



MATERIAL SAFETY DATA SHEET

NORDIC BLIZZARD 30

according to 1907/2006/EC, Article 31

Printing date 15.11.2023

Version number 1.0

Revision: 15.11.2023

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

- **1.1 Product identifier**
- Trade name: **NORDIC BLIZZARD 30**
- UFI: UA81-40TA-5006-1884
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- Sector of Use SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
- Product category PC15 Non-metal-surface treatment products
- Application of the substance / the mixture Raw material for plastics
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Thermo-Logic AB
Gamla Landsvägen 3F
438 34 Landvetter, Sweden
Dir: +48 880 427 683, +46 73 350 10 40
Vxl: +46 10 200 82 22
info@thermo-logic.se
www.thermo-logic.se
- Further information obtainable from: Thermo-Logic AB
- **1.4 Emergency telephone number:**
Dir: +48 880 427 683, +46 73 350 10 40
Vxl: +46 10 200 82 22

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- Classification according to Regulation (EC) No 1272/2008



GHS07

Skin Irrit. 2	H315 Causes skin irritation.
Eye Irrit. 2	H319 Causes serious eye irritation. H317 May cause an allergic skin reaction.
Skin Sens. 1	

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

- **2.2 Label elements**
- Labelling according to Regulation (EC) No 1272/2008
The product is classified and labelled according to the CLP regulation.
- Hazard pictograms



GHS07

- Signal word Warning
- Hazard-determining components of labelling:
Formaldehyde, polymer with nonylphenol, reaction products with diethanolamine and propylene oxide 1,2-dimethylimidazole
- Hazard statements
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H412 Harmful to aquatic life with long lasting effects.
- Precautionary statements
P273 P280 Avoid release to the environment.
P302+P352 Wear protective gloves/protective clothing/eye protection/face protection. IF ON SKIN: Wash with plenty of water.

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P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention. If

P337+P313 eye irritation persists: Get medical advice/attention.

• **Additional information:** Contains mixtures of HFC-365mfc, HFC-227ea, HCFC-1233zd with GWP=149

• **2.3 Other hazards**

• **Results of PBT and vPvB assessment**

• **PBT:** Not applicable.

• **vPvB:** Not applicable.

• **Determination of endocrine-disrupting properties** Not applicable.

SECTION 3: Composition/information on ingredients

• **3.2 Mixtures**

• **Description:** Mixture of substances listed below with nonhazardous additions.

• **Dangerous components:**

CAS: 68610-97-9 EC number: 614-668-1 Reg.nr.: 01-2119928014-47-0001	Formaldehyde, polymer with nonylphenol, reaction products with diethanolamine and propylene oxide ⚠ Aquatic Chronic 2, H411 ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1A, H317	≥10-<25%
CAS: 1244733-77-4 Reg.nr.: 01-2119486772-26-xxxx	Tris(2-chloro-1-methylethyl) phosphate ⚠ Acute Tox. 4, H302 ⚠ Aquatic Chronic 3, H412	≥10-<25%
CAS: 102687-65-0 EC number: 700-486-0 Reg.nr.: 01-2119855084-38	(1E)-1-chloro-3,3,3-trifluoroprop-1-ene ⚠ Press. Gas (Liq.), H280 ⚠ Aquatic Chronic 3, H412	2.5-10%
CAS: 111-46-6 EINECS: 203-872-2 Index number: 603-140-00-6 Reg.nr.: 01-2119457857-21-0004	2,2'-oxybisethanol ⚠ STOT RE 2, H373 ⚠ Acute Tox. 4, H302	≥2.5-<10%
CAS: 6425-39-4 EINECS: 229-194-7 Reg.nr.: 01-2119969278-20	2,2'-dimorpholinyl-diethyl ether ⚠ Eye Irrit. 2, H319	≥2.5-<10%
CAS: 107-21-1 EINECS: 203-473-3 Index number: 603-027-00-1 Reg.nr.: 01-2119456816-28-xxxx	ethanediol ⚠ STOT RE 2, H373 ⚠ Acute Tox. 4, H302	≤2.5%
CAS: 406-58-6 ELINCS: 430-250-1 Index number: 602-102-00-6 Reg.nr.: 01-0000017653-68	1,1,1,3,3-pentafluorobutane ⚠ Flam. Liq. 2, H225	≤2.5%
CAS: 1739-84-0 EINECS: 217-101-2 Index number: 613-034-00-1 Reg.nr.: 01-2119977103-39-0000	1,2-dimethylimidazole ⚠ Eye Dam. 1, H318 ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Skin Sens. 1B, H317	≥1-≤2.5%
CAS: 80-70-6 EINECS: 201-302-7 Reg.nr.: 01-2120108945-53	1,1,3,3-tetramethylguanidine ⚠ Flam. Liq. 3, H226 ⚠ Skin Corr. 1B, H314; Eye Dam. 1, H318 ⚠ Acute Tox. 4, H302	≥1-≤2.5%
CAS: 56-81-5 EINECS: 200-289-5	glycerol substance with a Community workplace exposure limit	≤2.5%

