SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form	:	Mixture
Product name	:	DEC-SPORE® 200 Plus
UFI	:	TVE3-G00R-6004-MMPW
Product code	:	SDS DS200-0397-01-01-EU

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Use of the substance/mixture	:	Concentrate Industrial use

1.2.2. Uses advised against

Restrictions on use	:	For professional use only

1.3. Details of the supplier of the safety data sheet

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

Veltek Associates Inc., Branch Office Europe
PO Box 1062, 8200 BB Lelystad, Netherlands
Customer service (USA): +800 00888700

Veltek Associates UK Limited
5 Aldermanbury Square, 13th Floor,
London, UK
Customer service (USA): +800 00888700

India distributor:
Tansha
A-17, Wadala Shriram, Industrial Estate
G. D. Ambekar Marg
Wadala, Mumbai- 400 031 India
Telephone: +91 22-43560400

1.4. Emergency telephone number

Emergency number	:	For Spill/Exposure Emergency Response Service in Europe in English (and 23 other European languages) (24 hours): +44 (0)1235 239 670 For Middle East/Africa (24 hours): +44 (0)1235 239 671 For Hindi (24 hours): 000 800 100 7479 For East/South East Asia: +65 3158 1074

Country/Area	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals-24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Org. Perox. F	H242
Acute Tox. 4 (Oral)	H302
Acute Tox. 3 (Inhalation)	H331
Skin Corr. 1A	H314
Eye Dam. 1	H318
STOT SE 3	H335
Aquatic Chronic 1	H410

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

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :

GHS02 GHS05 GHS06 GHS09

Signal word (CLP) : Danger

Contains : Hydrogen peroxide; Acetic acid; Peracetic acid

Hazard statements (CLP) : H242 - Heating may cause a fire.
H302 - Harmful if swallowed.
H314 - Causes severe skin burns and eye damage.
H331 - Toxic if inhaled.
H335 - May cause respiratory irritation.
H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements (CLP) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P234 - Keep only in original packaging.
P280 - Wear eye protection, face protection, protective clothing, protective gloves.
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a doctor.

2.3. Other hazards

Other hazards which do not result in classification : Oxidising. Reacts with chlorinated materials (e.g. bleach) generating toxic chlorine gas.

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

Component	
Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	Hydrogen peroxide (7722-84-1), Acetic acid (64-19-7), Peracetic acid (79-21-0)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	Hydrogen peroxide (7722-84-1), Acetic acid (64-19-7), Peracetic acid (79-21-0)

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

Component	
Substance(s) not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605	Hydrogen peroxide (7722-84-1), Acetic acid (64-19-7), Peracetic acid (79-21-0)

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Hydrogen peroxide	CAS-No.: 7722-84-1 EC No.: 231-765-0 EC index No.: 008-003-00-9 REACH-no: 01-2119485845-22	25.60 - 29.40	Ox. Liq. 1, H271 Acute Tox. 4 (Oral), H302 (ATE=693.7 mg/kg bodyweight) Acute Tox. 4 (Inhalation), H332 (ATE=11 mg/l/4h) Skin Corr. 1A, H314 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Chronic 3, H412
Acetic acid	CAS-No.: 64-19-7 EC No.: 200-580-7 EC index No.: 607-002-00-6 REACH-no: 01-2119475328-30	5 - 10	Flam. Liq. 3, H226 Skin Corr. 1A, H314 Eye Dam. 1, H318
Peracetic acid	CAS-No.: 79-21-0 EC No.: 201-186-8 EC index No.: 607-094-00-8	5.25 - 6.40	Flam. Liq. 3, H226 Org. Perox. D, H242 Acute Tox. 3 (Oral), H301 (ATE=50 mg/kg bodyweight) Acute Tox. 4 (Dermal), H312 (ATE=1100 mg/kg bodyweight) Acute Tox. 2 (Inhalation), H330 (ATE=0.05 mg/l/4h) Skin Corr. 1A, H314 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=10)

