HG scale away concentrate

Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)
Issue date: 10-31-2021 Revision date: 04-11-2024 Version: 2.1

SECTION 1 Identification

1.1. GHS Product identifier

Product form	: Mixture
Product name	: HG scale away concentrate
Type of product	: Detergent
Product code	: 100 ART
Product group	: Trade product

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Intended for general public

Recommended use	:	Cleaning agent
Restrictions on use	:	All other uses not recommended above

1.4. Supplier's details

Manufacturer
HG International B.V.
P.J. Oudweg 41
Almere, 1314 CJ
The Netherlands
T +31 (0)36 54 94 700
safety@hg.eu - www.hg.eu

Distributor
Toolway Industries Ltd.
1-280 Hunter's Valley Road
Woodbridge, On L4H 3V9
Canada

1.5. Emergency phone number

Country/Area	Organization/Company	Address	Emergency number	Comment
Canada	CANUTEC		1-888-CANUTEC (226-8832) (North American) 1-613-996-6666 (International use)	Toll Free (800) 255 3924 (24h)

SECTION 2 Hazard identification

2.1. Classification of the substance or mixture

Classification (GHS CA)

Acute toxicity (oral), Category 4	H302	Harmful if swallowed
Skin corrosion/irritation, Category 1B	H314	Causes severe skin burns and eye damage
Serious eye damage/eye irritation, Category 1	H318	Causes serious eye damage

Full text of H statements : see section 16

2.2. GHS label elements, including precautionary statements

GHS CA labeling

Hazard pictograms (GHS CA) :

Signal word (GHS CA) : Danger

Hazard statements (GHS CA) : H227 - Combustible liquid
H302 - Harmful if swallowed
H314 - Causes severe skin burns and eye damage

Precautionary statements (GHS CA) : P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P103 - Read carefully and follow all instructions.
P260 - Do not breathe vapors, mist, spray.
P264 - Wash hands, forearms and face thoroughly after handling.
P280 - Wear eye protection, protective gloves, protective clothing.
P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water .
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.
P370+P378 - In case of fire: Use extinguishing powder, carbon dioxide (CO2), foam, sand to extinguish.
P310 - Immediately call a POISON CENTER, a doctor.
P363 - Wash contaminated clothing before reuse.
P403 - Store in a well-ventilated place.
P405 - Store locked up.
P501 - Dispose of hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

2.3. Other hazards which do not result in classification

No additional information available

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Chemical name / Synonyms	Product identifier	%	Classification (GHS CA)
Phosphoric acid	phosphoric acid ... %, orthophosphoric acid ... %	CAS-No.: 7664-38-2	≥ 15 – < 25	Met. Corr. 1, H290 Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314
propan-2-ol, isopropyl alcohol, isopropanol	propan-2-ol; isopropyl alcohol; isopropanol alcohols	CAS-No.: 67-63-0	≥ 2 – < 5	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
Isotridecanol, ethoxylated	Fattyalcohol ethoxylates	CAS-No.: 69011-36-5	≥ 1 – < 2	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318
oxalic acid	oxalic acid	CAS-No.: 144-62-7	≥ 0.1 – < 2	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Eye Dam. 1, H318

SECTION 4 First-aid measures

4.1. Description of necessary first-aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact : After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water. Do not remove clothing if it sticks to the skin. Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Call a physician immediately.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.

First-aid measures after ingestion : Rinse mouth. Do not induce vomiting. Call a physician immediately.

First-aid measures general : If you feel unwell, seek medical advice (show the label where possible). Call a physician immediately.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation : Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.

Symptoms/effects after skin contact : Burns.

Symptoms/effects after eye contact : Serious damage to eyes.

Symptoms/effects after ingestion : Burns. Harmful if swallowed.

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 extinguishing media

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

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

5.2. Specific hazards arising from the chemical

Fire hazard : No fire hazard.

Explosion hazard : Intense heat may cause container to burst.

Reactivity in case of fire : Corrosive vapors.

Hazardous decomposition products in case of fire : Carbon monoxide. Carbon dioxide. Phosphorus oxides.

5.3. Special protective actions for fire-fighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection. Control run-off water by containing and keeping it out of sewers and watercourses.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

Precautionary measures fire : Runoff from fire control or dilution water may cause pollution.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material-damage.

