

SECTION 1: Identification of the substance/mixture and of the company/undertaking
1.1. Product identifier

Product form : Mixture
 Product name : MicroVue Klotho EIA
 Product code : 8050
 Product group : Kit

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

Industrial/Professional use spec : For research use only

1.2.2. Uses advised against

Restrictions on use : Restricted to professional users

1.3. Details of the supplier of the safety data sheet
Manufacturer

Quidel Corporation
 2005 East State Street, Suite 100
 45701 Athens - USA
 T 1.800.874.1517 - F 1.740.592.9820
gehs@quidel.com - quidel.com

1.4. Emergency telephone number

Emergency number : 1.866.519.4752

SECTION 2: Hazards identification
2.1. Classification of the substance or mixture
Classification according to Regulation (EC) No. 1272/2008 [CLP]


Components	CLP classification
Stop Solution	Skin Corr. 1, H314 Eye Dam. 1, H318
20X Wash Solution Concentrate (50 mL)	Skin Sens. 1, H317
Hydrating Reagent (25 mL)	Skin Sens. 1, H317
TMB Substrate	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Repr. 1B, H360 STOT SE 3, H335






Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice. Highly flammable liquid and vapour. May damage fertility or the unborn child. May cause respiratory irritation. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage.

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

Components	Pictograms	Signal word	Hazard statements	Precautionary statements	Extra phrases
20X Wash Solution Concentrate (50 mL)		Warning	H317 - May cause an allergic skin reaction.	P280 - Wear lab coat, safety glasses, gloves P302+P352 - IF ON SKIN: Wash with plenty of soap and water. P333+P313 - If skin irritation or rash occurs: Get medical advice/attention. P501 - Dispose of contents to hazardous or special waste collection point, in accordance with local, regional, national regulation.	No additional information available

Components	Pictograms	Signal word	Hazard statements	Precautionary statements	Extra phrases
Stop Solution (12 mL)		Danger	H314 - Causes severe skin burns and eye damage.	P260 - Do not breathe mist, vapours, or spray. P264 - Wash hands, forearms and face thoroughly after handling. P280 - Wear lab coat, safety glasses, gloves. P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P302+P352 - If on skin: Wash skin thoroughly with mild soap and 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. P321 - Specific treatment: Seek medical attention if ill effect develops. P332+P313 - If skin irritation occurs: Get medical advice/attention. P501 - Dispose of contents to hazardous or special waste collection point, in accordance with local, regional, national regulation.	No additional information available
Hydrating Reagent (25 mL)		Warning	H317 - May cause an allergic skin reaction.	P280 - Wear lab coat, safety glasses, gloves P302+P352 - IF ON SKIN: Wash with plenty of soap and water. P333+P313 - If skin irritation or rash occurs: Get medical advice/attention. P501 - Dispose of contents to hazardous or special waste collection point, in accordance with local, regional, national regulation.	No additional information available
TMB Substrate (12 mL)	  	Danger	H225 - Highly flammable liquid and vapour. H315 - Causes skin irritation. H319 - Causes serious eye irritation. H335 - May cause respiratory irritation. H360 - May damage fertility or the unborn child.	P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition. sources. No smoking. P261 - Avoid breathing mist, vapours, spray. P264 - Wash hands, forearms and face thoroughly after handling. P280 - Wear lab coat, safety glasses, gloves. P302+P352 - IF ON SKIN: Wash with plenty of 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. P321 - Specific treatment: Seek medical attention if ill effect develops. P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.	No additional information available

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Chemical name	CAS No EC-No.	%	CLP classification
TMB Substrate (12 mL)	Acetone	67-64-1 -	1 – 10	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
	1-methyl-2-pyrrolidone	872-50-4 -	1 – 10	Repr. 1B, H360D Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
	1-ethylpyrrolidin-2-one	2687-91-4 -	1 – 5	Repr. 1B, H360D
Specimen Diluent (50 mL)	Methylisothiazolone	26172-54-3 -	0.02	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 2 (Inhalation), H330 Acute Tox. 2 (Inhalation:dust,mist), H330 Skin Corr. 1A, H314 Skin Sens. 1A, H317 Aquatic Chronic 1, H410
20X Wash Solution Concentrate (50 mL)	Mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9 -	<0.1	Acute Tox. 3 (Inhalation), H331 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Oral), H301 Skin Corr. 1B, H314 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
	Sodium hydroxide, conc=33%, aqueous solution	1310-73-2 -	<1	Met. Corr. 1, H290 Skin Corr. 1A, H314 Eye Dam. 1, H318
Stop Solution (12 mL)	Hydrochloric acid ... %	- -	4	Skin Corr. 1B, H314 STOT SE 3, H335
Hydrating Reagent (25 mL)	Mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9 -	<0.1	Acute Tox. 3 (Inhalation), H331 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Oral), H301 Skin Corr. 1B, H314 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Specific concentration limits:

