Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 19.03.2024 Version number 15 (replaces version 14) Revision: 19.03.2024

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

· **1.1 Product identifier**

· **Product name: Ammonium Diluent Reagent HR**

· **Catalog number:** 00531149, 531140, 424456

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

· **Application of the substance / the preparation:** Reagent for water analysis

· **1.3 Details of the supplier of the safety data sheet**

· **Supplier:**
Tintometer GmbH
Schleefstraße 8-12
44287 Dortmund
Made in Germany
www.lovibond.com
phone: +49 (0)231 94510-0
e-mail: sales@lovibond.com

The Tintometer Limited
Lovibond® House
Sun Rise Way
Amesbury
Wiltshire SP4 7GR
United Kingdom
phone : +44 1980 664800
e-mail: SDS@lovibond.uk

· **Informing department:**
e-mail: sds@lovibond.com
Product Safety Department

· **1.4 Emergency telephone number:**
+44 1235 239670
Languages: English

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**
The product is not classified as hazardous according to the GB CLP regulation.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008** Void
· **Hazard pictograms** Void
· **Signal word** Void
· **Hazard statements** Void

· **2.3 Other hazards** No further relevant information available.

· **Results of PBT and vPvB assessment**
This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.
· **Determination of endocrine-disrupting properties**
The product does not contain substances with endocrine disrupting properties.

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**
· **Description:** aqueous solution
· **Dangerous components:** Void

(Contd. on page 2)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 19.03.2024 Version number 15 (replaces version 14) Revision: 19.03.2024

Product name: Ammonium Diluent Reagent HR

(Contd. of page 1)

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **General information** Instantly remove any clothing soiled by the product.
· **After inhalation** Supply fresh air.
· **After skin contact** Instantly wash with water and soap and rinse thoroughly.
· **After eye contact**
Rinse opened eye for several minutes under running water (at least 15 min). If symptoms persist, consult doctor.
· **After swallowing**
Rinse out mouth and then drink 1-2 glasses of water.
In case of persistent symptoms consult doctor.
· **4.2 Most important symptoms and effects, both acute and delayed:** Causes mild skin irritation.
· **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** Use fire fighting measures that suit the environment.
· **5.2 Special hazards arising from the substance or mixture**
The product is not combustible.
Formation of toxic gases is possible during heating or in case of fire.
· **5.3 Advice for firefighters**
· **Protective equipment:**
Wear self-contained breathing apparatus.
Wear full protective suit.
· **Additional information**
Collect contaminated fire fighting water separately. It must not enter drains.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Ambient fire may liberate hazardous vapours.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
· **Advice for non-emergency personnel:** No special measures required.
· **Advice for emergency responders:** Protective equipment: see section 8

· **6.2 Environmental precautions:**
Do not allow product to reach sewage system or water bodies.
Dilute with much water.
· **6.3 Methods and material for containment and cleaning up:**
Ensure adequate ventilation.
neutralize with diluted sulphuric acid
Absorb with liquid-binding material (sand, diatomite, universal binders).
Dispose of contaminated material as waste according to item 13.
· **6.4 Reference to other sections**
See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
· **Advice on safe handling:** No special precautions necessary if used correctly.
· **Hygiene measures:**
The usual precautionary measures should be adhered to general rules for handling chemicals.
Do not eat, drink or smoke when using this product.
Wash hands during breaks and at the end of the work.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Requirements to be met by storerooms and containers:** Store in cool location.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:**
Protect from heat and direct sunlight.

(Contd. on page 3)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 19.03.2024 Version number 15 (replaces version 14) Revision: 19.03.2024

Product name: Ammonium Diluent Reagent HR

(Contd. of page 2)

Protect from the effects of light.
Protect from humidity and keep away from water.
· **Recommended storage temperature:** 20°C +/- 5°C

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

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**
· **Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· **Additional information:** The lists that were valid during the compilation were used as basis.

· **8.2 Exposure controls**

· **Engineering measures:**
Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.
See item 7.

· **Individual protection measures, such as personal protective equipment**
Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled.
· **Eye/face protection**
Safety glasses
use against the effects of fumes / dust
Use safety glasses that have been tested and approved in accordance with government standards such as EN 166.
· **Hand protection**
Preventive skin protection by use of skin-protecting agents is recommended.
After use of gloves apply skin-cleaning agents and skin cosmetics.
· **Material of gloves**
nitrile rubber, NBR
Recommended thickness of the material: ≥ 0.11 mm
· **Penetration time of glove material**
Value for the permeation: Level = 1 (< 10 min)
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Other skin protection (body protection):** Protective work clothing.
· **Breathing equipment:** Use breathing protection against the effects of fumes/dust/aerosol.
· **Recommended filter device for short term use:** Filter P1

· **Environmental exposure controls** No special measures required.