Environmental precautions : Avoid release to the environment.

6.2. Methods and materials for containment and cleaning up

For containment	:	Stop leak if safe to do so. Do not touch or walk on the spilled product. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak, if possible without risk.
Methods for cleaning up	:	Take up liquid spill into absorbent material.
Other information	:	Dispose of materials or solid residues at an authorized site.

For further information refer to section 8: "Exposure controls/personal protection",For disposal of contaminated materials refer to section 13 : "Disposal considerations",For further information refer to section 13

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Ensure good ventilation of the work station. Avoid contact with skin and eyes. Do not breathe mist, vapors. Wear personal protective equipment.
Hygiene measures	:	Remove contaminated clothes. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.
Additional hazards when processed	:	Not expected to present a significant hazard under anticipated conditions of normal use.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	:	Keep in a cool, well-ventilated place away from heat.
Storage conditions	:	Store in dry, cool, well-ventilated area. Store locked up. Protect from freezing.
Incompatible materials	:	Keep away from (strong) bases.
Heat-ignition	:	Keep away from heat and direct sunlight. No flames. Eliminate all sources of ignition.
Storage temperature	:	> 0 – < 30 °C
Special rules on packaging	:	Keep only in original container. Opened containers must be carefully closed and kept upright to avoid leakage.
Packaging materials	:	Store always product in container of same material as original container.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

Phosphoric acid (7664-38-2)	
Canada (Alberta) - Occupational Exposure Limits	
Local name	Phosphoric acid
OEL TWA	1 mg/m³
OEL STEL	3 mg/m³
Notations and remarks	Occupational exposure limit is based on irritation effects and its adjustment to compensate for unusual work schedules is not required.
Regulatory reference	Alberta Regulation 191/2021
Canada (Quebec) - Occupational Exposure Limits	
Local name	Phosphoric acid
VECD (OEL STEV)	3 mg/m³
VEMP (OEL TWAEV)	1 mg/m³
Regulatory reference	S-2.1, r. 13 - Regulation respecting occupational health and safety

Phosphoric acid (7664-38-2)	
Canada (British Columbia) - Occupational Exposure Limits	
Local name	Phosphoric acid
OEL TWA	1 mg/m³
OEL STEL	3 mg/m³
Regulatory reference	OHS Guidelines Part 5: Chemical Agents and Biological Agents (WorkSafe BC)
Canada (Manitoba) - Occupational Exposure Limits	
Local name	Phosphoric acid
OEL TWA	1 mg/m³
OEL STEL	3 mg/m³
Notations and remarks	TLV® Basis: URT, eye, & skin irr
Regulatory reference	ACGIH 2024
Canada (New Brunswick) - Occupational Exposure Limits	
Local name	Phosphoric acid
OEL TWA	1 mg/m³
OEL STEL	3 mg/m³
Notations and remarks	URT, eye, & skin irr
Canada (Newfoundland and Labrador) - Occupational Exposure Limits	
Local name	Phosphoric acid
OEL TWA	1 mg/m³
OEL STEL	3 mg/m³
Notations and remarks	TLV® Basis: URT, eye, & skin irr
Regulatory reference	ACGIH 2024
Canada (Nova Scotia) - Occupational Exposure Limits	
Local name	Phosphoric acid
OEL TWA	1 mg/m³
OEL STEL	3 mg/m³
Notations and remarks	TLV® Basis: URT, eye, & skin irr
Regulatory reference	ACGIH 2024
Canada (Nunavut) - Occupational Exposure Limits	
Local name	Phosphoric acid
OEL TWA	1 mg/m³
OEL STEL	3 mg/m³
Regulatory reference	Occupational Health and Safety Regulations, Nu Reg 003-2016 (Amendment R-044-2021)
Canada (Northwest Territories) - Occupational Exposure Limits	
Local name	Phosphoric acid
OEL TWA	1 mg/m³
OEL STEL	3 mg/m³