Name	Product identifier	Specific concentration limits
1-methyl-2-pyrrolidone	(CAS No) 872-50-4 (EC-No.) 212-828-1 (EC Index-No.) 606-021-00-7	(10 ≤C < 100) STOT SE 3, H335
Hydrochloric acid ... %	(EC-No.) 231-595-7 (EC Index-No.) 017-002-01-X	(10 ≤C < 25) Skin Irrit. 2, H315 (10 ≤C < 25) Eye Irrit. 2, H319 (10 ≤C < 100) STOT SE 3, H335 (25 ≤C < 100) Skin Corr. 1B, H314

Specific concentration limits:

Name	Product identifier	Specific concentration limits
Sodium hydroxide, conc=33%, aqueous solution	(CAS No) 1310-73-2 (EC-No.) 215-185-5 (EC Index-No.) 011-002-00-6	(0.5 ≤C < 2) Skin Irrit. 2, H315 (0.5 ≤C < 2) Eye Irrit. 2, H319 (2 ≤C < 5) Skin Corr. 1B, H314 (5 ≤C < 100) Skin Corr. 1A, H314
Mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	(CAS No) 55965-84-9 (EC Index-No.) 613-167-00-5	(0.0015 ≤C < 100) Skin Sens. 1, H317 (0.06 ≤C < 0.6) Eye Irrit. 2, H319 (0.06 ≤C < 0.6) Skin Irrit. 2, H315 (0.6 ≤C < 100) Skin Corr. 1B, H314

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: IF exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Call a poison center or a doctor if you feel unwell.
First-aid measures after skin contact	: Rinse skin with water/shower. Take off immediately all contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
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	: Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: Irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Serious damage to eyes.

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. Dry powder. Foam. Carbon dioxide.
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5.2. Special hazards arising from the substance or mixture

Fire hazard	: Highly flammable liquid and vapour.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

5.3. Advice for firefighters

Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures	: Ventilate spillage area. No open flames, no sparks, and no smoking. Only qualified personnel equipped with suitable protective equipment may intervene. Avoid breathing dust/fume/gas/mist/vapours/spray.
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6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
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6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
Other information	: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

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. Wear personal protective equipment. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes.
Hygiene measures	: Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Separate working clothes from town clothes. Launder separately. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Ground/bond container and receiving equipment.
Storage conditions	: Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection
8.1. Control parameters

Hydrochloric acid ... %		
USA - OSHA	Local name	Hydrogen chloride
USA - OSHA	OSHA PEL (Ceiling) (mg/m ³)	7 mg/m ³
USA - OSHA	OSHA PEL (Ceiling) (ppm)	5 ppm

Sodium hydroxide, conc=33%, aqueous solution (1310-73-2)		
USA - OSHA	Local name	Sodium hydroxide
USA - OSHA	OSHA PEL (TWA) (mg/m ³)	2 mg/m ³

Acetone (67-64-1)		
EU	IOELV TWA (mg/m ³)	1210 mg/m ³
EU	IOELV TWA (ppm)	500 ppm
Belgium	Limit value (mg/m ³)	1210 mg/m ³
Belgium	Limit value (ppm)	500 ppm
Belgium	Short time value (mg/m ³)	2420 mg/m ³
Belgium	Short time value (ppm)	1000 ppm
France	VME (mg/m ³)	1210 mg/m ³
France	VME (ppm)	500 ppm
France	VLE (mg/m ³)	2420 mg/m ³
France	VLE (ppm)	1000 ppm
Netherlands	Grenswaarde TGG 8H (mg/m ³)	1210 mg/m ³
Netherlands	Grenswaarde TGG 8H (ppm)	501 ppm
Netherlands	Grenswaarde TGG 15MIN (mg/m ³)	2420 mg/m ³
Netherlands	Grenswaarde TGG 15MIN (ppm)	1002 ppm
United Kingdom	WEL TWA (mg/m ³)	1210 mg/m ³
United Kingdom	WEL TWA (ppm)	500 ppm
United Kingdom	WEL STEL (mg/m ³)	3620 mg/m ³
United Kingdom	WEL STEL (ppm)	1500 ppm

Acetone (67-64-1)		
USA - ACGIH	ACGIH TWA (ppm)	250 ppm
USA - ACGIH	ACGIH STEL (ppm)	500 ppm