*
SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **Physical state**	Fluid
· **Form:**	Solution
· **Colour:**	Colourless
· **Odour:**	Odourless
· **Odour threshold:**	Not applicable.
· **Melting point/Freezing point:**	Not determined.
· **Boiling point or initial boiling point and boiling range**	100°C (CAS: 7732-18-5 water)
· **Flammability**	Not applicable.
· **Explosive properties:**	Product is not explosive.
· **Lower and upper explosion limit**	
Lower:	Not applicable.
Upper:	Not applicable.
· **Flash point:**	Not applicable.
· **Auto-ignition temperature:**	Not applicable.
· **Decomposition temperature:**	Not determined.
· **pH at 20°C**	10.2
· **Kinematic viscosity**	Not determined.
· **Solubility**	
· **Water:**	Fully miscible

(Contd. on page 4)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 19.03.2024 Version number 15 (replaces version 14) Revision: 19.03.2024

Product name: Ammonium Diluent Reagent HR

(Contd. of page 3)

· **Partition coefficient n-octanol/water (log value)**	Not applicable (mixture).
· **Vapour pressure:**	Not determined.
· **Density and/or relative density**	
· **Density at 20°C:**	1 g/cm³
· **Relative density:**	Not determined.
· **Relative gas density**	Not determined.
· **Particle characteristics**	Not applicable (liquid).

· **9.2 Other information**

· **Information with regard to physical hazard classes**	
· **Corrosive to metals**	Void
· **Metal corrosion rate:**	acc. to "Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria, Fifth revised Edition"
· **Corrosion rate (steel)**	1.26 mm/a
· **Corrosion rate (aluminium)**	1.85 mm/a
· **Other safety characteristics**	
· **Oxidising properties:**	none
· **Additional information**	
· **Solids content:**	< 1.5 %
· **Solvent content:**	
· **Water:**	> 98 %

SECTION 10: Stability and reactivity

· **10.1 Reactivity** see section 10.3
· **10.2 Chemical stability** Stable at ambient temperature (room temperature).
· **10.3 Possibility of hazardous reactions** Exothermic reaction with acids
· **10.4 Conditions to avoid** No further relevant information available.
· **10.5 Incompatible materials:**
light metals
aluminium
zinc
· **10.6 Hazardous decomposition products:** see section 5

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.

· **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
· **Serious eye damage/irritation** Based on available data, the classification criteria are not met.

· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

· **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 (specific target organ toxicity) -single exposure** Based on available data, the classification criteria are not met.
· **STOT (specific target organ toxicity) -repeated exposure** Based on available data, the classification criteria are not met.

· **Aspiration hazard** Based on available data, the classification criteria are not met.

· **Additional toxicological information:**
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

· **11.2 Information on other hazards**
· **Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.

· **Other information** No further relevant information available.

(Contd. on page 5)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 19.03.2024 Version number 15 (replaces version 14) Revision: 19.03.2024

Product name: Ammonium Diluent Reagent HR

(Contd. of page 4)

SECTION 12: Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **12.2 Persistence and degradability** No further relevant information available.
· **12.3 Bioaccumulative potential** No further relevant information available.
· **12.4 Mobility in soil** No further relevant information available.
· **12.5 Results of PBT and vPvB assessment**
This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.
· **12.6 Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.
· **12.7 Other adverse effects**
Harmful effect due to pH shift.
Neutralisation possible in waste water treatment plants.
Avoid transfer into the environment.
· **Water hazard:**
Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation** Disposal must be made according to official regulations.

· **European waste catalogue**	
16 05 09	discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

· **14.1 UN number or ID number**	
· **ADR, IMDG, IATA**	Void
· **14.2 UN proper shipping name**	
· **ADR, IMDG, IATA**	Void
· **14.3 Transport hazard class(es)**	
· **ADR, IMDG, IATA**	
· **Class**	Void
· **14.4 Packing group**	
· **ADR, IMDG, IATA**	Void
· **14.5 Environmental hazards:**	Not applicable.
· **14.6 Special precautions for user**	Not applicable.
· **14.7 Maritime transport in bulk according to IMO instruments**	Not applicable.
· **Transport/Additional information:**	Not dangerous according to the above specifications.

SECTION 15: Regulatory information

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

· **Poisons Act UK**

· **Regulated explosives precursors**
None of the ingredients is listed.

