



Divosan Mezzo VT7

Revision: 2023-01-03

Version: 08.2

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

1.1 Product identifier

Trade name: Divosan Mezzo VT7

UFI: JTM4-J0PY-M00U-P6HU

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

Product use:	Cleaning in place chemical. Surface disinfectant. for general surface disinfection For industrial use only..
Uses advised against:	Uses other than those identified are not recommended.

SWED - Sector-specific worker exposure description :

AISE_SWED_PW_8a_1
AISE_SWED_IS_1_1
AISE_SWED_IS_8b_1
AISE_SWED_IS_4_1
AISE_SWED_IS_13_3

1.3 Details of the supplier of the safety data sheet

Diversey Europe Operations BV, Maarssenbroeksedijk 2, 3542DN Utrecht, The Netherlands

Contact details

Tandur Hf.
Hesthálslí 12, 110 Reykjavík
Tel. 5101200, Email: tandur@tandur.is

1.4 Emergency telephone number

Seek medical advice (show the label or safety data sheet where possible).
Poison Center: (+354) 543-2222
Emergency services: 112.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Ox. Liq. 2 (H272)
Skin Corr. 1A (H314)
EUH071
Acute Tox. 4 (H302)
Acute Tox. 4 (H312)
STOT SE 3 (H335)
Eye Dam. 1 (H318)
Aquatic Chronic 1 (H410)
Met. Corr. 1 (H290)

2.2 Label elements



Signal word: Danger.

Contains hydrogen peroxide (Hydrogen Peroxide), nitric acid (Nitric Acid), acetic acid (Acetic Acid), peracetic acid (Peracetic Acid)

Hazard statements:

H272 - May intensify fire; oxidiser.

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H302 - Harmful if swallowed.
 H314 - Causes severe skin burns and eye damage.
 EUH071 - Corrosive to the respiratory tract.
 H410 - Very toxic to aquatic life with long lasting effects.
 H290 - May be corrosive to metals.
 H312 - Harmful in contact with skin.

Precautionary statements:

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P221 - Take any precaution to avoid mixing with combustibles.
 P260 - Do not breathe vapours.
 P280 - Wear protective gloves, protective clothing and eye or face protection.
 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 POISON CENTRE, doctor or physician.

2.3 Other hazards

Regulation (EU) 2019/1148 - restricted explosives precursor.

SECTION 3: Composition/information on ingredients**3.2 Mixtures**

Ingredient(s)	EC number	CAS number	REACH number	Classification	Notes	Weight percent
hydrogen peroxide	231-765-0	7722-84-1	[6]	Ox. Liq. 1 (H271) Skin Corr. 1A (H314) Acute Tox. 4 (H302) Acute Tox. 4 (H332) STOT SE 3 (H335) Aquatic Chronic 3 (H412)		10-20
nitric acid	231-714-2	7697-37-2	01-2119487297-23	Ox. Liq. 3 (H272) Acute Tox. 3 (H331) Skin Corr. 1A (H314) Met. Corr. 1 (H290)		3-10
acetic acid	200-580-7	64-19-7	01-2119475328-30	Flam. Liq. 3 (H226) Skin Corr. 1A (H314)		3-10
peracetic acid	201-186-8	79-21-0	[6]	Org. Perox. D (H242) Flam. Liq. 3 (H226) Skin Corr. 1A (H314) Acute Tox. 4 (H302) Acute Tox. 4 (H332) STOT SE 3 (H335) Aquatic Acute 1 (H400) Aquatic Chronic 1 M=10 (H410)		1-3

Specific concentration limits

hydrogen peroxide:

- Eye Dam. 1 (H318) >= 8% > Eye Irrit. 2 (H319) >= 5%
- Skin Corr. 1A (H314) >= 70% > Skin Corr. 1A (H314) >= 60% > Skin Corr. 1B (H314) >= 50% > Skin Irrit. 2 (H315) >= 35%
- STOT SE 3 (H335) >= 35%

nitric acid:

- Skin Corr. 1A (H314) >= 70% > Skin Corr. 1A (H314) >= 20% > Skin Corr. 1B (H314) >= 5% > Skin Irrit. 2 (H315) >= 1%

acetic acid:

- Eye Dam. 1 (H318) >= 25% > Eye Irrit. 2 (H319) >= 10%
- Skin Corr. 1A (H314) >= 90% > Skin Corr. 1B (H314) >= 25% > Skin Irrit. 2 (H315) >= 10%

peracetic acid:

- STOT SE 3 (H335) >= 1%

Workplace exposure limit(s), if available, are listed in subsection 8.1.