1-methyl-2-pyrrolidone (872-50-4)		
EU	IOELV TWA (mg/m ³)	40 mg/m ³
EU	IOELV TWA (ppm)	10 ppm
EU	IOELV STEL (mg/m ³)	80 mg/m ³
EU	IOELV STEL (ppm)	20 ppm
Belgium	Limit value (mg/m ³)	40 mg/m ³
Belgium	Limit value (ppm)	10 ppm
Belgium	Short time value (mg/m ³)	80 mg/m ³
Belgium	Short time value (ppm)	20 ppm
France	VME (mg/m ³)	40 mg/m ³
France	VME (ppm)	10 ppm
France	VLE (mg/m ³)	80 mg/m ³
France	VLE (ppm)	20 ppm
Netherlands	Grenswaarde TGG 8H (mg/m ³)	40 mg/m ³
Netherlands	Grenswaarde TGG 8H (ppm)	9.72 ppm
Netherlands	Grenswaarde TGG 15MIN (mg/m ³)	80 mg/m ³
Netherlands	Grenswaarde TGG 15MIN (ppm)	19.44 ppm
United Kingdom	WEL TWA (mg/m ³)	40 mg/m ³
United Kingdom	WEL TWA (ppm)	10 ppm
United Kingdom	WEL STEL (mg/m ³)	80 mg/m ³
United Kingdom	WEL STEL (ppm)	20 ppm
USA - ACGIH	Biological Exposure Indices (BEI)	100 mg/l Parameter: 5-Hydroxy-N-methyl-2-pyrrolidone - Medium: urine - Sampling time: End of shift

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Materials for protective clothing:

Lab coat

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment.

Personal protective equipment symbol(s):



Environmental exposure controls:

Avoid release to the environment.

Other information:

Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state	: Liquid
Appearance	: EIA Kit.
Colour	: No data available
Odour	: No data available
Odour threshold	: No data available
pH	: Stop Solution (<1)
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity**10.1. Reactivity**

The product is non-reactive under normal conditions of use, storage and transport. **TMB Substrate:** Flammable liquid and vapour.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7). Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information**11.1. Information on toxicological effects**

Acute toxicity (oral) : Not classified

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

Mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1) (55965-84-9)

LD50 oral rat	53 mg/kg (Rat, Literature study)
LD50 dermal	200 – 1000 mg/kg bodyweight (Literature study)

Methylisothiazolone (26172-54-3)

LD50 oral rat	175 mg/kg
LD50 dermal rat	246 mg/kg
LC50 inhalation rat (mg/l)	0.11 mg/l 4 hr

1-ethylpyrrolidin-2-one (2687-91-4)

LD50 oral rat	3200 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral)
LD50 dermal rat	> 2000 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal)
LC50 inhalation rat (mg/l)	> 5.1 mg/l (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Inhalation (aerosol))

Acetone (67-64-1)

LD50 oral rat	5800 mg/kg (Equivalent or similar to OECD 401, Rat, Female, Experimental value)
LD50 dermal rabbit	20000 mg/kg (Equivalent or similar to OECD 402, Rabbit, Male, Experimental value)
LC50 inhalation rat (mg/l)	76 mg/l (Other, 4 h, Rat, Female, Experimental value)

1-methyl-2-pyrrolidone (872-50-4)

LD50 oral rat	4150 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 dermal rat	> 5000 mg/kg bodyweight (Equivalent or similar to OECD 402, 24 h, Rat, Male / female, Experimental value, Dermal, 14 day(s))
LC50 inhalation rat (mg/l)	> 5.1 mg/l air (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Inhalation (aerosol), 14 day(s))

Skin corrosion/irritation : Causes skin irritation.
 Serious eye damage/irritation : Causes serious eye damage.
 Respiratory or skin sensitisation : May cause an allergic skin reaction.
 Germ cell mutagenicity : Not classified
 Carcinogenicity : Not classified
 Reproductive toxicity : May damage fertility or the unborn child.
 STOT-single exposure : May cause respiratory irritation.
 STOT-repeated exposure : Not classified
 Aspiration hazard : Not classified

SECTION 12: Ecological information
12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
 Hazardous to the aquatic environment, short-term (acute) : Not classified
 Hazardous to the aquatic environment, long-term (chronic) : Not classified

Mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3-one [EC no. 220-239-6] (3:1) (55965-84-9)

LC50 fish 1	0.28 mg/l (96 h, Lepomis macrochirus, Literature)
EC50 Daphnia 1	0.16 mg/l (48 h, Daphnia magna, Literature)
EC50 72h algae (1)	0.018 mg/l (Pseudokirchneriella subcapitata, Literature)