· **Regulated poisons**
None of the ingredients is listed.

(Contd. on page 6)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 19.03.2024 Version number 15 (replaces version 14) Revision: 19.03.2024

Product name: Ammonium Diluent Reagent HR

(Contd. of page 5)

· **Reportable explosives precursors**
None of the ingredients is listed.

· **Reportable poisons**
The concentration of the substance is less than the stated mass percentage and is therefore of no concern:

CAS: 1310-73-2	sodium hydroxide	12% of total caustic alkalinity

· **Regulation (EU) 2019/1148 on the marketing and use of explosives precursors** not regulated

· **Regulation (EU) No 649/2012 concerning the export and import of hazardous chemicals (PIC)**
None of the ingredients is listed.

· **Regulation (EC) No 1334/2000 setting up a Community regime for the control of exports of dual-use items and technology:**
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.

· **Regulation (EC) No 1005/2009 on substances that deplete the ozone layer:**
None of the ingredients is listed.

· **REGULATION (EU) 2019/1021 on persistent organic pollutants (POP)**
None of the ingredients is listed.

· **LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV)**
None of the ingredients is listed.

· **Substances of very high concern (SVHC) according to REACH, Article 57**
This product does not contain any substances of very high concern above the legal concentration limit of ≥ 0.1% (w / w).
· **Substances of very high concern (SVHC) according to UK REACH**
This product does not contain any substances of very high concern above the legal concentration limit of ≥ 0.1% (w / w).

· **Directive 2012/18/EU (SEVESO III):**
· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· **Information about limitation of use:** Not required.

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

SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.
This Safety Data Sheets is in compliance with Regulation (EC) No 1907/2006, Article 31 as amended by Regulation (EU) 2020/878.

· **Training hints** Provide adequate information, instruction and training for operators.

· **Abbreviations and acronyms:**
STOT: specific target organ toxicity
SE: single exposure
RE: repeated exposure
EC50: half maximal effective concentration
IC50: half maximal inhibitory concentration
NOEL or NOEC: No Observed Effect Level or Concentration
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
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)
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative

· **Sources** Data arise from safety data sheets, reference works and literature.

· *** Data compared to the previous version altered.**

Tintometer® Group
Water Testing

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 08.08.2018 Version number 50 Revision: 03.07.2018

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

· **1.1 Product identifier**

· **Product name: Vario Ammonia Cyanurate F5 ml**

· **Catalog number:** 00531159, 531150, 4531150

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

· **Application of the substance / the preparation:** Reagent for water analysis

· **1.3 Details of the supplier of the safety data sheet**

· **Supplier:**
Tintometer GmbH
Schleefstraße 8-12
44287 Dortmund
Made in Germany
www.lovibond.com
phone: +49 231 94510-0
e-mail: sales@tintometer.de

Tintometer GmbH
Division AQUALYTIC®
Schleefstr. 12
44287 Dortmund
Made in Germany
www.aqualytic.de
phone: +49 231 94510-755
e-mail: sales@aqualytic.de

The Tintometer Limited
Lovibond® House
Sun Rise Way
Amesbury
Wiltshire SP4 7GR
United Kingdom
phone : +44 1980 664800
e-mail: SDS@tintometer.com

· **Informing department:**
e-mail: sds@tintometer.de
Product Safety Department

· **1.4 Emergency telephone number:**
+44 1235 239670
Languages: English

*
SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**



GHS05 corrosion

Skin Corr. 1A	H314	Causes severe skin burns and eye damage.
Eye Dam. 1	H318	Causes serious eye damage.
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.

(Contd. on page 2)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 08.08.2018 Version number 50 Revision: 03.07.2018

Product name: Vario Ammonia Cyanurate F5 ml

(Contd. of page 1)

· **Hazard pictograms**



GHS05

· **Signal word** Danger
· **Hazard-determining components of labelling:**
lithium hydroxide monohydrate
· **Hazard statements**
H314 Causes severe skin burns and eye damage.
H412 Harmful to aquatic life with long lasting effects.
· **Precautionary statements**
P280 Wear protective gloves/protective clothing/eye protection.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P310 Immediately call a POISON CENTER/doctor.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

· **2.3 Other hazards** No further relevant information available.
· **Results of PBT and vPvB assessment**
This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**
· **Description:** Mixture of organic and inorganic compounds