Specific concentration limits:		
Name	**Product identifier**	**Specific concentration limits (%)**
Hydrogen peroxide	CAS-No.: 7722-84-1 EC No.: 231-765-0 EC index No.: 008-003-00-9 REACH-no: 01-2119485845-22	(5 ≤ C < 8) Eye Irrit. 2, H319 (8 ≤ C < 50) Eye Dam. 1, H318 (35 ≤ C < 50) Skin Irrit. 2, H315 (35 ≤ C ≤ 100) STOT SE 3, H335 (50 ≤ C < 70) Skin Corr. 1B, H314 (50 ≤ C < 70) Ox. Liq. 2, H272 (70 ≤ C ≤ 100) Skin Corr. 1A, H314 (70 ≤ C ≤ 100) Ox. Liq. 1, H271
Acetic acid	CAS-No.: 64-19-7 EC No.: 200-580-7 EC index No.: 607-002-00-6 REACH-no: 01-2119475328-30	(10 ≤ C < 25) Eye Irrit. 2, H319 (10 ≤ C < 25) Skin Irrit. 2, H315 (25 ≤ C < 90) Skin Corr. 1B, H314 (90 ≤ C ≤ 100) Skin Corr. 1A, H314
Peracetic acid	CAS-No.: 79-21-0 EC No.: 201-186-8 EC index No.: 607-094-00-8	(1 ≤ C ≤ 100) STOT SE 3, H335

Full text of H- and EUH-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 comfortable for breathing. If breathing is difficult, trained personnel should give oxygen. If not breathing, give artificial respiration. Obtain immediate medical attention.

First-aid measures after skin contact : Take off immediately all contaminated clothing. Rinse skin with water/shower. Obtain immediate medical attention.

First-aid measures after eye contact : Rinse immediately with plenty of water (for at least 15 minutes). Ensure that folded skin of eyelids is thoroughly washed with water. Obtain immediate medical attention.

First-aid measures after ingestion : Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth. Obtain immediate medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation : Toxic if inhaled. May cause irritation to the respiratory tract.

Symptoms/effects after skin contact : Causes burns.

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

Symptoms/effects after ingestion : Severe irritation or burns to the mouth, throat, oesophagus, and stomach. Harmful if swallowed.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

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

Unsuitable extinguishing media : Do not use water jet.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Organic peroxides. Heating may cause a fire. Oxidising. May intensify fire.

Explosion hazard : On heating, there is a risk of bursting due to internal pressure build-up. Use water for cooling exposed containers.

Reactivity in case of fire : On combustion, forms: oxygen. Oxygen will accelerate burning of combustible materials.
Hazardous decomposition products in case of fire : Acetic acid. oxygen. Phosphorus oxides.

5.3. Advice for firefighters

Firefighting instructions : Keep upwind. On heating, there is a risk of bursting due to internal pressure build-up. Use water for cooling exposed containers. Exercise caution when fighting any chemical fire. Do not allow run-off from fire fighting to enter drains or water courses.
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 : Remove all sources of ignition. Ventilate area. Do not breathe vapours. Do not get in eyes, on skin, or on clothing. Evacuate unnecessary personnel. Ensure clean-up is conducted by trained personnel only. Refer to protective measures in sections 7 and 8.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection. Use chemically protective clothing.
Emergency procedures : Remove all sources of ignition. Ventilate area. Do not breathe vapours. Do not get in eyes, on skin, or on clothing.

6.2. Environmental precautions

Collect spillage. Avoid release to the environment. Do not allow to enter drains or water courses. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Stop leak, if possible without risk. Dam up the liquid spill. Do not allow to come in contact with incompatible materials.
Methods for cleaning up : Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Store away from other materials. Combustible materials exposed to this product should be rinsed immediately with large amounts of water to ensure that all product is removed. Residual product which is allowed to dry on organic materials such as rags, cloths, paper, fabrics, cotton, leather, wood, or other combustibles may spontaneously ignite and result in a fire.

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 : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep away from clothing and other combustible materials. Provide adequate ventilation, including appropriate local extraction, to ensure that occupational exposure limits are not exceeded. Do not get in eyes, on skin, or on clothing. Do not breathe vapours.
Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Comply with applicable regulations.

