Hours (Danio rerio)
EC50 Daphnia	2.7 mg/l - 48 Hours (Dapnia magna, Mobility)
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)
NOEC chronic fish	< 0.0095 mg/l - 30 days (Danio rerio) (OECD 210 method)
NOEC chronic crustacea	0.0067 mg/l - 21 days (Daphia magna, reproduction)

2,2',2''-nitrilotriethanol (102-71-6)	
LC50 fish	11800 mg/l - 96 Hours (Pimephales promelas)(APHA)
EC50 Daphnia	609.88 mg/l - 96 Hours (Ceriodaphnia dubia)(ASTM E1192)
NOEC (acute)	16 mg/l 21 days - Daphnia magna

2,2',2''-nitrilotriethanol (102-71-6)	
NOEC chronic crustacea	16 mg/l - 21 days (Daphnia magna)

12.2. Persistence and degradability

Isopropanol (67-63-0)	
Persistence and degradability	Expected to be 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.

12.3. Bioaccumulative potential

DECON-CYCLE® (0.8% Dilution after mixing). Also known as: DECON-CYCLE® II	
Bioaccumulative potential	No information available.

Isopropanol (67-63-0)	
Bioconcentration factor (BCF REACH)	3
Log Pow	0.05

Biphenyl-2-ol (ortho-phenylphenol) (90-43-7)	
BCF fish 1	21.7 (Danio rerio)
Log Pow	3.18 (22.5 °C)(OECD 107 method)
Bioaccumulative potential	Not expected to bioaccumulate.

Clorofene (ortho-benzyl-para-chlorophenol) (120-32-1)	
Log Pow	4.276 (25 °C)
Bioaccumulative potential	Not expected to bioaccumulate.

12.4. Mobility in soil

DECON-CYCLE® (0.8% Dilution after mixing). Also known as: DECON-CYCLE® II	
Ecology - soil	Miscible with water.

Biphenyl-2-ol (ortho-phenylphenol) (90-43-7)	
Log Koc	2.4 - 2.6 (20 °C)

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of this material and its container at hazardous or special waste collection point.

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Additional information : Handle empty containers with care.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Dangerous for the environment : Yes

Marine pollutant : Yes

Other information : No supplementary information available.

Special transport precautions : DO NOT TRANSPORT - This dilution of product is an on-site dilution in water by the user according to product label directions. It is not supplied nor transported in commerce at this dilution. This dilution is classified as dangerous for transport. Details of this transport classification have not been provided, as the diluted form of this product shall not be transported. See SDS DCY-98-01 for hazards of undiluted product.

Transportation of Dangerous Goods

Not regulated

Transport by sea

Not applicable

Air transport

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

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	0.06 - 0.11%
Biphenyl-2-ol (ortho-phenylphenol)	CAS-No. 90-43-7	0.04 - 0.08%

2-methylpentane-2,4-diol (hexylene glycol) (107-41-5)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Isopropanol (67-63-0)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Biphenyl-2-ol (ortho-phenylphenol) (90-43-7)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Clorofene (ortho-benzyl-para-chlorophenol) (120-32-1)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

2,2',2''-nitrilotriethanol (102-71-6)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Disodium oxybis[decylbenzenesulphonate] (70146-13-3)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA
No additional information available

EU-Regulations
No additional information available

National regulations
No additional information available

15.3. US State regulations

WARNING: This product can expose you to Biphenyl-2-ol (ortho-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. - New Jersey - Right to Know Hazardous Substance List
Isopropanol(67-63-0)	U.S. - New Jersey - Right to Know Hazardous Substance List
Biphenyl-2-ol (ortho-phenylphenol)(90-43-7)	U.S. - New Jersey - Right to Know Hazardous Substance List
2,2',2''-nitrilotriethanol(102-71-6)	U.S. - New Jersey - Right to Know Hazardous Substance List

SECTION 16: Other information

Revision date : 10/08/2019

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 H-phrases:

H225	Highly flammable liquid and vapor
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
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
H410	Very toxic to aquatic life with long lasting effects
H411	Toxic to aquatic life with long lasting effects

Abbreviations and acronyms:

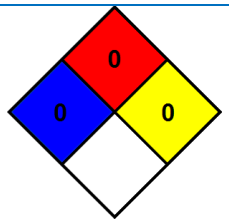
	ACGIH (American Conference of Government Industrial Hygienists)
	ATE (Acute Toxicity Estimate)
	CAS (Chemical Abstracts Service) number
	DNEL (Derived No Effect Level)
	EC50 (Effective Concentration 50%)
	IARC (International Agency for Research on Cancer)
	IATA (International Air Transport Association)
	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)
	OSHA (Occupational Safety and Health Administration) (US)
	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 : 0 - Materials that, under emergency conditions, would offer no hazard beyond that of ordinary combustible materials.

NFPA fire hazard : 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

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



Hazard Rating

Health : 0 Minimal Hazard - No significant risk to health

Flammability : 0 Minimal Hazard - Materials that will not burn

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 : B

B - Safety glasses, Gloves

Indication of changes:

Section	Changed item	Change	Comments
1	Identification	Modified	
3	Composition/Information on ingredients	Modified	
5	Fire fighting measures	Modified	
6	Accidental release measures	Modified	
7	Handling and storage	Modified	
8	Exposure controls / Personal protection equipment	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	

SDS US (GHS HazCom 2012)