ATE, if available, are listed in section 11.

[6] Exempted: biocidal active. See Article 15(2) of Regulation (EC) No 1907/2006.

For the full text of the H and EUH phrases mentioned in this Section, see Section 16..

SECTION 4: First aid measures**4.1 Description of first aid measures****General Information:**

Symptoms of intoxication may even occur after several hours. It is recommended to continue medical observation for at least 48 hours after the incident. If unconscious place in recovery position and seek medical advice. Provide fresh air. If breathing is irregular or stopped, administer artificial respiration. No mouth-to-mouth or mouth-to-nose resuscitation. Use Ambu bag or ventilator.

Inhalation:

Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTRE, doctor or physician.

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Skin contact:	Wash skin with plenty of lukewarm, gently flowing water for at least 30 minutes. Take off immediately all contaminated clothing and wash it before reuse. Immediately call a POISON CENTRE, doctor or physician.
Eye contact:	Hold eyelids apart and flush eyes with plenty of lukewarm water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE, doctor or physician.
Ingestion:	Rinse mouth. Immediately drink 1 glass of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Keep at rest. Immediately call a POISON CENTRE, doctor or physician.
Self-protection of first aider:	Consider personal protective equipment as indicated in subsection 8.2.

4.2 Most important symptoms and effects, both acute and delayed**Inhalation:** Corrosive to the respiratory tract.**Skin contact:** Causes severe burns.**Eye contact:** Causes severe or permanent damage.**Ingestion:** Ingestion will lead to a strong caustic effect on mouth and throat and to the danger of perforation of oesophagus and stomach.**4.3 Indication of any immediate medical attention and special treatment needed**

No information available on clinical testing and medical monitoring. Specific toxicological information on substances, if available, can be found in section 11.

SECTION 5: Firefighting measures**5.1 Extinguishing media**

Carbon dioxide. Dry powder. Water spray jet. Fight larger fires with water spray jet or alcohol-resistant foam.

5.2 Special hazards arising from the substance or mixture

No special hazards known.

5.3 Advice for firefighters

As in any fire, wear self contained breathing apparatus and suitable protective clothing including gloves and eye/face protection.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation. Do not breathe dust or vapour. Wear suitable protective clothing. Wear eye/face protection. Wear suitable gloves.

6.2 Environmental precautions

Dilute with plenty of water. Do not allow to enter drainage system, surface or ground water. Do not allow to enter the ground/soil. Inform responsible authorities in case undiluted product reaches drainage system, surface or ground water or the ground/soil.

6.3 Methods and material for containment and cleaning up

Ensure adequate ventilation. Dyke to collect large liquid spills. Absorb onto dry sand or similar inert material. Do not use fabric, sawdust, paper or other inflammable materials (danger of spontaneous combustion). Do not place spilled materials back into the original container. Collect in closed and suitable containers for disposal.

6.4 Reference to other sections

For personal protective equipment see subsection 8.2. For disposal considerations see section 13.

SECTION 7: Handling and storage**7.1 Precautions for safe handling****Measures to prevent fire and explosions:**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use non-sparking tools.

Measures required to protect the environment:

For environmental exposure controls see subsection 8.2.

Advices on general occupational hygiene:

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not mix with other products unless advised by Diversey. Wash face, hands and any exposed skin thoroughly after handling. Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. Avoid contact with skin and eyes. Do not breathe vapours. Do not eat, drink or smoke when using this product. Use only with adequate ventilation. See chapter 8.2, Exposure controls / Personal protection.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local and national regulations. Store in a closed container. Keep only in original packaging. Keep from freezing. Keep cool. Keep away from heat and direct sunlight. Keep at temperature not exceeding 35 °C. For conditions to avoid see subsection 10.4. For incompatible materials see subsection 10.5.

Seveso - Lower Tier requirements (tonnes): 50

Seveso - Upper Tier requirements (tonnes): 200

7.3 Specific end use(s)

No specific advice for end use available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Workplace exposure limits

Air limit values, if available:

Ingredient(s)	Long term value(s)	Short term value(s)
hydrogen peroxide	1 ppm 1.4 mg/m ³	
nitric acid		1 ppm 2.6 mg/m ³
acetic acid	10 ppm 25 mg/m ³	20 ppm 50 mg/m ³

Biological limit values, if available:

Recommended monitoring procedures, if available:

Additional exposure limits under the conditions of use, if available:

DNEL/DMEL and PNEC values

Human exposure

DNEL/DMEL oral exposure - Consumer (mg/kg bw)