Storage conditions	:	Keep cool. Store at temperatures not exceeding 40 °C / 104 °F. Store in a well-ventilated place. Keep container closed when not in use. Keep only in original container. Protect from sunlight. Keep/Store away from clothing and other combustible materials. Risk of overpressure in insufficiently vented containers.
Incompatible materials	:	Combustible materials. Bases. Reducing agents. Metals. Metallic salts. Acetic anhydride. Chlorinated compounds.
Storage temperature	:	-30 – 40 °C

7.3. Specific end use(s)

Concentrate. Industrial use.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

Hydrogen peroxide (7722-84-1)	
Ireland - Occupational Exposure Limits	
Local name	Hydrogen peroxide
OEL (8 hours ref) (mg/m³)	1.5 mg/m³
OEL TWA	1 ppm
OEL (15 min ref) (mg/m3)	3 mg/m³
OEL STEL	2 ppm
Regulatory reference	Chemical Agents Code of Practice 2021
United Kingdom - Occupational Exposure Limits	
Local name	Hydrogen peroxide
WEL TWA (mg/m³)	1.4 mg/m³
WEL TWA (ppm)	1 ppm
WEL STEL (mg/m³)	2.8 mg/m³
WEL STEL (ppm)	2 ppm
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

Acetic acid (64-19-7)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Acetic acid
IOELV TWA (mg/m³)	25 mg/m³
IOELV TWA (ppm)	10 ppm
IOELV STEL (mg/m³)	50 mg/m³
IOELV STEL (ppm)	20 ppm
Regulatory reference	COMMISSION DIRECTIVE (EU) 2017/164
Ireland - Occupational Exposure Limits	
Local name	Acetic acid
OEL (8 hours ref) (mg/m³)	25 mg/m³
OEL TWA	10 ppm
OEL (15 min ref) (mg/m3)	50 mg/m³

Acetic acid (64-19-7)	
OEL STEL	20 ppm
Remark	IOELV (Indicative Occupational Exposure Limit Values)
Regulatory reference	Chemical Agents Code of Practice 2021
United Kingdom - Occupational Exposure Limits	
Local name	Acetic acid
WEL TWA (mg/m³)	25 mg/m³
WEL TWA (ppm)	10 ppm
WEL STEL (mg/m³)	50 mg/m³
WEL STEL (ppm)	20 ppm
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

Peracetic acid (79-21-0)	
Ireland - Occupational Exposure Limits	
Local name	Peracetic acid
OEL STEL	0.4 ppm IFV (Inhlable Fraction and Vapour)
Regulatory reference	Chemical Agents Code of Practice 2021

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:
Provide adequate ventilation, including appropriate local extraction, to ensure that occupational exposure limits are not exceeded. Emergency eye wash stations and safety showers should be available in the immediate vicinity of any potential exposure.

8.2.2. Personal protection equipment

Personal protective equipment:
Avoid all unnecessary exposure.

8.2.2.1. Eye and face protection

Eye protection:
Chemical goggles or safety glasses. Standard EN 166 - Personal eye-protection.

8.2.2.2. Skin protection

Skin and body protection:
Use chemically protective clothing. Impervious footwear must be worn

Hand protection:
Wear chemically resistant protective gloves. Standard EN 374 - Protective gloves against chemicals. The exact breakthrough time has to be found out by the manufacturer of the protective gloves and has to be observed. Gloves should be removed and replaced if there are any signs of degradation or breakthrough.

8.2.2.3. Respiratory protection

Respiratory protection:
Wear suitable respiratory equipment in case of insufficient ventilation. Wear a respirator conforming to EN149 with Type FFP1 filter or better

8.2.2.4. Thermal hazards

Thermal hazard protection:
Not required for normal conditions of use.

8.2.3. Environmental exposure controls

Environmental exposure controls:
Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Refer to section 6.

Other information:
Handle in accordance with good industrial hygiene and safety procedures. 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
Colour	:	Colourless.
Appearance	:	Clear.
Odour	:	Pungent.
Odour threshold	:	Not available
Melting point	:	Not available
Freezing point	:	Not available
Boiling point	:	100 °C
Flammability (solid, gas)	:	Not applicable
Explosive properties	:	Not explosive.
Oxidising properties	:	Oxidising.
Lower explosion limit	:	Not available
Upper explosion limit	:	Not available
Flash point	:	Not applicable, does not sustain combustion
Auto-ignition temperature	:	Not available
Decomposition temperature	:	75 °C (SADT)
pH	:	0.49 (100%)
Viscosity, kinematic	:	Not available
Solubility	:	Water: Miscible
Log Kow	:	Not available
Vapour pressure	:	Not available
Vapour pressure at 50°C	:	Not available
Density	:	Not available
Relative density	:	1.12 (Water = 1)
Relative vapour density at 20°C	:	Not available
Particle characteristics	:	Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Oxidising.