· **Dangerous components:**		
CAS: 1310-66-3 EINECS: 215-183-4	lithium hydroxide monohydrate Skin Corr. 1A, H314; Eye Dam. 1, H318; Acute Tox. 4, H302	10-20%
CAS: 51580-86-0 EINECS: 220-767-7 Index No: 613-030-01-7	sodium dichloroisocyanurate, dihydrate Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H302; Eye Irrit. 2, H319; STOT SE 3, H335	0.25-<2.5%

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

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **General information** Instantly remove any clothing soiled by the product.
· **After inhalation** Supply fresh air and call for doctor for safety reasons.
· **After skin contact**
Instantly rinse with water.
Immediate medical treatment necessary. Failure to treat burns can prevent wounds from healing.
· **After eye contact**
Rinse opened eye for several minutes (at least 15 min) under running water.
Call a doctor immediately.
· **After swallowing**
Rinse out mouth and then drink 1-2 glasses of water.
Do not induce vomiting; instantly call for medical help.
· **4.2 Most important symptoms and effects, both acute and delayed:**
burns
after inhalation:
coughing
breathing difficulty
after swallowing:
strong caustic effect.
absorption
after absorption of large amounts:

(Contd. on page 3)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 08.08.2018 Version number 50 Revision: 03.07.2018

Product name: Vario Ammonia Cyanurate F5 ml

(Contd. of page 2)

vomiting
CNS disorders
ataxia (impaired locomotor coordination)
disorder of electrolyte balance
cramps
· **Danger**
Danger of system failure.
Danger of gastric perforation.
· **4.3 Indication of any immediate medical attention and special treatment needed:**
If swallowed or in case of vomiting, danger of entering the lungs
Subsequent observation for pneumonia and pulmonary oedema

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents** Use fire fighting measures that suit the environment.
· **5.2 Special hazards arising from the substance or mixture**
mixture with combustible ingredients
Formation of toxic gases is possible during heating or in case of fire.
Can be released in case of fire:
Hydrogen chloride (HCl)
nitrous gases
LiOx
Carbon monoxide (CO) and carbon dioxide (CO_2)
· **5.3 Advice for firefighters**
· **Protective equipment:**
Wear self-contained breathing apparatus.
Wear full protective suit.
· **Additional information**
Collect contaminated fire fighting water separately. It must not enter drains.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Ambient fire may liberate hazardous vapours.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
· **Advice for non-emergency personnel:**
Wear protective equipment. Keep unprotected persons away.
Avoid substance contact.
Ensure adequate ventilation
Use breathing protection against the effects of fumes/dust/aerosol.
· **Advice for emergency responders:** Protective equipment: see section 8
· **6.2 Environmental precautions:**
Do not allow product to reach sewage system or water bodies.
Inform respective authorities in case product reaches water or sewage system.
· **6.3 Methods and material for containment and cleaning up:**
Ensure adequate ventilation.
Collect mechanically.
Dispose of contaminated material as waste according to item 13.
· **6.4 Reference to other sections**
See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
· **Advice on safe handling:**
Prevent formation of dust.
Thorough dedusting.
· **Hygiene measures:**
Do not inhale dust / smoke / mist.
Do not get in eyes, on skin, or on clothing.

(Contd. on page 4)

Safety data sheet
according to 1907/2006/EC, Article 31

(Contd. of page 3)

Take off immediately all contaminated clothing.
Wash hands during breaks and at the end of the work.
Do not eat, drink or smoke when using this product.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage**
· **Requirements to be met by storerooms and containers:** Store in cool location.
· **Information about storage in one common storage facility:**
Do not store together with acids.
Store away from oxidising agents.
· **Further information about storage conditions:**
Store in cool, dry conditions in well sealed containers.
Protect from heat and direct sunlight.
This product is hygroscopic.
· **Recommended storage temperature:** 20°C +/- 5°C
· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

· **Components with limit values that require monitoring at the workplace:**	
CAS: 51580-86-0 sodium dichloroisocyanurate, dihydrate	
WEL (Great Britain)	Short-term value: 0.07 mg/m³ Long-term value: 0.02 mg/m³ Sen; as -NCO

· **Regulatory information** WEL (Great Britain): EH40/2011
· **Recommended monitoring procedures:**
Methods for measurement of the workplace atmosphere have to correspond to the requirements of norms DIN EN 482 and DIN EN 689.

· **Additional information:** The lists that were valid during the compilation were used as basis.

· **8.2 Exposure controls**

· **Engineering measures:**
Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.
See item 7.