Sodium hydroxide, conc=33%, aqueous solution (1310-73-2)

LC50 fish 1	45.4 mg/l (96 h, Salmo gairdneri, Literature study, Solution >=50%)
EC50 Daphnia 1	40.38 mg/l (48 h, Ceriodaphnia dubia, Fresh water, Literature study, Pure substance)
TLM fish 1	99 mg/l (48 h, Lepomis macrochirus, Pure substance)
TLM fish 2	125 ppm (96 h, Gambusia affinis, Pure substance)

Methylisothiazolone (26172-54-3)

LC50 fish 1	4.77 mg/l Oncorhynchus mykiss - 96 hr
LC50 other aquatic organisms 1	2.33 mg/l Daphnia magna (Water Flea) - 48 hr

1-ethylpyrrolidin-2-one (2687-91-4)

LC50 fish 1	> 465 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Brachydanio rerio, Static system, Fresh water, Experimental value, Nominal concentration)
EC50 Daphnia 1	> 104 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
EC50 72h algae (1)	> 101 mg/l (OECD 201: Alga, Growth Inhibition Test, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, Growth rate)

Acetone (67-64-1)

LC50 fish 1	5540 mg/l (EU Method C.1, 96 h, Salmo gairdneri, Static system, Fresh water, Experimental value)
EC50 96h algae (1)	> 7000 mg/l (Selenastrum capricornutum, Static system, Fresh water, Experimental value)

1-methyl-2-pyrrolidone (872-50-4)

LC50 fish 1	> 500 mg/l (96 h, Oncorhynchus mykiss, Static system, Fresh water, Experimental value)
EC50 Daphnia 1	1107 mg/l (EPA 660/3 - 75/009, 96 h, Palaemonetes vulgaris, Static system, Salt water, Experimental value)
EC50 Daphnia 2	> 1000 mg/l (DIN 38412-11, 24 h, Daphnia magna, Static system, Fresh water, Experimental value)
EC50 72h algae (1)	600.5 mg/l (DIN 38412-9, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, Growth rate)

12.2. Persistence and degradability
Mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3-one [EC no. 220-239-6] (3:1) (55965-84-9)

Biochemical oxygen demand (BOD)	Not applicable.
Chemical oxygen demand (COD)	Not applicable.
ThOD	Not applicable.
BOD (% of ThOD)	Not applicable.

Hydrochloric acid ... %

Persistence and degradability	Biodegradability: not applicable.
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Sodium hydroxide, conc=33%, aqueous solution (1310-73-2)

Persistence and degradability	Biodegradability: not applicable.
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Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

1-ethylpyrrolidin-2-one (2687-91-4)

Persistence and degradability	Readily biodegradable in water.
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Acetone (67-64-1)

Persistence and degradability	Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	1.43 g O ₂ /g substance
Chemical oxygen demand (COD)	1.92 g O ₂ /g substance
ThOD	2.2 g O ₂ /g substance
BOD (% of ThOD)	0.872 (20 day(s), Literature study)

1-methyl-2-pyrrolidone (872-50-4)

Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	1.07 g O ₂ /g substance
Chemical oxygen demand (COD)	1.56 g O ₂ /g substance
ThOD	1.9 g O ₂ /g substance
BOD (% of ThOD)	0.56

12.3. Bioaccumulative potential
Mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3-one [EC no. 220-239-6] (3:1) (55965-84-9)

Bioaccumulative potential	Not established.
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Hydrochloric acid ... %

Bioaccumulative potential	Does not contain bioaccumulative component(s).
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Sodium hydroxide, conc=33%, aqueous solution (1310-73-2)

Partition coefficient n-octanol/water (Log Pow)	-3.88 (Estimated value)
Bioaccumulative potential	Not bioaccumulative.

1-ethylpyrrolidin-2-one (2687-91-4)

Partition coefficient n-octanol/water (Log Pow)	-0.2 (Experimental value, EU Method A.8: Partition Coefficient, 23 °C)
Bioaccumulative potential	Not bioaccumulative.

Acetone (67-64-1)

BCF fish 1	0.69 (Pisces)
BCF other aquatic organisms 1	3 (BCFWIN, Calculated value)
Partition coefficient n-octanol/water (Log Pow)	-0.24 (Test data)
Bioaccumulative potential	Not bioaccumulative.