10.2. Chemical stability

Organic peroxides. Heating may cause a fire.

10.3. Possibility of hazardous reactions

Risk of explosion on reaction with acetic anhydride. Risk of self-accelerated thermal decomposition in contact with: Metals and metallic compounds. Bases. Reducing agents. Organic materials. Contamination may result in dangerous pressure increases - closed containers may rupture. Reacts with chlorinated materials (e.g. bleach) generating toxic chlorine gas.

10.4. Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep out of direct sunlight. Freezing.

10.5. Incompatible materials

Combustible materials. Bases. Reducing agents. Metals. Metallic salts. Chlorinated compounds. Acetic anhydride.

10.6. Hazardous decomposition products

Phosphorus oxides. Acetic acid. On combustion, forms: oxygen. May intensify fire. Reacts with chlorinated materials (e.g. bleach) generating toxic chlorine gas.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Harmful if swallowed.
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Toxic if inhaled.

DEC-SPORE® 200 Plus	
LC50 inhalation, rat (mg/l)	0.75 mg/l - 4 Hours (Dust/Mist)
ATE CLP (oral)	642.498 mg/kg bodyweight
ATE CLP (vapours)	0.75 mg/l/4h
ATE CLP (dust,mist)	0.75 mg/l/4h

Hydrogen peroxide (7722-84-1)	
LD50 oral, rat	693.7 mg/kg (female)(70% Aqueous solution), (OECD 401 method)
LD50 dermal, rabbit	> 2000 mg/kg bodyweight (35% Aqueous solution), (OECD 402 method)
LC50 inhalation, rat (mg/l)	> 170 mg/m³ - 4 Hours (50% aerosol), (OECD 403 method)

Acetic acid (64-19-7)	
LD50 oral, rat	3310 mg/kg bodyweight (Read-across: Sodium acetate)

Peracetic acid (79-21-0)	
LD50 oral, rat	50 – 500 mg/kg bodyweight (35% Aqueous solution)(EPA OPP 81-1)
LD50 dermal, rabbit	> 1147 mg/kg bodyweight (5% Aqueous solution)(EPA OPP 81-2)
LC50 inhalation, rat (mg/l)	204 mg/m³ air - 4 Hours (5% aerosol)(EPA OPP 81-3)

Skin corrosion/irritation : Causes severe skin burns.
pH: 0.49 (100%)
Serious eye damage/irritation : Causes serious eye damage.
pH: 0.49 (100%)
Respiratory or skin sensitisation : Not classified
Additional information : Based on available data, the classification criteria are not met
Germ cell mutagenicity : Not classified
Additional information : Based on available data, the classification criteria are not met
Carcinogenicity : Not classified
Additional information : Based on available data, the classification criteria are not met

Hydrogen peroxide (7722-84-1)	
IARC group	3 - Not classifiable

Reproductive toxicity : Not classified
Additional information : Based on available data, the classification criteria are not met
STOT-single exposure : May cause respiratory irritation.

Hydrogen peroxide (7722-84-1)	
STOT-single exposure	May cause respiratory irritation.

Peracetic acid (79-21-0)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : Not classified
Additional information : Based on available data, the classification criteria are not met
Aspiration hazard : Not classified
Additional information : Based on available data, the classification criteria are not met

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties : No additional information available

11.2.2. Other information

Potential adverse human health effects and symptoms : Causes severe skin burns and eye damage,Toxic if inhaled,Severe irritation or burns to the mouth, throat, oesophagus, and stomach,Harmful if swallowed,May cause respiratory irritation.

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short–term (acute) : Not classified
Hazardous to the aquatic environment, long–term (chronic) : Very toxic to aquatic life with long lasting effects.