Ingredient(s)	Short term - Local effects	Short term - Systemic effects	Long term - Local effects	Long term - Systemic effects
hydrogen peroxide	-	-	-	-
nitric acid	-	-	-	-
acetic acid	-	-	-	-
peracetic acid	-	1.25	-	1.25

DNEL/DMEL dermal exposure - Worker

Ingredient(s)	Short term - Local effects	Short term - Systemic effects (mg/kg bw)	Long term - Local effects	Long term - Systemic effects (mg/kg bw)
hydrogen peroxide	-	-	-	-
nitric acid	-	-	-	-
acetic acid	-	-	-	-
peracetic acid	0.12 %	-	-	-

DNEL/DMEL dermal exposure - Consumer

Ingredient(s)	Short term - Local effects	Short term - Systemic effects (mg/kg bw)	Long term - Local effects	Long term - Systemic effects (mg/kg bw)
hydrogen peroxide	-	-	-	-
nitric acid	-	-	-	-
acetic acid	-	-	-	-
peracetic acid	0.12 %	-	-	-

DNEL/DMEL inhalatory exposure - Worker (mg/m³)

Ingredient(s)	Short term - Local effects	Short term - Systemic effects	Long term - Local effects	Long term - Systemic effects
hydrogen peroxide	3	-	1.4	-
nitric acid	-	-	2.6	-
acetic acid	25	-	25	-
peracetic acid	0.6	0.6	0.6	0.6

DNEL/DMEL inhalatory exposure - Consumer (mg/m³)

Ingredient(s)	Short term - Local effects	Short term - Systemic effects	Long term - Local effects	Long term - Systemic effects
hydrogen peroxide	1.93	-	0.21	-
nitric acid	-	-	1.3	-
acetic acid	25	-	25	-
peracetic acid	0.3	0.6	0.6	0.6

Environmental exposure

Environmental exposure - PNEC

Ingredient(s)	Surface water, fresh	Surface water, marine	Intermittent (mg/l)	Sewage treatment
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	(mg/l)	(mg/l)		plant (mg/l)
hydrogen peroxide	0.0126	0.0126	0.0138	4.66
nitric acid	-	-	-	-
acetic acid	3.058	0.3058	30.58	85
peracetic acid	0.000224	0.0000049	0.0016	0.051

Environmental exposure - PNEC, continued

Ingredient(s)	Sediment, freshwater (mg/kg)	Sediment, marine (mg/kg)	Soil (mg/kg)	Air (mg/m ³)
hydrogen peroxide	0.047	0.047	0.0023	-
nitric acid	-	-	-	-
acetic acid	11.36	1.136	0.47	-
peracetic acid	0.00018	0.000015	0.320	-

8.2 Exposure controls

The following information applies for the uses indicated in subsection 1.2 of the Safety Data Sheet.
If available, please refer to the product information sheet for application and handling instructions.
Normal use conditions are assumed for this section.

Recommended safety measures for handling the undiluted product:

Appropriate engineering controls: If the product is diluted by using specific dosing systems with no risk of splashes or direct skin contact, the personal protection equipment as described in this section is not required.
Appropriate organisational controls: No special requirements under normal use conditions.

REACH use scenarios considered for the undiluted product:

	SWED - Sector-specific worker exposure description	LCS	PROC	Duration (min)	ERC
Automatic application in a dedicated closed system	AISE_SWED_IS_1_1	IS	PROC 1	480	ERC4
Automatic transfer and dilution	AISE_SWED_IS_8b_1	IS	PROC 8b	60	ERC4
Manual transfer and dilution	AISE_SWED_PW_8a_1	PW	PROC 8a	60	ERC8a

Personal protective equipment

Eye / face protection:

Safety glasses or goggles (EN 166). The use of a full-face shield or other full-face protection is strongly recommended when handling open containers or if splashes may occur.

Hand protection:

Chemical-resistant protective gloves (EN 374). Verify instructions regarding permeability and breakthrough time, as provided by the gloves supplier. Consider specific local use conditions, such as risk of splashes, cuts, contact time and temperature.
Suggested gloves for prolonged contact: Material: butyl rubber Penetration time: ≥ 480 min Material thickness: ≥ 0.7 mm
Suggested gloves for protection against splashes: Material: nitrile rubber Penetration time: ≥ 30 min Material thickness: ≥ 0.4 mm
In consultation with the supplier of protective gloves a different type providing similar protection may be chosen.

Body protection:

No special requirements under normal use conditions. Wear chemical-resistant clothing and boots in case direct dermal exposure and/or splashes may occur (EN 14605).