· **Personal protective equipment**
· **Breathing equipment:** Use breathing protection against the effects of fumes/dust/aerosol.
· **Recommended filter device for short term use:** Filter P2
· **Protection of hands:**
Alkaline resistant gloves
Check protective gloves prior to each use for their proper condition.
After use of gloves apply skin-cleaning agents and skin cosmetics.
· **Material of gloves**
nitrile rubber, NBR
Recommended thickness of the material: ≥ 0.11 mm
· **Penetration time of glove material**
Value for the permeation: Level = 1 (< 10 min)
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Eye protection:** Tightly sealed safety glasses.
· **Body protection:** Alkaline resistant protective clothing

· **Limitation and supervision of exposure into the environment:** Do not allow product to reach sewage system or water bodies.

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**
· **Appearance:**

Form / Physical state:	Powder
Colour:	White
· **Odour:**	Pungent

(Contd. on page 5)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 08.08.2018 Version number 50 Revision: 03.07.2018

Product name: Vario Ammonia Cyanurate F5 ml

(Contd. of page 4)

· **Odour threshold:**	Not determined.
· **pH-value at 20°C:**	12.3 Strongly alkaline
· **Melting point/Freezing point:**	Not determined
· **Initial boiling point and boiling range:**	Not determined
· **Flash point:**	Not applicable
· **Flammability (solid, gas):**	The product is not combustible.
· **Ignition temperature:**	Not determined.
· **Decomposition temperature:**	Not determined.
· **Auto-ignition temperature:**	Product is not self-igniting.
· **Explosive properties:**	Product is not explosive.
· **Flammability or explosive limits:**	
Lower:	Not applicable
Upper:	Not applicable
· **Oxidising properties:**	none
· **Vapour pressure:**	Not applicable.
· **Density:**	Not determined
· **Relative density:**	Not determined.
· **Vapour density:**	Not applicable.
· **Evaporation rate:**	Not applicable.
· **Solubility(ies):**	
Water:	Soluble
· **Partition coefficient: n-octanol/water:**	Not applicable.
· **Viscosity:**	Not applicable.
· **Solvent content:**	
Organic solvents:	0.0 %
Solids content:	100.0 %
· **9.2 Other information**	No further relevant information available.

SECTION 10: Stability and reactivity

· **10.1 Reactivity** see section 10.3
· **10.2 Chemical stability** Stable at ambient temperature (room temperature).
· **10.3 Possibility of hazardous reactions**
Aqueous solution reacts alkaline.
Aqueous solution reacts with metals.
Reacts with light alloys in the presence of moisture to form hydrogen
Corrodes aluminium
Reacts with acids
· **10.4 Conditions to avoid** Exposure to moisture.
· **10.5 Incompatible materials:**
organic substances
aluminium
zinc
· **10.6 Hazardous decomposition products:**
Chlorine compounds
In case of fire: see section 5.

SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity** Based on available data, the classification criteria are not met.

· **Acute toxicity estimate ($ATE_{(MIX)}$) - Calculation method:**		
Oral	CLP $ATE_{(MIX)}$	2894 mg/kg (.)

(Contd. on page 6)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 08.08.2018 Version number 50 Revision: 03.07.2018

Product name: Vario Ammonia Cyanurate F5 ml

(Contd. of page 5)

· **LD/LC50 values that are relevant for classification:**

CAS: 1310-66-3 lithium hydroxide monohydrate		
Oral	LD50	368 mg/kg (rat) (Registrant, ECHA)
Inhalative	LC50.	>6.15 mg/l/4h (rat) (Registant, ECHA)
CAS: 51580-86-0 sodium dichloroisocyanurate, dihydrate		
Oral	LD50	1671 mg/kg (rat) (EPA OPP 81-1) (Registrant, ECHA)
Dermal	LD50	>5000 mg/kg (rat) (EPA OPP 81-2) (Registrant, ECHA)

· **Primary irritant effect:**
· **Skin corrosion/irritation**
Causes severe skin burns and eye damage.
· **Serious eye damage/irritation**
Causes serious eye damage.
Risk of blindness!

· **Information on components:**

CAS: 51580-86-0 sodium dichloroisocyanurate, dihydrate		
Irritation of eyes	OECD 405	(rabbit: burns)

· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

· **Information on components:**

CAS: 51580-86-0 sodium dichloroisocyanurate, dihydrate		
Sensitisation	OECD 406	(guinea pig: negative) (Magnusson / Klingman)

· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)** The following statements refer to the mixture:
· **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 (specific target organ toxicity) -single exposure** Based on available data, the classification criteria are not met.
· **STOT (specific target organ toxicity) -repeated exposure** Based on available data, the classification criteria are not met.
· **Aspiration hazard** Based on available data, the classification criteria are not met.