Hydrogen peroxide (7722-84-1)	
LC50 fish	16.4 mg/l - 96 Hours (Pimephales promelas)
EC50 Daphnia	2.4 mg/l - 48 Hours (Daphnia pulex)
EC50 72h - Algae [1]	1.38 mg/l - 72 Hours (Skeletonema costatum, Growth rate)
NOEC chronic crustacea	0.63 mg/l - 21 days (Daphnia magna, reproduction)
NOEC chronic algae	0.63 mg/l - 72 Hours (Skeletonema costatum, Growth rate)

Acetic acid (64-19-7)	
LC50 fish	> 300.82 mg/l - 96 Hours (Oncorhynchus mykiss)(OECD 203 method)
EC50 Daphnia	> 300.82 mg/l - 48 Hours (Daphnia magna, Mobility)(OECD 202 method)
ErC50 algae	> 300.82 mg/l - 72 Hours (Skeletonema costatum, Mobility)
NOEC chronic algae	300.82 mg/l - 72 Hours (Skeletonema costatum, Mobility)

Peracetic acid (79-21-0)	
LC50 fish	0.53 mg/l - 96 Hours (Oncorhynchus mykiss)(5% Aqueous solution)(OECD 203 method)
LC50 fish 2	11 mg/l - 96 Hours (Pleuronectes platessa)(12% Aqueous solution)
EC50 Daphnia	0.73 mg/l - 48 Hours (Daphnia magna, Mobility)(OECD 202 method)

Peracetic acid (79-21-0)	
EC50 - Other aquatic organisms [1]	0.27 mg/l - 48 Hours (Mytilus edulis, Developmental toxicity)
ErC50 algae	0.16 mg/l - 72 Hours (Pseudokirchneriella subcapitata, Growth rate)
NOEC chronic fish	2.2 µg/L - 33 days (Danio rerio)(OECD 210 method)
NOEC chronic crustacea	0.012 mg/l - 21 days (Daphnia magna, immobilisation, reproduction)(OECD 211 method)
NOEC chronic algae	0.061 mg/l - 72 Hours (Pseudokirchneriella subcapitata, Growth rate)

12.2. Persistence and degradability

DEC-SPORE® 200 Plus	
Persistence and degradability	Not established.

Hydrogen peroxide (7722-84-1)	
Persistence and degradability	Readily biodegradable.
Biodegradation	> 99 % - 30 minutes (OECD 209 method)

Acetic acid (64-19-7)	
Persistence and degradability	Readily biodegradable.

Peracetic acid (79-21-0)	
Persistence and degradability	Readily biodegradable.
Biodegradation	98 % - 28 days (OECD 301E method)

12.3. Bioaccumulative potential

Hydrogen peroxide (7722-84-1)	
Log Pow	-1.57 (20 °C)(calculated value)
Bioaccumulative potential	Low bioaccumulation potential.

Acetic acid (64-19-7)	
BCF - Fish [1]	3.16 (QSAR)
Log Pow	-0.17 (25 °C)
Bioaccumulative potential	Not bioaccumulable.

Peracetic acid (79-21-0)	
Log Pow	-0.26 (25 °C, pH 7)(QSAR)
Bioaccumulative potential	Low bioaccumulation potential.

12.4. Mobility in soil

DEC-SPORE® 200 Plus	
Ecology - soil	Miscible with water.

Hydrogen peroxide (7722-84-1)	
Ecology - soil	Not expected to adsorb to soil.

Acetic acid (64-19-7)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0.062 (20 °C)

Peracetic acid (79-21-0)	
Ecology - soil	Highly mobile in soil.

12.5. Results of PBT and vPvB assessment

DEC-SPORE® 200 Plus
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

Component	
Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	Hydrogen peroxide (7722-84-1), Acetic acid (64-19-7), Peracetic acid (79-21-0)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	Hydrogen peroxide (7722-84-1), Acetic acid (64-19-7), Peracetic acid (79-21-0)