Phosphoric acid (7664-38-2)	
Regulatory reference	Occupation Health and Safety Regulations R-039-2015 (R-090-2024)
Canada (Ontario) - Occupational Exposure Limits	
Local name	Phosphoric acid
OEL TWAEV	1 mg/m³
	3 mg/m³
Regulatory reference	Ontario Occuational Exposure Limits under Regulation 833
Canada (Prince Edward Island) - Occupational Exposure Limits	
Local name	Phosphoric acid
OEL TWA	1 mg/m³
OEL STEL	3 mg/m³
Notations and remarks	TLV® Basis: URT, eye, & skin irr
Regulatory reference	ACGIH 2024
Canada (Saskatchewan) - Occupational Exposure Limits	
Local name	Phosphoric acid
OEL TWA	1 mg/m³
OEL STEL	3 mg/m³
Regulatory reference	The Occupational Health and Safety Regulations, 2020. Chapter S-15.1 Reg 10

oxalic acid (144-62-7)	
Canada (Alberta) - Occupational Exposure Limits	
Local name	Oxalic acid
OEL TWA	1 mg/m³
OEL STEL	2 mg/m³
Notations and remarks	Occupational exposure limit is based on irritation effects and its adjustment to compensate for unusual work schedules is not required.
Regulatory reference	Alberta Regulation 191/2021
Canada (Quebec) - Occupational Exposure Limits	
Local name	Oxalic acid
VECD (OEL STEV)	2 mg/m³
VEMP (OEL TWAEV)	1 mg/m³
Regulatory reference	S-2.1, r. 13 - Regulation respecting occupational health and safety
Canada (British Columbia) - Occupational Exposure Limits	
Local name	Oxalic acid, anhydrous
OEL TWA	1 mg/m³
OEL STEL	2 mg/m³
Regulatory reference	OHS Guidelines Part 5: Chemical Agents and Biological Agents (WorkSafe BC)
Canada (Manitoba) - Occupational Exposure Limits	
Local name	Oxalic acid, anhydrous

oxalic acid (144-62-7)	
OEL TWA	1 mg/m³
OEL STEL	2 mg/m³
Notations and remarks	TLV® Basis: URT, eye, & skin irr
Regulatory reference	ACGIH 2024
Canada (New Brunswick) - Occupational Exposure Limits	
Local name	Oxalic acid
OEL TWA	1 mg/m³
OEL STEL	2 mg/m³
Notations and remarks	URT, eye, & skin irr
Canada (Newfoundland and Labrador) - Occupational Exposure Limits	
Local name	Oxalic acid, anhydrous
OEL TWA	1 mg/m³
OEL STEL	2 mg/m³
Notations and remarks	TLV® Basis: URT, eye, & skin irr
Regulatory reference	ACGIH 2024
Canada (Nova Scotia) - Occupational Exposure Limits	
Local name	Oxalic acid, anhydrous
OEL TWA	1 mg/m³
OEL STEL	2 mg/m³
Notations and remarks	TLV® Basis: URT, eye, & skin irr
Regulatory reference	ACGIH 2024
Canada (Nunavut) - Occupational Exposure Limits	
Local name	Oxalic acid
OEL TWA	1 mg/m³
OEL STEL	2 mg/m³
Regulatory reference	Occupational Health and Safety Regulations, Nu Reg 003-2016 (Amendment R-044-2021)
Canada (Northwest Territories) - Occupational Exposure Limits	
Local name	Oxalic acid
OEL TWA	1 mg/m³
OEL STEL	2 mg/m³
Regulatory reference	Occupation Health and Safety Regulations R-039-2015 (R-090-2024)
Canada (Ontario) - Occupational Exposure Limits	
Local name	Oxalic acid, anhydrous
OEL TWAEV	1 mg/m³
	2 mg/m³
Regulatory reference	Ontario Occuational Exposure Limits under Regulation 833

oxalic acid (144-62-7)	
Canada (Prince Edward Island) - Occupational Exposure Limits	
Local name	Oxalic acid, anhydrous
OEL TWA	1 mg/m³
OEL STEL	2 mg/m³
Notations and remarks	TLV® Basis: URT, eye, & skin irr
Regulatory reference	ACGIH 2024
Canada (Saskatchewan) - Occupational Exposure Limits	
Local name	Oxalic acid
OEL TWA	1 mg/m³
OEL STEL	2 mg/m³
Regulatory reference	The Occupational Health and Safety Regulations, 2020. Chapter S-15.1 Reg 10