Respiratory protection:

Respiratory protection is not normally required. However, inhalation of vapour, spray, gas or aerosols should be avoided.

Environmental exposure controls:

Should not reach sewage water or drainage ditch undiluted or unneutralised.

Recommended safety measures for handling the diluted product:

Recommended maximum concentration (% w/w): 8

Appropriate engineering controls: No special requirements under normal use conditions.
Appropriate organisational controls: No special requirements under normal use conditions.

REACH use scenarios considered for the diluted product:

	SWED	LCS	PROC	Duration (min)	ERC
Manual application by dipping, soaking, pouring	AISE_SWED_IS_13_3	IS	PROC 13	240	ERC4
Automatic application in a dedicated system	AISE_SWED_IS_4_1	IS	PROC 4	480	ERC8a

Personal protective equipment

Eye / face protection:

No special requirements under normal use conditions.

Hand protection:

No special requirements under normal use conditions.

Body protection:

No special requirements under normal use conditions.

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Respiratory protection: No special requirements under normal use conditions.

Environmental exposure controls: Should not reach sewage water or drainage ditch undiluted.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Information in this section refers to the product, unless it is specifically stated that substance data is listed

Physical state: Liquid

Colour: Clear , Colourless

Odour: Product specific

Odour threshold: Not applicable

Melting point/freezing point (°C): Not determined

Initial boiling point and boiling range (°C): Not determined

Method / remark

Not relevant to classification of this product

See substance data

Substance data, boiling point

Ingredient(s)	Value (°C)	Method	Atmospheric pressure (hPa)
hydrogen peroxide	150.2	Method not given	
nitric acid	116	Method not given	
acetic acid	103	Method not given	
peracetic acid	No data available		

Method / remark

Flammability (solid, gas): Not applicable to liquids

Flammability (liquid): Not flammable.

Flash point (°C): > 100 °C

Sustained combustion: The product does not sustain combustion
(UN Manual of Tests and Criteria, section 32, L.2)

closed cup

Weight of evidence

Lower and upper explosion limit/flammability limit (%): Not determined

See substance data

Substance data, flammability or explosive limits, if available:

Ingredient(s)	Lower limit (% vol)	Upper limit (% vol)
acetic acid	4	17

Method / remark

Autoignition temperature: Not determined

Decomposition temperature: ≥ 60 (°C) SADT (self-accelerating decomposition temperature)

pH: < 2 (neat)

ISO 4316

Dilution pH: < 2 (8 %)

ISO 4316

Kinematic viscosity: Not determined

Solubility in / Miscibility with water: Fully miscible

Substance data, solubility in water

Ingredient(s)	Value (g/l)	Method	Temperature (°C)
hydrogen peroxide	1000	Method not given	20
nitric acid	> 500	Method not given	
acetic acid	Soluble	Method not given	
peracetic acid	No data available		

Substance data, partition coefficient n-octanol/water (log Kow): see subsection 12.3

Method / remark

Vapour pressure: Not determined

See substance data

Substance data, vapour pressure

Ingredient(s)	Value (Pa)	Method	Temperature (°C)
hydrogen peroxide	214	Method not given	20
nitric acid	770	Method not given	20
acetic acid	1500	Method not given	20
peracetic acid	No data available		

Method / remark

Relative density: ≈ 1.10 (20 °C)

Relative vapour density: No data available.

Particle characteristics: No data available.

OECD 109 (EU A.3)

Not relevant to classification of this product

Not applicable to liquids.

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9.2 Other information

9.2.1 Information with regard to physical hazard classes

Explosive properties: Not explosive. Vapours may form explosive mixtures with air.

Oxidising properties: May intensify fire; oxidiser.

Corrosion to metals: Corrosive

Weight of evidence

9.2.2 Other safety characteristics

Acid reserve: \approx -4.6 (g NaOH / 100g; pH=4)

SECTION 10: Stability and reactivity

10.1 Reactivity

No reactivity hazards known under normal storage and use conditions.

10.2 Chemical stability

Stable under normal storage and use conditions.

10.3 Possibility of hazardous reactions

No hazardous reactions known under normal storage and use conditions.

10.4 Conditions to avoid

None known under normal storage and use conditions.

10.5 Incompatible materials

Keep away from clothing and other combustible materials. May be corrosive to metals. Reacts with alkali. Keep away from products containing chlorine-based bleaching agents or sulphites.

10.6 Hazardous decomposition products

Oxygen. Nitrogen oxides (NO_x).

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Mixture data:.