· **Information on components:**

CAS: 51580-86-0 sodium dichloroisocyanurate, dihydrate	
OECD 471	(negative) (Bacterial Reverse Mutation Test - Ames test) (Escherichia coli)

· **Additional toxicological information:**
The following applies to lithium compounds in general:
after absorption: CNS disorders, ataxia (impaired locomotor coordination) due to disturbed electrolyte balance
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

* SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**

CAS: 51580-86-0 sodium dichloroisocyanurate, dihydrate	
EC50	0.28 mg/l/48h (Daphnia magna) (ECOTOX)
EC50	>5000 mg/l/96h (Algeal toxicity) (OECD 201)
NOEC	2600 mg/l (Daphnia magna) (OECD 2011, 21d) (Registrant, ECHA)
	756 mg/l (fish) (28d) (Registrant, ECHA)

(Contd. on page 7)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 08.08.2018 Version number 50 Revision: 03.07.2018

Product name: Vario Ammonia Cyanurate F5 ml

(Contd. of page 6)

	1000 mg/l (rainbow trout) (OECD 2015, 28d) (Registrant, ECHA)
LC50	0.25 mg/l/96h (rainbow trout) (ECOTOX)

· **Other information:**
The following applies for lithium compounds in general:
fish toxic from 100 mg/l, Daphnia toxic from 16 mg/l, plants toxic from 0,2 mg/l

· **12.2 Persistence and degradability**

CAS: 51580-86-0 sodium dichloroisocyanurate, dihydrate	
OECD 306	4 (.) (Biodegradation Test – Seawater)

· **12.3 Bioaccumulative potential** No further relevant information available.
· **12.4 Mobility in soil** No further relevant information available.
· **12.5 Results of PBT and vPvB assessment**
This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.
· **12.6 Other adverse effects**
Harmful effect due to pH shift.
Avoid transfer into the environment.
· **Water hazard:**
Do not allow product to reach ground water, water bodies or sewage system.
Danger to drinking water if even small quantities leak into soil.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Hand over to disposers of hazardous waste.

· **European waste catalogue**	
16 05 06*	laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.
· **Recommended cleaning agent:** Water, if necessary with cleaning agent.

SECTION 14: Transport information

· **14.1 UN-Number**
· **ADR, IMDG, IATA** UN2680

· **14.2 UN proper shipping name**
· **ADR** 2680 LITHIUM HYDROXIDE mixture
· **IMDG, IATA** LITHIUM HYDROXIDE

· **14.3 Transport hazard class(es)**

· **ADR**



· **Class** 8 (C6) Corrosive substances.
· **Label** 8

· **IMDG, IATA**



· **Class** 8 Corrosive substances.

(Contd. on page 8)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 08.08.2018 Version number 50 Revision: 03.07.2018

Product name: Vario Ammonia Cyanurate F5 ml

(Contd. of page 7)

· **Label**	8
· **14.4 Packing group** · **ADR, IMDG, IATA**	II
· **14.5 Environmental hazards:**	Not applicable.
· **14.6 Special precautions for user** · **Kemler Number:** · **EMS Number:** · **Segregation groups** · **Stowage Category** · **Segregation Code**	Warning: Corrosive substances. 80 F-A,S-B Alkalis A SG35 Stow "separated from" acids.
· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **ADR**	
· **Limited quantities (LQ)**	1 kg
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
· **Transport category**	2
· **Tunnel restriction code**	E
· **IMDG**	
· **Limited quantities (LQ)**	1 kg
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g

SECTION 15: Regulatory information

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

· **Regulation (EC) No 1005/2009 on substances that deplete the ozone layer:**

None of the ingredients is listed.

· **Directive 2012/18/EU (SEVESO III):**
· **Named dangerous substances - ANNEX I** sodium dichloroisocyanurate, dihydrate

· **Regulation (EU) No 649/2012**

None of the ingredients is listed.

· **Information about limitation of use:** Employment restrictions concerning young persons must be observed.

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

SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

· **Training hints** Provide adequate information, instruction and training for operators.