• **Additional information:** For the wording of the listed hazard phrases refer to section 16.

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SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Call for a doctor immediately.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fire with alcohol resistant foam. Use fire extinguishing methods suitable to surrounding conditions.
- **5.2 Special hazards arising from the substance or mixture** Formation of toxic gases is possible during heating or in case of fire.
- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Ensure adequate ventilation
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Store in cool, dry place in tightly closed receptacles.
Keep away from heat and direct sunlight.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Store only in the original receptacle.
Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Store in dry conditions.
Store in cool, dry conditions in well sealed receptacles.

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· 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

· 8.1 Control parameters

· Ingredients with limit values that require monitoring at the workplace:

CAS: 111-46-6 2,2'-oxybisethanol

WEL (Great Britain) Long-term value: 101 mg/m³, 23 ppm

CAS: 107-21-1 ethanediol

WEL (Great Britain) Short-term value: 104** mg/m³, 40** ppm
Long-term value: 10* 52** mg/m³, 20** ppm
Sk *particulate **vapour

CAS: 56-81-5 glycerol

WEL (Great Britain) Long-term value: 10 mg/m³

· DNELs

CAS: 1244733-77-4 Tris(2-chloro-1-methylethyl) phosphate

Oral	DNEL	0.52 mg/kg b.w./day (consumers)
Dermal	DNEL	1.04 mg/kg b.w./day (consumers) (long-term exposure, systemic effect) 4 mg/kg b.w./day (consumers) (short-term exposure, systemic effect) 8 mg/kg b.w./day (workers) (short-term exposure, systemic effect) 2.08 mg/kg b.w./day (workers) (long-term exposure, systemic effect) 1.46 mg/m ³ (consumers) (long-term exposure, systemic effect)
		11.2 mg/m ³ (consumers) (short-term exposure, systemic effect) 22.4 mg/m ³ (workers) (short-term exposure, systemic effect)
Inhalative	DNEL	

CAS: 6425-39-4 2,2'-dimorpholinyldiethyl ether

Oral	DNEL	0.5 mg/kg m.c./dzień (consumers) (long-term exposure, systemic effect) 0.5 mg/kg b.w./day (consumers) (long-term exposure, systemic effect) 1 mg/kg m.c./dzień (workers) (long-term exposure, systemic effect) 7.28 mg/m ³ (workers) (long-term exposure, systemic effect)
Dermal	DNEL	
Inhalative	DNEL	

CAS: 107-21-1 ethanediol

Dermal	DNEL	53 mg/kg b.w./day (consumers) (long-term exposure, systemic effect) 106 mg/kg b.w./day (workers) (long-term exposure, systemic effect) 7 mg/m ³ (consumers) (long-term exposure, systemic effect) 35 mg/m ³ (workers) (long-term exposure, systemic effect)
Inhalative	DNEL	

CAS: 406-58-6 1,1,1,3,3-pentafluorobutane

Dermal	DNEL	4,212 mg/kg (workers) (long-term exposure, systemic effect)
Inhalative	DNEL	1,717 mg/m ³ (workers) (long-term exposure, systemic effect)

· PNECs

CAS: 1244733-77-4 Tris(2-chloro-1-methylethyl) phosphate

PNEC	0.064 mg/l (marine water)
	0.64 mg/l (fresh water)
	7.84 mg/l (waste treatment plant) 1.7 mg/kg (soil)
PNEC	1.34 mg/kg (marine water sediment)
	13.4 mg/kg (fresh water sediment)