Acute oral toxicity

LD₅₀ Oral > 300

Relevant calculated ATE(s):

ATE - Oral (mg/kg): >2000

Substance data, where relevant and available, are listed below:.

Acute toxicity

Acute oral toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)	ATE (mg/kg)
hydrogen peroxide	LD ₅₀	> 300-2000	Rat	Weight of evidence		2600
nitric acid		No data available				Not established
acetic acid	LD ₅₀	3310	Rat	Weight of evidence		Not established
peracetic acid	LD ₅₀	> 50-2000	Rat	Substance was tested as 5 % aqueous solution OECD 401 (EU B.1)		20000

Acute dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)	ATE (mg/kg)
hydrogen peroxide	LD ₅₀	> 2000	Rabbit	Substance was tested as 5 % aqueous solution		Not established
nitric acid		No data available				Not established
acetic acid		No data available				Not established
peracetic acid	LD ₅₀	1147	Rabbit	EPA OPP 81-2 Substance was tested as 5 % aqueous		Not established

				solution		
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Acute inhalative toxicity

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
hydrogen peroxide	LC ₀	No mortality observed (vapour)	Rat	Method not given	4
nitric acid	LC ₅₀	> 2.65 (vapour)	Rat	OECD 403 (EU B.2)	
acetic acid	LC ₅₀	> 40	Rat	Weight of evidence	4
peracetic acid	LC ₅₀	> 0.05-0.5 (dust) (mist)	Rat	EPA OPP 81-3 Substance was tested as 5 % aqueous solution	

Acute inhalative toxicity, continued

Ingredient(s)	ATE - inhalation, dust (mg/l)	ATE - inhalation, mist (mg/l)	ATE - inhalation, vapour (mg/l)	ATE - inhalation, gas (mg/l)
hydrogen peroxide	Not established	Not established	11	Not established
nitric acid	Not established	Not established	2.65	Not established
acetic acid	Not established	Not established	Not established	Not established
peracetic acid	Not established	Not established	24	Not established

Irritation and corrosivity

Skin irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
hydrogen peroxide	Corrosive	Rabbit	Method not given	
nitric acid	Corrosive	Rabbit	Method not given	
acetic acid	Corrosive	Rabbit	OECD 404 (EU B.4)	
peracetic acid	Corrosive	Rabbit	OECD 404 (EU B.4)	

Eye irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
hydrogen peroxide	Corrosive	Rabbit	Method not given	
nitric acid	Corrosive		Method not given	
acetic acid	Severe damage	Rabbit	OECD 405 (EU B.5)	
peracetic acid	Corrosive	Rabbit	Method not given	

Respiratory tract irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
hydrogen peroxide	Irritating to respiratory tract		Method not given	
nitric acid	No data available			
acetic acid	No data available			
peracetic acid	Irritating to respiratory tract	Rat	Method not given	

Sensitisation

Sensitisation by skin contact

Ingredient(s)	Result	Species	Method	Exposure time (h)
hydrogen peroxide	Not sensitising	Guinea pig	Method not given	
nitric acid	No data available			
acetic acid	Not sensitising		Method not given	
peracetic acid	Not sensitising	Guinea pig	OECD 406 (EU B.6) / Buehler test	

Sensitisation by inhalation

Ingredient(s)	Result	Species	Method	Exposure time
hydrogen peroxide	No data available			
nitric acid	No data available			
acetic acid	No data available			
peracetic acid	No data available			

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Mutagenicity

Ingredient(s)	Result (in-vitro)	Method (in-vitro)	Result (in-vivo)	Method (in-vivo)
hydrogen peroxide	No evidence for mutagenicity	OECD 471 (EU B.12/13)	No evidence of genotoxicity, negative test results	Method not given

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nitric acid	No evidence for mutagenicity, negative test results	OECD 471 (EU B.12/13)	No data available	
acetic acid	No evidence for mutagenicity, negative test results	OECD 471 (EU B.12/13)	No data available	
peracetic acid	No evidence for mutagenicity, negative test results	OECD 471 (EU B.12/13)	No evidence for mutagenicity, negative test results	Method not given

Carcinogenicity

Ingredient(s)	Effect
hydrogen peroxide	No evidence for carcinogenicity, negative test results
nitric acid	No evidence for carcinogenicity, negative test results
acetic acid	No evidence for carcinogenicity, negative test results
peracetic acid	No evidence for carcinogenicity, negative test results