· **Abbreviations and acronyms:**
OECD: Organisation for Economic Co-operation and Development
STOT: specific target organ toxicity
SE: single exposure
RE: repeated exposure

(Contd. on page 9)

Safety data sheet
according to 1907/2006/EC, Article 31

(Contd. of page 8)

EC50: half maximal effective concentration
IC50: hallf maximal inhibitory concentration
NOEL or NOEC: No Observed Effect Level or Concentration
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
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)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1A: Skin corrosion/irritation – Category 1A
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

· **Sources**
Data arise from safety data sheets, reference works and literature.
ECHA: European CHemicals Agency http://echa.europa.eu
RTECS (Registry of Toxic Effects of Chemical Substances)

· *** Data compared to the previous version altered.**

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 14.11.2023 Version number 53 (replaces version 52) Revision: 14.11.2023

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

· **1.1 Product identifier**

· **Product name: Vario Ammonia Cyanurate F5 ml**

· _SDS valid from Lot: T09A

· **Catalog number:** 00531159, 531150, 4531150

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

· **Application of the substance / the preparation:** Reagent for water analysis

· **1.3 Details of the supplier of the safety data sheet**

· **Supplier:**
Tintometer GmbH
Schleefstraße 8-12
44287 Dortmund
Made in Germany
www.lovibond.com
phone: +49 (0)231 94510-0
e-mail: sales@lovibond.com

The Tintometer Limited
Lovibond® House
Sun Rise Way
Amesbury
Wiltshire SP4 7GR
United Kingdom
phone : +44 1980 664800
e-mail: SDS@lovibond.uk

· **Informing department:**
e-mail: sds@lovibond.com
Product Safety Department

· **1.4 Emergency telephone number:**
+44 1235 239670
Languages: English

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**


GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.


GHS07

Skin Irrit. 2 H315 Causes skin irritation.

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 GB CLP regulation.

(Contd. on page 2)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 14.11.2023 Version number 53 (replaces version 52) Revision: 14.11.2023

Product name: Vario Ammonia Cyanurate F5 ml

(Contd. of page 1)

· **Hazard pictograms**



GHS05

· **Signal word** Danger
· **Hazard-determining components of labelling:**
lithium hydroxide monohydrate
· **Hazard statements**
H315 Causes skin irritation.
H318 Causes serious eye damage.
H412 Harmful to aquatic life with long lasting effects.
· **Precautionary statements**
P280 Wear protective gloves / eye protection.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor.
· **Additional information:**
EUH031 Contact with acids liberates toxic gas.

· **2.3 Other hazards** No further relevant information available.

· **Results of PBT and vPvB assessment**
This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.
· **Determination of endocrine-disrupting properties**
The product does not contain substances with endocrine disrupting properties.

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**
· **Description:** Mixture of organic and inorganic compounds

· **Dangerous components:**		
CAS: 1310-66-3 EINECS: 215-183-4 Reg.nr.: 01-2119560576-31-XXXX	lithium hydroxide monohydrate Skin Corr. 1A, H314; Eye Dam. 1, H318; Acute Tox. 4, H302	3–<5%
CAS: 51580-86-0 EINECS: 220-767-7 Index No: 613-030-01-7	sodium dichloroisocyanurate, dihydrate Aquatic Acute 1, H400 (M=1); Aquatic Chronic 1, H410 (M=1); Acute Tox. 4, H302; Eye Irrit. 2, H319; STOT SE 3, H335, EUH031	0.25–<2.5%

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

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **General information** Instantly remove any clothing soiled by the product.
· **After inhalation** Supply fresh air and call for doctor for safety reasons.
· **After skin contact**
Instantly rinse with water.
Immediate medical treatment necessary. Failure to treat burns can prevent wounds from healing.
· **After eye contact**
Rinse opened eye for several minutes (at least 15 min) under running water.
Call a doctor immediately.
· **After swallowing**
Rinse out mouth and then drink 1-2 glasses of water.
Do not induce vomiting; instantly call for medical help.
· **4.2 Most important symptoms and effects, both acute and delayed:**
Irritation and corrosion
after inhalation:

(Contd. on page 3)

Safety data sheet
according to 1907/2006/EC, Article 31

(Contd. of page 2)

coughing
breathing difficulty
damage to the affected mucous membranes possible
after swallowing:
strong caustic effect.
absorption
after absorption of large amounts:
sickness
vomiting
ataxia (impaired locomotor coordination)
CNS disorders
disorder of electrolyte balance
cramps

· **Danger**
Danger of system failure.
Danger of gastric perforation.