CAS: 6425-39-4 2,2'-dimorpholinyldiethyl ether

PNEC	1 mg/l (intermittent)
	0.01 mg/l (marine water)
	0.1 mg/l (fresh water)
	100 mg/l (waste treatment plant)

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PNEC	1.58 mg/kg (soil) 0.82 mg/kg (marine water sediment) 8.2 mg/kg (fresh water sediment)
CAS: 107-21-1 ethanediol	
PNEC	10 mg/l (intermittent) 1 mg/l (marine water) 10 mg/l (fresh water) 199.5 mg/l (waste treatment plant)
PNEC	1.53 mg/kg (soil) 3.7 mg/kg (marine water sediment) 37 mg/kg (fresh water sediment)
CAS: 406-58-6 1,1,1,3,3-pentafluorobutane	
PNEC	0.12 mg/l (marine water) 1.2 mg/l (fresh water) 5.95 mg/l (waste treatment plant) 0.823
PNEC	mg/kg (soil) 0.737 mg/kg (marine water sediment) 7.37 mg/kg (fresh water sediment)

- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Appropriate engineering controls** No further data; see section 7.
- **Individual protection measures, such as personal protective equipment**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
- **Respiratory protection:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- **Hand protection**



Protective gloves

The glove material has to be impermeable and resistant to the product.

Due to missing tests no recommendation to the glove material can be given for the product/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

• **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

• **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• **Eye/face protection** Goggles recommended during refilling

• **Environmental exposure controls**

There are not any obligations to make regular measurements of emission to environment. Basic rules of machinery and devices exploitation are to be observed.

SECTION 9: Physical and chemical properties

• **9.1 Information on basic physical and chemical properties**

• **General Information**

• **Physical state**

Fluid

• **Colour:**

dark green to brown

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· Odour:	Amine-like
· Odour threshold:	Not determined.
· Melting point/freezing point:	Undetermined.
· Boiling point or initial boiling point and boiling range	Undetermined.
· Flammability	Not applicable.
· Lower and upper explosion limit	
· Lower:	Not determined.
· Upper:	Not determined.
· Flash point:	Not applicable.
· Decomposition temperature:	Not determined.
· pH	Not determined.
· Viscosity:	
· Kinematic viscosity	Not determined.
· Dynamic at 25 °C:	250-550 mPas
· Solubility	
· water:	Not miscible or difficult to mix.
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure:	Not determined.
· Density and/or relative density	
· Density at 25 °C:	1.14-1.18 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.

· 9.2 Other information	
· Appearance:	
· Form:	Liquid
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	Product is not selfigniting.
· Explosive properties:	Product does not present an explosion hazard.
· Solvent content:	
· VOC (EC)	3.00 %
· Change in condition	
· Evaporation rate	Not determined.

· Information with regard to physical hazard classes	
· Explosives	Void
· Flammable gases	Void
· Aerosols	Void
· Oxidising gases	Void
· Gases under pressure	Void
· Flammable liquids	Void
· Flammable solids	Void
· Self-reactive substances and mixtures	Void
· Pyrophoric liquids	Void
· Pyrophoric solids	Void
· Self-heating substances and mixtures	Void
· Substances and mixtures, which emit flammable gases in contact with water	Void
· Oxidising liquids	Void
· Oxidising solids	Void
· Organic peroxides	Void
· Corrosive to metals	Void
· Desensitised explosives	Void

SECTION 10: Stability and reactivity

- **10.1 Reactivity** Avoid contacts with strong oxidizing substances.
- **10.2 Chemical stability** The product is stable at room temperature.

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- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** Avoid heat sources (sunbeams, heaters and the like) influence.
- **10.5 Incompatible materials:** Strong oxidizers.
- **10.6 Hazardous decomposition products:** Carbon monoxide and carbon dioxide

SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Based on available data, the classification criteria are not met.