Toxicity for reproduction

Ingredient(s)	Endpoint	Specific effect	Value (mg/kg bw/d)	Species	Method	Exposure time	Remarks and other effects reported
hydrogen peroxide			No data available				No evidence for reproductive toxicity
nitric acid	NOAEL	Developmental toxicity	1500	Rat	OECD 422, oral	28 day(s)	Not toxic for reproduction
acetic acid			No data available				No evidence for reproductive toxicity
peracetic acid	NOAEL		200	Rat	Not known		

Repeated dose toxicity

Sub-acute or sub-chronic oral toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
hydrogen peroxide	NOAEL	100	Mouse	OECD 408 (EU B.26)	90	
nitric acid	NOAEL	1500	Rat	OECD 422, oral	28	
acetic acid		No data available				
peracetic acid	NOAEL	23.4	Rat	Weight of evidence	90	No adverse effects observed

Sub-chronic dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
hydrogen peroxide		No data available				
nitric acid		No data available				
acetic acid		No data available				
peracetic acid		No data available				

Sub-chronic inhalation toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
hydrogen peroxide	NOAEL	7	Mouse	OECD 413 (EU B.29)	28	
nitric acid		No data available				
acetic acid		No data available				
peracetic acid		No data available				

Chronic toxicity

Ingredient(s)	Exposure route	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time	Specific effects and organs affected	Remark
hydrogen peroxide			No data available					
nitric acid			No data available					
acetic acid			No data available					
peracetic acid			No data available					

STOT-single exposure

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Ingredient(s)	Affected organ(s)
hydrogen peroxide	No data available
nitric acid	No data available
acetic acid	No data available
peracetic acid	Not applicable

STOT-repeated exposure

Ingredient(s)	Affected organ(s)
hydrogen peroxide	No data available
nitric acid	No data available
acetic acid	No data available
peracetic acid	No data available

Aspiration hazard

Substances with an aspiration hazard (H304), if any, are listed in section 3.

Potential adverse health effects and symptoms

Effects and symptoms related to the product, if any, are listed in subsection 4.2.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Endocrine disrupting properties - Human data, if available:

11.2.2 Other information

No other relevant information available.

SECTION 12: Ecological information

12.1 Toxicity

No data is available on the mixture.

Substance data, where relevant and available, are listed below:

Aquatic short-term toxicity

Aquatic short-term toxicity - fish

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
hydrogen peroxide	LC ₅₀	16.4	<i>Pimephales promelas</i>	EPA-OPPTS 850.1075	96
nitric acid	LC ₅₀	12.5	<i>Gambusia affinis</i>	Method not given	96
acetic acid	LC ₅₀	75	<i>Lepomis macrochirus</i>	Method not given	96
peracetic acid	LC ₅₀	13	<i>Fish</i>	OECD 203, semi-static	96

Aquatic short-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
hydrogen peroxide	EC ₅₀	2.4	<i>Daphnia pulex</i>	Method not given	48
nitric acid	EC ₅₀	8609	<i>Daphnia magna Straus</i>	Non guideline test	24
acetic acid	EC ₅₀	95	<i>Daphnia magna Straus</i>	Method not given	24
peracetic acid	EC ₅₀	0.73-3.3	<i>Daphnia magna Straus</i>	OECD 202 (EU C.2)	48

Aquatic short-term toxicity - algae

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
hydrogen peroxide	EC ₅₀	1.38	<i>Chlorella vulgaris</i>	OECD 201 (EU C.3)	72
nitric acid		No data available			
acetic acid	EC ₅₀	300.82	<i>Not specified</i>	Method not given	72
peracetic acid		No data available			

Aquatic short-term toxicity - marine species

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (days)
hydrogen peroxide	ErC ₅₀	1.38	<i>Skeletonema</i>	Method not given	72

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			<i>costatum</i>		
nitric acid		No data available			
acetic acid		No data available			
peracetic acid		No data available			

Impact on sewage plants - toxicity to bacteria

Ingredient(s)	Endpoint	Value (mg/l)	Inoculum	Method	Exposure time
hydrogen peroxide	EC ₅₀	466	<i>Activated sludge</i>	Method not given	
nitric acid		No data available			
acetic acid	EC ₁₀	1000	<i>Pseudomonas putida</i>	Method not given	0.5 hour(s)
peracetic acid		No data available			

Aquatic long-term toxicity

Aquatic long-term toxicity - fish

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
hydrogen peroxide	NOEC	4.3	<i>Pimephales promelas</i>	Method not given	96 hour(s)	
nitric acid	LD ₅₀	8226	<i>Oncorhynchus mykiss</i>	Method not given	96 hour(s)	
acetic acid		No data available				
peracetic acid	NOEC	0.00094	<i>Brachydanio rerio</i>	OECD 210	33 day(s)	