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

Additional information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

14.1. UN number or ID number

UN-No. (ADR) : UN 3109
UN-No. (IMDG) : UN 3109
UN-No. (IATA) : UN 3109
UN-No. (ADN) : UN 3109
UN-No. (RID) : UN 3109

14.2. UN proper shipping name

Proper Shipping Name : ORGANIC PEROXIDE TYPE F, LIQUID (Peroxyacetic acid, type F, stabilized)
Proper Shipping Name (IMDG) : ORGANIC PEROXIDE TYPE F, LIQUID (Peroxyacetic acid, type F, stabilized)
Proper Shipping Name (IATA) : Organic peroxide type F, liquid (Peroxyacetic acid, type F, stabilized)
Proper Shipping Name (ADN) : ORGANIC PEROXIDE TYPE F, LIQUID (Peroxyacetic acid, type F, stabilized)
Proper Shipping Name (RID) : ORGANIC PEROXIDE TYPE F, LIQUID (Peroxyacetic acid, type F, stabilized)
Transport document description (ADR) : UN 3109 ORGANIC PEROXIDE TYPE F, LIQUID (Peroxyacetic acid, type F, stabilized), 5.2, (D)
Transport document description (IMDG) : UN 3109 ORGANIC PEROXIDE TYPE F, LIQUID (Peroxyacetic acid, type F, stabilized), 5.2 (8), MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS
Transport document description (IATA) : UN 3109 Organic peroxide type F, liquid (Peroxyacetic acid, type F, stabilized), 5.2 (8), ENVIRONMENTALLY HAZARDOUS
Transport document description (ADN) : UN 3109 ORGANIC PEROXIDE TYPE F, LIQUID (Peroxyacetic acid, type F, stabilized), 5.2 (8), ENVIRONMENTALLY HAZARDOUS
Transport document description (RID) : UN 3109 ORGANIC PEROXIDE TYPE F, LIQUID (Peroxyacetic acid, type F, stabilized), 5.2 (8), ENVIRONMENTALLY HAZARDOUS

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 5.2 (8)

Hazard labels : 5.2, 8

:

IMDG

Transport hazard class(es) (IMDG) : 5.2 (8)

Danger labels (IMDG) : 5.2, 8

:

IATA

Transport hazard class(es) (IATA) : 5.2 (8)

Danger labels (IATA) : 5.2, 8

:

ADN

Transport hazard class(es) (ADN) : 5.2 (8)

Danger labels (ADN) : 5.2, 8

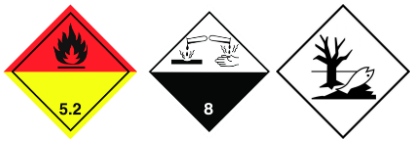
:

RID

Transport hazard class(es) (RID) : 5.2 (8)

Danger labels (RID) : 5.2, 8

:



14.4. Packing group

Packing group : Not applicable

Packing group (IMDG) : Not applicable

Packing group (IATA) : Not applicable

Packing group (ADN) : Not applicable

Packing group (RID) : Not applicable

14.5. Environmental hazards

Dangerous for the environment : Yes

Marine pollutant : Yes

Other information : No supplementary information available

14.6. Special precautions for user

Overland transport

Tunnel restriction code (ADR) : D

Transport by sea
No data available

Air transport
Transport regulations (IATA) : Air regulations permit shipment of peracetic acid in non-vented containers for Air Cargo Only aircraft, as well as for Passenger and Cargo aircraft. HOWEVER, all peracetic acid containers are vented and therefore, air shipments of peracetic acid are not permitted. IATA air regulations state that venting of packages containing oxidising substances is not permitted for air transport.

Inland waterway transport
No data available

Rail transport
No data available

14.7. Maritime transport in bulk according to IMO instruments
Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)

Reference code	Applicable on	Entry title or description
3.	Hydrogen peroxide ; Acetic acid ; Peracetic acid	Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008
3(a)	DEC-SPORE® 200 Plus ; Hydrogen peroxide ; Acetic acid ; Peracetic acid	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F
3(b)	DEC-SPORE® 200 Plus ; Hydrogen peroxide ; Acetic acid ; Peracetic acid	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10
3(c)	DEC-SPORE® 200 Plus ; Hydrogen peroxide ; Peracetic acid	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1
40.	Acetic acid ; Peracetic acid	Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not.