• **LD/LC50 values relevant for classification:**

ATE (Acute Toxicity Estimates)

Oral	LD50	2,928 mg/kg
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CAS: 68610-97-9 Formaldehyde, polymer with nonylphenol, reaction products with diethanolamine and propylene oxide

Oral	LD50	>2,200 mg/kg (rat)
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Dermal	LD50	>2,000 mg/kg (rabbit)
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CAS: 1244733-77-4 Tris(2-chloro-1-methylethyl) phosphate

Oral	LD50	632 mg/kg (rat)
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Dermal	LD50	>2,000 mg/kg (rat)
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CAS: 102687-65-0 (1E)-1-chloro-3,3,3-trifluoroprop-1-ene

Inhalative	LC50/4 h	98,500-176,500 mg/l (rat)
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CAS: 111-46-6 2,2'-oxybisethanol

Oral	LD50	19,600 mg/kg (rat)
------	------	--------------------

Dermal	LD50	13,300 mg/kg (rabbit)
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Inhalative	LC50/4 h	>4.6 mg/l (rat)
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CAS: 6425-39-4 2,2'-dimorpholinyl diethyl ether

Oral	LD50	2,025 mg/kg (rat)
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Dermal	LD50	3,038 mg/kg (rabbit)
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CAS: 107-21-1 ethanediol

Oral	LD50	7,712 mg/kg (rat)
------	------	-------------------

Dermal	LD50	>3,500 mg/kg (mouse)
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Inhalative	LC50/4 h	>2.5 mg/l (rat)
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CAS: 1739-84-0 1,2-dimethylimidazole

Oral	LD50	1,300 mg/kg (rat)
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CAS: 80-70-6 1,1,3,3-tetramethylguanidine

Oral	LD50	500 mg/kg (ATE)
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CAS: 56-81-5 glycerol

Oral	LD50	12,600 mg/kg (rat)
------	------	--------------------

- **Skin corrosion/irritation** Causes skin irritation.
- **Serious eye damage/irritation** Causes serious eye irritation.
- **Respiratory or skin sensitisation** May cause an allergic skin reaction.
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.
- **11.2 Information on other hazards** No further data.
- **Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.

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SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**

CAS: 68610-97-9 Formaldehyde, polymer with nonylphenol, reaction products with diethanolamine and propylene oxide

EC50/72h	5.6 mg/l (algae) 6.5
LC50/48h	mg/l (daphnia) 8.8
LC50/96h	mg/l (fish)

CAS: 1244733-77-4 Tris(2-chloro-1-methylethyl) phosphate

EC50/48h	131 mg/l (daphnia) (OECD 202 Daphnia sp. Acute Immobilisation Test) 82 mg/
EC50/72h	l (algae) (OECD 201 Growth Inhibition Test)
LC50/96h	51 mg/l (fish) (OECD 203 Acute Toxicity Test)

CAS: 102687-65-0 (1E)-1-chloro-3,3,3-trifluoroprop-1-ene

NOEC/72h	115 mg/l (algae)
EC50/48h	82 mg/l (daphnia)
LC50/96h	38 mg/l (fish)

CAS: 111-46-6 2,2'-oxybisethanol

EC5	2,700 mg/l (algae)
EC50/24h	>100,000 mg/l (daphnia) (DIN 38412/11)
LC50/24h	752,000 mg/l (fish)

CAS: 6425-39-4 2,2'-dimorpholinyl diethyl ether

EC50/48h	>100 mg/l (daphnia)
EC50/96h	>100 mg/l (algae)
LC50/96h	>2,150 mg/l (fish)

CAS: 107-21-1 ethanediol

EC50/48h (static)	>100 mg/l (daphnia) (OECD 202 Daphnia sp. Acute Immobilisation Test)
EC50/96h	6,500-13,000 mg/l (algae)
LC50/96h	>500 mg/l (fish)

CAS: 406-58-6 1,1,1,3,3-pentafluorobutane

NOEC/72h	13.2 mg/l (algae)
EC50/72h	>114 mg/l (algae)
LC50/96h	>200 mg/l (fish) 38.2
NOEC/30 d	mg/l (fish)
NOEC/48h	>200 mg/l (daphnia)

· **12.2 Persistence and degradability**

CAS: 68610-97-9 Formaldehyde, polymer with nonylphenol, reaction products with diethanolamine and propylene oxide