Aquatic long-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
hydrogen peroxide	NOEC	1	<i>Daphnia pulex</i>	Method not given	48 hour(s)	
nitric acid		No data available				
acetic acid		No data available				
peracetic acid	NOEC	0.0121	<i>Daphnia magna</i>	Method not given	33 day(s)	

Aquatic toxicity to other aquatic benthic organisms, including sediment-dwelling organisms, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw sediment)	Species	Method	Exposure time (days)	Effects observed
hydrogen peroxide		No data available				
nitric acid		No data available				
acetic acid		No data available				
peracetic acid		No data available				

Terrestrial toxicity

Terrestrial toxicity - soil invertebrates, including earthworms, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
hydrogen peroxide		No data available				
nitric acid		No data available				

Terrestrial toxicity - plants, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
hydrogen peroxide		No data available				
nitric acid		No data available				

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Terrestrial toxicity - birds, if available:

Ingredient(s)	Endpoint	Value	Species	Method	Exposure time (days)	Effects observed
hydrogen peroxide		No data available				
nitric acid		No data available				

Terrestrial toxicity - beneficial insects, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
hydrogen peroxide		No data available				
nitric acid		No data available				

Terrestrial toxicity - soil bacteria, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
hydrogen peroxide		No data available				
nitric acid		No data available				

12.2 Persistence and degradability**Abiotic degradation**

Abiotic degradation - photodegradation in air, if available:

Ingredient(s)	Half-life time	Method	Evaluation	Remark
hydrogen peroxide	24 hour(s)	Method not given	OH radical	
nitric acid	No data available			

Abiotic degradation - hydrolysis, if available:

Ingredient(s)	Half-life time in fresh water	Method	Evaluation	Remark
hydrogen peroxide	No data available			
nitric acid	No data available			

Abiotic degradation - other processes, if available:

Ingredient(s)	Type	Half-life time	Method	Evaluation	Remark
hydrogen peroxide		No data available			
nitric acid		No data available			

Biodegradation

Ready biodegradability - aerobic conditions

Ingredient(s)	Inoculum	Analytical method	DT ₅₀	Method	Evaluation
hydrogen peroxide	Activated sludge, aerobe	Specific analysis (primary degradation)	> 50 % in < 1 day(s)		Not applicable (inorganic substance)
nitric acid					Not applicable (inorganic substance)
acetic acid	Activated sludge, aerobe		96% in 20 day(s)		Readily biodegradable
peracetic acid				Method not given	Readily biodegradable

Ready biodegradability - anaerobic and marine conditions, if available:

Ingredient(s)	Medium & Type	Analytical method	DT ₅₀	Method	Evaluation
hydrogen peroxide					No data available
nitric acid					No data available

Degradation in relevant environmental compartments, if available:

Ingredient(s)	Medium & Type	Analytical method	DT ₅₀	Method	Evaluation
hydrogen peroxide					No data available
nitric acid					No data available

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12.3 Bioaccumulative potential

Partition coefficient n-octanol/water (log Kow)

Ingredient(s)	Value	Method	Evaluation	Remark
hydrogen peroxide	-1.57		No bioaccumulation expected	
nitric acid	-2.3	Method not given	Not relevant, does not bioaccumulate	
acetic acid	-0.17	Method not given	No bioaccumulation expected	
peracetic acid	No data available		Not relevant, does not bioaccumulate	

Bioconcentration factor (BCF)

Ingredient(s)	Value	Species	Method	Evaluation	Remark
hydrogen peroxide	1.4		QSAR	Low potential for bioaccumulation	
nitric acid	No data available				
acetic acid	3.16		Method not given	No bioaccumulation expected	
peracetic acid	No data available				

12.4 Mobility in soil

Adsorption/Desorption to soil or sediment

Ingredient(s)	Adsorption coefficient Log Koc	Desorption coefficient Log Koc(des)	Method	Soil/sediment type	Evaluation
hydrogen peroxide	2				Mobile in soil
nitric acid	No data available				Mobile in aqueous environment
acetic acid	No data available				Potential for mobility in soil, soluble in water
peracetic acid	No data available				Mobile in aqueous environment

12.5 Results of PBT and vPvB assessment

Substances that fulfill the criteria for PBT/vPvB, if any, are listed in section 3.

12.6 Endocrine disrupting properties

Endocrine disrupting properties - Environmental effects, if available:

12.7 Other adverse effects

No other adverse effects known.