propan-2-ol, isopropyl alcohol, isopropanol (67-63-0)	
Canada (Alberta) - Occupational Exposure Limits	
Local name	2-Propanol (Isopropyl alcohol, isopropanol)
OEL TWA	492 mg/m³
	200 ppm
OEL STEL	984 mg/m³
	400 ppm
Regulatory reference	Alberta Regulation 191/2021
Canada (Quebec) - Occupational Exposure Limits	
Local name	Isopropyl alcohol
VECD (OEL STEV)	400 ppm
VEMP (OEL TWAEV)	200 ppm
Regulatory reference	S-2.1, r. 13 - Regulation respecting occupational health and safety
Canada (British Columbia) - Occupational Exposure Limits	
Local name	Isopropanol (Isopropyl alcohol, 2-Propanol)
OEL TWA	200 ppm
OEL STEL	400 ppm
Regulatory reference	OHS Guidelines Part 5: Chemical Agents and Biological Agents (WorkSafe BC)
Canada (Manitoba) - Occupational Exposure Limits	
Local name	2-Propanol
OEL TWA	200 ppm
OEL STEL	400 ppm
Notations and remarks	TLV® Basis: Eye & URT irr; CNS impair. Notations: A4 (Not classifiable as a Human Carcinogen); BEI
Regulatory reference	ACGIH 2024

propan-2-ol, isopropyl alcohol, isopropanol (67-63-0)	
Canada (New Brunswick) - Occupational Exposure Limits	
Local name	2-Propanol
OEL TWA	200 ppm
OEL STEL	400 ppm
Notations and remarks	Eye & URT irr; CNS impair
Canada (Newfoundland and Labrador) - Occupational Exposure Limits	
Local name	2-Propanol
OEL TWA	200 ppm
OEL STEL	400 ppm
Notations and remarks	TLV® Basis: Eye & URT irr; CNS impair. Notations: A4 (Not classifiable as a Human Carcinogen); BEI
Regulatory reference	ACGIH 2024
Canada (Nova Scotia) - Occupational Exposure Limits	
Local name	2-Propanol
OEL TWA	200 ppm
OEL STEL	400 ppm
Notations and remarks	TLV® Basis: Eye & URT irr; CNS impair. Notations: A4 (Not classifiable as a Human Carcinogen); BEI
Regulatory reference	ACGIH 2024
Canada (Nunavut) - Occupational Exposure Limits	
Local name	Isopropyl alcohol
OEL TWA	200 ppm
OEL STEL	400 ppm
Regulatory reference	Occupational Health and Safety Regulations, Nu Reg 003-2016 (Amendment R-044-2021)
Canada (Northwest Territories) - Occupational Exposure Limits	
Local name	Isopropyl alcohol
OEL TWA	200 ppm
OEL STEL	400 ppm
Regulatory reference	Occupation Health and Safety Regulations R-039-2015 (R-090-2024)
Canada (Ontario) - Occupational Exposure Limits	
Local name	2-Propanol
OEL TWAEV	200 ppm
	400 ppm
Regulatory reference	Ontario Occuational Exposure Limits under Regulation 833
Canada (Prince Edward Island) - Occupational Exposure Limits	
Local name	2-Propanol
OEL TWA	200 ppm

propan-2-ol, isopropyl alcohol, isopropanol (67-63-0)	
OEL STEL	400 ppm
Notations and remarks	TLV® Basis: Eye & URT irr; CNS impair. Notations: A4 (Not classifiable as a Human Carcinogen); BEI
Regulatory reference	ACGIH 2024
Canada (Saskatchewan) - Occupational Exposure Limits	
Local name	Isopropyl alcohol
OEL TWA	200 ppm
OEL STEL	400 ppm
Regulatory reference	The Occupational Health and Safety Regulations, 2020. Chapter S-15.1 Reg 10

8.2. Appropriate engineering controls

Appropriate engineering controls : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment (PPE)

Personal protective equipment:
Safety glasses. Gloves. Protective clothing.