Not easily bio-degradable.	8.9 % (calculation) (28 d)
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CAS: 102687-65-0 (1E)-1-chloro-3,3,3-trifluoroprop-1-ene

Not easily bio-degradable.	0 % (sediment) (28 d)
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CAS: 107-21-1 ethanediol

Easily bio-degradable.	90-100 % (sediment) (10 d)
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· **12.3 Bioaccumulative potential**

CAS: 68610-97-9 Formaldehyde, polymer with nonylphenol, reaction products with diethanolamine and propylene oxide

log Pow	2.2 (calculation)
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CAS: 1244733-77-4 Tris(2-chloro-1-methylethyl) phosphate

BCF	8-14 (fish)
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CAS: 102687-65-0 (1E)-1-chloro-3,3,3-trifluoroprop-1-ene log

Pow 2.2 (calculation)

- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects**
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. Harmful to aquatic organisms

SECTION 13: Disposal considerations

13.1 Waste treatment methods

- **Recommendation** Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **European waste catalogue**
- 1 Regulation of the Minister of Climate of 2 January 2020 on the waste catalogue (OJ 2020, item 10)
- 2. the Commission (EU) notice on technical guidance on waste classification (2018/C 124/01)
- 3. Commission Regulation (EU) No 1357/2014 of 18 December 2014 replacing Annex III to Directive 2008/98/EC of the European Parliament and of the Council on waste and repealing certain Directives (Guidelines for HP01-08, 10-13,15)
- 4 Council Regulation (EU) 2017/997 of 8 June 2017 amending Annex III to Directive 2008/98/EC of the European Parliament and of the Council with regard to the hazardous property HP 14 "Ecotoxic" (Guidance document for HP14)

The waste codes listed are a proposal based on the likely use of the product. Based on the specific types of use and waste management conditions, other waste codes may be assigned if necessary.

16 03 05*	organic wastes containing hazardous substances
15 01 10*	packaging containing residues of or contaminated by hazardous substances
HP4	Irritant - skin irritation and eye damage
HP6	Acute Toxicity
HP13	Sensitising
HP14	Ecotoxic

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- **14.1 UN number or ID number**
- **ADR/RID/ADN, IMDG, IATA** not regulated
- **14.2 UN proper shipping name**
- **ADR/RID/ADN, IMDG, IATA** not regulated
- **14.3 Transport hazard class(es)**
- **ADR/RID/ADN, IMDG, IATA**
- **Class** not regulated
- **14.4 Packing group**
- **ADR/RID/ADN, IMDG, IATA** not regulated
- **14.5 Environmental hazards:** Not applicable.
- **14.6 Special precautions for user** Not applicable.

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- **14.7 Maritime transport in bulk according to IMO instruments** Not applicable.
- **UN "Model Regulation":** not regulated

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
 1. 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
 2. Regulation (EC) No 1907/2006 of the European Parliament and the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 and Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67EWG, 93/105/EC and 2000/21/WE
 3. Commission Regulation (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

- **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**
None of the ingredients is listed.

- **REGULATION (EU) 2019/1148**
 - **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**
None of the ingredients is listed.
 - **Annex II - REPORTABLE EXPLOSIVES PRECURSORS**
None of the ingredients is listed.
 - **Regulation (EC) No 273/2004 on drug precursors**
None of the ingredients is listed.
 - **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**
None of the ingredients is listed.

- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**
 - H225 Highly flammable liquid and vapour.
 - H226 Flammable liquid and vapour.
 - H280 Contains gas under pressure; may explode if heated.
 - H302 Harmful if swallowed.
 - 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.
 - H373 May cause damage to organs through prolonged or repeated exposure. H411 Toxic to aquatic life with long lasting effects.
 - H412 Harmful to aquatic life with long lasting effects.

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according to 1907/2006/EC, Article 31

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· **Contact:** Thermo-Logic AB

· **Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Press. Gas (Liq.): Gases under pressure – Liquefied gas
Flam. Liq. 2: Flammable liquids – Category 2
Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Skin Sens. 1: Skin sensitisation – Category 1
Skin Sens. 1A: Skin sensitisation – Category 1A
Skin Sens. 1B: Skin sensitisation – Category 1B
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

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