REACH Annex XIV (Authorisation List)
Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)
Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)
Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Dual-Use Regulation (428/2009)

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

Seveso Directive (Disaster Risk Reduction)

Seveso Additional information : Directive 2012/18/EU (SEVESO III) Seveso III Part I (Categories of dangerous substances)
E1:Hazardous to the Aquatic Environment in Category Acute 1 or Chronic 1,
H2:ACUTE TOXIC
— Category 2, all exposure routes
— Category 3, inhalation exposure route,
P6b:SELF-REACTIVE SUBSTANCES AND MIXTURES and ORGANIC PEROXIDES
Self-reactive substances and mixtures, Type C, D, E or F or organic peroxides, Type C, D, E, or F

Explosives Precursors Regulation (2019/1148)

Contains substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)
ANNEX I RESTRICTED EXPLOSIVES PRECURSORS
List of substances which are not to be made available to, or introduced, possessed or used by, members of the general public, whether on their own or in mixtures or substances that include those substances, unless the concentration is equal to or lower than the limit values set out in column 2, and for which suspicious transactions and significant disappearances and thefts are to be reported within 24 hours.

Name	CAS-No.	Limit value	Upper limit value for licensing under Article 5(3)	Combined Nomenclature (CN) code for a separate chemically defined compound meeting the requirements of Note 1 to Chapter 28 or 29 of the CN, respectively	Combined Nomenclature code for mixture without constituents which would determine classification under another CN code
Hydrogen peroxide	7722-84-1	12 % w/w	35% w/w	2847 00 00	ex 3824 99 96

Acquisition, introduction, possession or use of this product by the general public is restricted by Regulation (EU) 2019/1148. All suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point. Please see https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/crisis-and-terrorism/explosives/explosives-precursors/docs/list_of_competent_authorities_and_national_contact_points_en.pdf.

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

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

Abbreviations and acronyms:	
	ADR (Accord relatif au transport international des marchandises dangereuses par route)
	ATE (Acute Toxicity Estimate)
	CAS (Chemical Abstracts Service) number
	CLP (Classification, Labeling and Packaging)
	DNEL (Derived No Effect Level)
	EC (European Community)
	EC50 (Effective Concentration 50%)
	EN (European Norm)
	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%)
	MAC (Maximal Allowed Concentration)
	OECD (Organisation for Economic Co-operation and Development)
	PBT (Persistent, Bioaccumulative and Toxic)
	PNEC (Predicted No Effect Concentration)
	REACH (Registration, Evaluation and Authorisation of CHemicals)
	SADT (Self-Accelerating Decomposition Temperature)
	STEL (Short Term Exposure Limit)

Abbreviations and acronyms:	
	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)

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006. ECHA (European Chemicals Agency), http://echa.europa.eu/.

Other information : Classification procedure according to Regulation (EC) No. 1272/2008 [CLP]: Health hazards: On basis of test data & Calculation method. Physical hazards: On basis of test data. Environmental hazards: Calculation method. Marine Pollutants packaged in single or combination packagings containing a net quantity per single or inner packaging of 5 lt or less for liquids or having a net mass per single or inner packaging of 5 kg or less for solids are not subject to any other provisions of this Code relevant to marine pollutants provided the packagings meet the general requirements of 4.1.1.1, 4.1.1.2, and 4.1.1.4 to 4.1.1.8. In the case of marine pollutants also meeting the criteria of inclusion in another hazards class all provisions of the Code relevant to any additional hazards continue to apply.

Full text of H- and EUH-statements:	
Acute Tox. 2 (Inhalation)	Acute toxicity (inhal.), Category 2
Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Aquatic Chronic 3	Hazardous to the aquatic environment – Chronic Hazard, Category 3
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
H226	Flammable liquid and vapour.
H242	Heating may cause a fire.
H271	May cause fire or explosion; strong oxidiser.
H272	May intensify fire; oxidiser.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.

Full text of H- and EUH-statements:	
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
Org. Perox. D	Organic Peroxides, Type D
Org. Perox. F	Organic Peroxides, Type F
Ox. Liq. 1	Oxidising Liquids, Category 1
Ox. Liq. 2	Oxidising Liquids, Category 2
Skin Corr. 1A	Skin corrosion/irritation, Category 1, Sub-Category 1A
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation

Safety Data Sheet (SDS), EU

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.