Hand protection:				
Protective gloves				
Type	**Material**	**Permeation**	**Thickness (mm)**	**Penetration**
Disposable gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	0.35	
Disposable gloves	butyl rubber	6 (> 480 minutes)	0.5	

Eye protection:		
Safety glasses		
Type	**Field of application**	**Characteristics**
Safety glasses with side shields	Normal use conditions	
Chemical goggles or face shield	Droplet	

Skin and body protection:
Long sleeved protective clothing. Chemical resistant safety shoes
Type
Chemical resistant safety shoes
Use chemically protective clothing

Respiratory protection:
No respiratory protection needed under normal use conditions

Personal protective equipment symbol(s):

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	:	No data available
Color	:	Colorless
Odor	:	Fresh
Odor threshold	:	No data available
pH	:	0.3
Relative evaporation rate (butyl acetate=1)	:	No data available
Relative evaporation rate (ether=1)	:	No data available
Melting point	:	Not applicable
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	> 100 °C
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	Non flammable.
Vapor pressure	:	No data available
Relative vapor density at 20°C	:	No data available
Relative density	:	1.14
Solubility	:	Soluble in water.
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Viscosity, kinematic	:	No data available
Explosion limits	:	No data available
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

Reactivity	:	The product is non-reactive under normal conditions of use, storage and transport.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No dangerous reactions known under normal conditions of use.
Conditions to avoid	:	Keep away from (strong) bases.
Incompatible materials	:	Attacks many metals releasing highly flammable gas (hydrogen) which generates fire or explosion hazards. Slightly reactive or incompatible with the following materials: Alkalines. Strong bases. Oxidizing materials.
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hardening time:	:	No additional information available

SECTION 11 Toxicological information

11.1. Likely routes of exposure

Acute toxicity (oral) : Harmful if swallowed.
Acute toxicity (dermal) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation) : Not classified (Based on available data, the classification criteria are not met)

HG scale away concentrate	
ATE CA (oral)	1314.692 mg/kg body weight

Phosphoric acid (7664-38-2)	
LD50 oral rat	1.25 g/kg
LD50 oral	301 mg/kg
LD50 dermal rabbit	2740 mg/kg Source: ECHA
ATE CA (oral)	301 mg/kg body weight
ATE CA (Dermal)	2740 mg/kg body weight

oxalic acid (144-62-7)	
LD50 oral rat	375 mg/kg
LD50 dermal rabbit	20000 mg/kg body weight Animal: rabbit
ATE CA (oral)	375 mg/kg body weight
ATE CA (Dermal)	1100 mg/kg body weight

Isotridecanol, ethoxylated (69011-36-5)	
LD50 oral	> 2000 mg/kg body weight
LD50 dermal rat	> 2000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LD50 dermal rabbit	≈ 5960 mg/kg body weight Animal: rabbit, Animal sex: male, Remarks on results: other:
ATE CA (oral)	500 mg/kg body weight

propan-2-ol, isopropyl alcohol, isopropanol (67-63-0)	
LD50 oral rat	5840 mg/kg Source: ECHA
LD50 oral	4396 mg/kg body weight
LD50 dermal rabbit	12800 mg/kg Source: ECHA
LC50 Inhalation - Rat (Dust/Mist)	46600 mg/l
ATE CA (oral)	4396 mg/kg body weight
ATE CA (Dermal)	12800 mg/kg body weight
ATE CA (dust,mist)	46600 mg/l/4h

Skin corrosion/irritation : Causes severe skin burns.
pH: 0.3
Serious eye damage/irritation : Causes serious eye damage.
pH: 0.3
Respiratory or skin sensitization : Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity : Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity : Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure : Not classified (Based on available data, the classification criteria are not met)

propan-2-ol, isopropyl alcohol, isopropanol (67-63-0)	
STOT-single exposure	May cause drowsiness or dizziness.

STOT-repeated exposure : Not classified (Based on available data, the classification criteria are not met)

Isotridecanol, ethoxylated (69011-36-5)	
NOAEL (oral,rat,90 days)	≥ 500 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)

Aspiration hazard : Not classified (Based on available data, the classification criteria are not met)

propan-2-ol, isopropyl alcohol, isopropanol (67-63-0)	
Viscosity, kinematic	2.658 mm²/s

Symptoms/effects after inhalation : Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.

Symptoms/effects after skin contact : Burns.

Symptoms/effects after eye contact : Serious damage to eyes.

Symptoms/effects after ingestion : Burns. Harmful if swallowed.