1-methyl-2-pyrrolidone (872-50-4)

BCF other aquatic organisms 1	3 (Calculated value)
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil
Mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3-one [EC no. 220-239-6] (3:1) (55965-84-9)

Ecology - soil	No (test)data on mobility of the components available.
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Hydrochloric acid ... %

Ecology - soil	No (test)data on mobility of the components available. May be harmful to plant growth, blooming and fruit formation.
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Sodium hydroxide, conc=33%, aqueous solution (1310-73-2)

Ecology - soil	No (test)data on mobility of the components available.
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1-ethylpyrrolidin-2-one (2687-91-4)

Surface tension	0.069 N/m (20 °C, 1 g/l, OECD 115: Surface Tension of Aqueous Solutions)
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Partition coefficient n-octanol/water (Log Koc)	1.6 (log Koc, PCKOCWIN v1.66, Calculated value)
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Ecology - soil	Low potential for adsorption in soil. Highly mobile in soil.
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Acetone (67-64-1)

Surface tension	0.0237 N/m
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Ecology - soil	No (test)data on mobility of the substance available.
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1-methyl-2-pyrrolidone (872-50-4)

Surface tension	0.407 N/m
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Partition coefficient n-octanol/water (Log Koc)	1.32 (log Koc, Calculated value)
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Ecology - soil	Highly mobile in soil.
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12.5. Results of PBT and vPvB assessment
Component

Hydrochloric acid ... % ()	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
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1-ethylpyrrolidin-2-one (2687-91-4)	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
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1-methyl-2-pyrrolidone (872-50-4)	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
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Acetone (67-64-1)	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
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12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations
13.1. Waste treatment methods

Regional legislation (waste)	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Additional information	: Flammable vapours may accumulate in the container.
Ecology - waste materials	: Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / IATA / IMDG

14.1. UN number

UN-No. (ADR)	: Not regulated
UN-No. (IMDG)	: Not regulated
UN-No. (IATA)	: Not regulated

14.2. UN proper shipping name

Proper Shipping Name (ADR)	: Not regulated
Proper Shipping Name (IMDG)	: Not regulated
Proper Shipping Name (IATA)	: Not regulated

14.3. Transport hazard class(es)
ADR

Transport hazard class(es) (ADR)	: Not regulated
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IMDG

Transport hazard class(es) (IMDG)	: Not regulated
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IATA

Transport hazard class(es) (IATA)	: Not regulated
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14.4. Packing group

Packing group (ADR)	: Not regulated
Packing group (IMDG)	: Not regulated
Packing group (IATA)	: Not regulated

14.5. Environmental hazards

Dangerous for the environment	: No
Marine pollutant	: No
Other information	: No supplementary information available

14.6. Special precautions for user
Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

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

Contains no REACH substances with Annex XVII restrictions

 Contains a substance on the REACH candidate list in concentration $\geq 0.1\%$ or with a lower specific limit:

1-Methyl-2-pyrrolidone (EC 212-828-1, CAS 872-50-4)

Contains no REACH Annex XIV substances

15.1.2. National regulations
Germany

Regulatory reference	: WGK 1, Slightly hazardous to water (Classification according to AwSV, Annex 1)
Employment restrictions	: Observe restrictions according Act on the Protection of Working Mothers (MuSchG) Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG)
Hazardous Incident Ordinance (12. BImSchV)	: Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen	: None of the components are listed
SZW-lijst van mutagene stoffen	: None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding	: None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid	: None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling	: 1-ethylpyrrolidin-2-one,1-methyl-2-pyrrolidone are listed

Denmark

Danish National Regulations	: Young people below the age of 18 years are not allowed to use the product Pregnant/breastfeeding women working with the product must not be in direct contact with the product
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15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

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
BLV	Biological limit value
CAS No	Chemical Abstract Service number
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC50	Median effective concentration
EC-No.	European Community number
EN	European Standard
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
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail

SDS	Safety Data Sheet
vPvB	Very Persistent and Very Bioaccumulative
WGK	Water Hazard Class

Other information : Please review product insert prior to using this product.

Full text of H- and EUH-statements:	
Acute Tox. 2 (Inhalation)	Acute toxicity (inhal.), Category 2
Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
Met. Corr. 1	Corrosive to metals, Category 1
Repr. 1B	Reproductive toxicity, Category 1B
Repr. 1B	Reproductive toxicity, Category 1B
Skin Corr. 1A	Skin corrosion/irritation, Category 1, Sub-Category 1A
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
Skin Sens. 1A	Skin sensitisation, category 1A
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis
H225	Highly flammable liquid and vapour.
H290	May be corrosive to metals.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H360	May damage fertility or the unborn child.
H360D	May damage the unborn child.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

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.