SECTION 13: Disposal considerations**13.1 Waste treatment methods****Waste from residues / unused products:**

The concentrated contents or contaminated packaging should be disposed of by a certified handler or according to the site permit. Release of waste to sewers is discouraged. The cleaned packaging material is suitable for energy recovery or recycling in line with local legislation.

Empty packaging**Recommendation:****Suitable cleaning agents:**

Dispose of observing national or local regulations.
Water, if necessary with cleaning agent.

SECTION 14: Transport information**Land transport (ADR/RID), Sea transport (IMDG), Air transport (ICAO-TI / IATA-DGR)****14.1 UN number:** 3149**14.2 UN proper shipping name:**

Hydrogen peroxide and peroxyacetic acid mixture, stabilized

Hydrogen peroxide and peroxyacetic acid mixture, stabilized

14.3 Transport hazard class(es):

Transport hazard class (and subsidiary risks): 5.1(8)

14.4 Packing group: II**14.5 Environmental hazards:**

Environmentally hazardous: Yes

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Marine pollutant: Yes

14.6 Special precautions for user: None known.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code: The product is not transported in bulk tankers.

Other relevant information:

ADR

Classification code: OC1

Tunnel restriction code: (E)

Hazard identification number: 58

IMO/IMDG

EmS: F-H, S-Q

The product has been classified, labelled and packaged in accordance with the requirements of ADR and the provisions of the IMDG Code. Transport regulations include special provisions for certain classes of dangerous goods packed in limited quantities.

SECTION 15: Regulatory information

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

EU regulations:

- Regulation (EC) No. 1907/2006 - REACH
- Regulation (EC) No 1272/2008 - CLP
- Regulation (EC) No. 648/2004 - Detergents regulation
- Regulation (EU) No 528/2012 on biocidal products
- Regulation (EU) 2019/1148 - Explosive Precursors
- substances identified as having endocrine disrupting properties in accordance with the criteria set out in Delegated Regulation (EU) 2017/2100 or Regulation (EU) 2018/605
- Agreement concerning the International Carriage of Dangerous Goods by Road (ADR)
- International Maritime Dangerous Goods (IMDG) Code

Authorisations or restrictions (Regulation (EC) No 1907/2006, Title VII respectively Title VIII): Not applicable.

Ingredients according to EC Detergents Regulation 648/2004

disinfectants

Seveso - Classification: P8 - OXIDISING LIQUIDS AND SOLIDS

15.2 Chemical safety assessment

A chemical safety assessment has not been carried out on the mixture

SECTION 16: Other information

The information in this document is based on our best present knowledge. However, it does not constitute a guarantee for any specific product features and does not establish a legally binding contract

SDS code: MSDS3822

Version: 08.2

Revision: 2023-01-03

Reason for revision:

Overall design adjusted in accordance with Amendment 2020/878, Annex II of Regulation (EC) No 1907/2006. This data sheet contains changes from the previous version in section(s): 4, 6, 7, 8, 10, 16

Classification procedure

The classification of the mixture is in general based on calculation methods using substance data, as required by Regulation (EC) No 1272/2008. If for certain classifications data on the mixture is available or for example bridging principles or weight of evidence can be used for classification, this will be indicated in the relevant sections of the Safety Data Sheet. See section 9 for physical chemical properties, section 11 for toxicological information and section 12 for ecological information.

Full text of the H and EUH phrases mentioned in section 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.
- H290 - May be corrosive to metals.
- H302 - Harmful if swallowed.
- H314 - Causes severe skin burns and eye damage.
- H318 - Causes serious eye damage.
- H331 - Toxic if inhaled.
- H332 - Harmful if inhaled.
- H335 - May cause respiratory irritation.

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- 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.

Abbreviations and acronyms:

- AISE - The international Association for Soaps, Detergents and Maintenance Products
- ATE - Acute Toxicity Estimate
- DNEL - Derived No Effect Limit
- EC50 - effective concentration, 50%
- ERC - Environmental release categories
- EUH - CLP Specific hazard statement
- LC50 - Lethal Concentration, 50% / Median Lethal Concentration
- LCS - Life cycle stage
- LD50 - Lethal Dose, 50% / Median Lethal dose
- NOAEL - No observed adverse effect level
- NOEL - No observed effect level
- OECD - Organisation for Economic Cooperation and Development
- PBT - Persistent, Bioaccumulative and Toxic
- PNEC - Predicted No Effect Concentration
- PROC - Process categories
- REACH number - REACH registration number, without supplier specific part
- vPvB - very Persistent and very Bioaccumulative

End of Safety Data Sheet