SECTION 12 Ecological information

12.1. Toxicity

Ecology - general : Before neutralisation, the product may represent a danger to aquatic organisms.

Hazardous to the aquatic environment, short–term (acute) : Not classified (Based on available data, the classification criteria are not met).

Hazardous to the aquatic environment, long–term (chronic) : Not classified (Based on available data, the classification criteria are not met).

Phosphoric acid (7664-38-2)	
LC50 - Fish [1]	75.1 mg/l Source: ECHA
EC50 - Crustacea [1]	> 100 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 100 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)

oxalic acid (144-62-7)	
LC50 - Fish [1]	160 mg/l
EC50 - Crustacea [1]	162.2 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	19.83 – 21.35 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

Isotridecanol, ethoxylated (69011-36-5)	
LC50 - Fish [1]	> 1 mg/l
EC50 - Crustacea [1]	1.5 mg/l Test organisms (species): Daphnia magna
EC50 - Other aquatic organisms [1]	> 1 mg/l waterflea
EC50 96h - Algae [1]	11.5 mg/l Source: EPISUITE v4.1

propan-2-ol, isopropyl alcohol, isopropanol (67-63-0)	
LC50 - Fish [1]	10000 mg/l Test organisms (species): Pimephales promelas

12.2. Persistence and degradability

HG scale away concentrate	
Persistence and degradability	The surfactant(s) contained in this preparation complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.

Phosphoric acid (7664-38-2)	
Persistence and degradability	Rapidly degradable

oxalic acid (144-62-7)	
Persistence and degradability	Rapidly degradable
Biochemical oxygen demand (BOD)	0.16 g O_2/g substance
Chemical oxygen demand (COD)	0.18 g O_2/g substance
Biodegradation	40 %

Isotridecanol, ethoxylated (69011-36-5)	
Persistence and degradability	Rapidly degradable

propan-2-ol, isopropyl alcohol, isopropanol (67-63-0)	
Persistence and degradability	Rapidly degradable

12.3. Bioaccumulative potential

Phosphoric acid (7664-38-2)	
Partition coefficient n-octanol/water (Log Pow)	-0.77

oxalic acid (144-62-7)	
Partition coefficient n-octanol/water (Log Pow)	-0.81

propan-2-ol, isopropyl alcohol, isopropanol (67-63-0)	
Partition coefficient n-octanol/water (Log Pow)	0.05

12.4. Mobility in soil

Isotridecanol, ethoxylated (69011-36-5)	
Mobility in soil	111.3 Source: EPISUITE v4.1

12.5. Other adverse effects

Ozone : Not classified (Based on available data, the classification criteria are not met)

Fluorinated greenhouse gases : No

SECTION 13 Disposal considerations

Regional waste regulation : Disposal must be done according to official regulations.

Waste treatment methods : Dispose of in accordance with relevant local regulations. Dispose of contents/container in accordance with licensed collector's sorting instructions.

Sewage disposal recommendations : Disposal must be done according to official regulations. Do not flush down sewers.

Product/Packaging disposal recommendations : Disposal must be done according to official regulations. Do not pierce or burn, even after use. Do not dispose of the packaging without first carrying out the necessary cleaning.

Additional information : Do not re-use empty containers.
Ecological waste information : Avoid release to the environment.

SECTION 14 Transport information

In accordance with TDG / DOT / IMDG / IATA

TDG	DOT	IMDG	IATA
14.1. UN Number			
Not regulated for transport			
14.2. UN Proper Shipping Name			
Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)			
Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group, if applicable			
Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards			
Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available			

14.6. Special precautions for user

TDG
Not regulated

DOT
Not regulated

IMDG
Not regulated

IATA
Not regulated

14.7. Transport in bulk according to Annex II of MARPOL 73/78[9] and the IBC Code[10]

Not applicable

SECTION 15 Regulatory information

Phosphoric acid (7664-38-2)

Listed on the Canadian DSL (Domestic Substances List)

oxalic acid (144-62-7)

Listed on the Canadian DSL (Domestic Substances List)

Isotridecanol, ethoxylated (69011-36-5)

Listed on the Canadian DSL (Domestic Substances List)

propan-2-ol, isopropyl alcohol, isopropanol (67-63-0)

Listed on the Canadian DSL (Domestic Substances List)

Phosphoric acid (7664-38-2)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active
Listed on INSQ (Mexican National Inventory of Chemical Substances)

oxalic acid (144-62-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active
Listed on INSQ (Mexican National Inventory of Chemical Substances)

Isotridecanol, ethoxylated (69011-36-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active

propan-2-ol, isopropyl alcohol, isopropanol (67-63-0)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active
Listed on INSQ (Mexican National Inventory of Chemical Substances)

SECTION 16 Other Information

Issue date : 10-31-2021
Revision date : 04-11-2024

Indication of changes

Section	Changed item	Comments
	Precautionary statements (GHS CA)	**Modified**
	Emergency Response Guide (ERG) Number	**Added**
	UN-No. (DOT)	**Added**
	UN-No. (TDG)	**Modified**
	DOT NA No	**Modified**
	DOT Vessel Stowage Other	**Modified**
	DOT Special Provisions (49 CFR 172.102)	**Modified**
	Proper Shipping Name (DOT)	**Modified**
	Proper Shipping Name (TDG)	**Modified**
	ATE CA (oral)	**Added**
	Hazard pictograms (GHS CA)	**Modified**
	Hazard statements (GHS CA)	**Modified**
	Revision date	**Added**
	Flammability	**Modified**
	IBC packing instructions (IMDG)	**Added**
	Segregation (IMDG)	**Added**

Indication of changes		
Section	**Changed item**	**Comments**
	Proper Shipping Name (IATA)	**Modified**
	Proper Shipping Name (IMDG)	**Modified**
1.2	Restrictions on use	**Added**
2.1	Classification (GHS CA)	**Modified**
3	Composition/Information on ingredients	**Modified**
4.1	First-aid measures after ingestion	**Modified**
4.1	First-aid measures after eye contact	**Modified**
4.1	First-aid measures after inhalation	**Modified**
4.1	First-aid measures general	**Modified**
4.1	First-aid measures after skin contact	**Modified**
4.2	Symptoms/effects after inhalation	**Added**
5.1	Suitable extinguishing media	**Modified**
5.2	Reactivity in case of fire	**Added**
5.2	Explosion hazard	**Added**
5.2	Hazardous decomposition products in case of fire	**Modified**
5.2	Fire hazard	**Modified**
5.3	Firefighting instructions	**Added**
5.3	Protection during firefighting	**Modified**
6	For containment	**Added**
6	Methods for cleaning up	**Modified**
6.1	General measures	**Added**
7.1	Precautions for safe handling	**Modified**
7.1	Additional hazards when processed	**Added**
7.1	Hygiene measures	**Modified**
7.2	Packaging materials	**Added**
7.2	Storage temperature	**Added**
7.2	Technical measures	**Added**
7.2	Storage conditions	**Modified**
7.2	Incompatible products	**Added**
7.2	Incompatible materials	**Added**
7.2	Storage area	**Added**
8.2	Eye protection	**Modified**
8.2	Appropriate engineering controls	**Modified**
8.2	Personal protective equipment	**Modified**
9.1	Melting point	**Modified**

Indication of changes		
Section	**Changed item**	**Comments**
9.1	Flash point	**Modified**
10	Conditions to avoid	**Modified**
10	Incompatible materials	**Modified**
13.1	Product/Packaging disposal recommendations	**Added**
13.1	Sewage disposal recommendations	**Added**
13.1	Additional information	**Added**
13.1	Regional waste regulation	**Added**
13.1	Waste treatment methods	**Modified**
14.1	UN-No. (IATA)	**Modified**
14.1	UN-No. (IMDG)	**Modified**
16	Training advice	**Added**
16	Other information	**Modified**

Training advice : Ensure personnel is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency.

Other information : Normal use of this product shall imply use in accordance with the instructions on the packaging. DISCLAIMER OF LIABILITY The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

Full text of hazard classes and H-statements:	
H225	Highly flammable liquid and vapor
H290	May be corrosive to metals
H302	Harmful if swallowed
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H319	Causes serious eye irritation
H336	May cause drowsiness or dizziness

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor

Abbreviations and acronyms:	
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organization for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disruptor

Safety Data Sheet (SDS), Canada

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.