· **4.3 Indication of any immediate medical attention and special treatment needed:**
If swallowed or in case of vomiting, danger of entering the lungs
Subsequent observation for pneumonia and pulmonary oedema

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents** Use fire fighting measures that suit the environment.
· **5.2 Special hazards arising from the substance or mixture**
The product is not combustible.
Formation of toxic gases is possible during heating or in case of fire.
Can be released in case of fire:
Hydrogen chloride (HCl)
nitrous gases
LiOx
· **5.3 Advice for firefighters**
· **Protective equipment:**
Wear self-contained breathing apparatus.
Wear full protective suit.
· **Additional information**
Collect contaminated fire fighting water separately. It must not enter drains.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Ambient fire may liberate hazardous vapours.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
· **Advice for non-emergency personnel:**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
· **Advice for emergency responders:** Protective equipment: see section 8

· **6.2 Environmental precautions:**
Do not allow product to reach sewage system or water bodies.
Inform respective authorities in case product reaches water or sewage system.
· **6.3 Methods and material for containment and cleaning up:**
Ensure adequate ventilation.
Collect mechanically.
Dispose of contaminated material as waste according to item 13.
· **6.4 Reference to other sections**
See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

(Contd. on page 4)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 14.11.2023 Version number 53 (replaces version 52) Revision: 14.11.2023

Product name: Vario Ammonia Cyanurate F5 ml

(Contd. of page 3)

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
· **Advice on safe handling:**
Prevent formation of dust.
Provide suction extractors if dust is formed.
· **Hygiene measures:**
Avoid contact with the skin.
Avoid contact with the eyes.
Take off immediately all contaminated clothing.
Wash hands during breaks and at the end of the work.
Do not eat, drink or smoke when using this product.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Requirements to be met by storerooms and containers:** Store in cool location.
· **Information about storage in one common storage facility:**
Store away from oxidising agents.
Do not store together with acids.
see chapter 10
· **Further information about storage conditions:**
Store in cool, dry conditions in well sealed containers.
Protect from heat and direct sunlight.
Protect from the effects of light.
Protect from humidity and keep away from water.
This product is hygroscopic.
· **Recommended storage temperature:** 10-25°C

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

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

· **Components with limit values that require monitoring at the workplace:**	
CAS: 51580-86-0 sodium dichloroisocyanurate, dihydrate	
WEL (Great Britain)	Short-term value: 0.07 mg/m³ Long-term value: 0.02 mg/m³ Sen; as -NCO

· **Regulatory information** WEL (Great Britain): EH40/2020

· **DNELs**		
CAS: 1310-66-3 lithium hydroxide monohydrate		
Oral	DNEL	12.4 mg/kg (Consumer / acute / systemic effects)
		4.13 mg/kg /bw/d (Consumer / long-term / systemic effects)
Dermal	DNEL	100 mg/kg /bw/d (Worker / acute / systemic effects)
		41.35 mg/kg /bw/d (Worker / long-term /systemic effects)
		50 mg/kg /bw/d (Consumer / acute / systemic effects)
		41.35 mg/kg /bw/d (Consumer / long-term / systemic effects)
Inhalative	DNEL	30 mg/m³ (Worker / acute / systemic effects)
		10 mg/m³ (Worker / long-term /systemic effects)
		18.63 mg/m³ (Consumer / acute / systemic effects)
		6.21 mg/m³ (Consumer / long-term / systemic effects)

· **Recommended monitoring procedures:**
Methods for measurement of the workplace atmosphere have to correspond to the requirements of norms DIN EN 482 and DIN EN 689.

· **PNECs**	
CAS: 1310-66-3 lithium hydroxide monohydrate	
PNEC	79.2 mg/l (Sewage treatment plant)
	0.23 mg/l (Marine water)
	2.3 mg/l (Fresh water)
PNEC	28.22 mg/kg (Soil)

(Contd. on page 5)

Safety data sheet
according to 1907/2006/EC, Article 31

(Contd. of page 4)

	15.3 mg/kg (Marine sediment) 153 mg/kg (Fresh water sediment)

· **Additional information:** The lists that were valid during the compilation were used as basis.

· **8.2 Exposure controls**

· **Engineering measures:**
Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.
See item 7.

· **Individual protection measures, such as personal protective equipment**
Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled.
· **Eye/face protection** Tightly sealed safety glasses.
· **Hand protection**
Check protective gloves prior to each use for their proper condition.
Protective gloves.
After use of gloves apply skin-cleaning agents and skin cosmetics.
· **Material of gloves**
nitrile rubber, NBR
Recommended thickness of the material: ≥ 0.11 mm
· **Penetration time of glove material**
Value for the permeation: Level = 1 (< 10 min)
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Other skin protection (body protection):** Protective work clothing.
· **Breathing equipment:** Use breathing protection against the effects of fumes/dust/aerosol.
· **Recommended filter device for short term use:** Filter P2

· **Environmental exposure controls** Do not allow product to reach sewage system or water bodies.

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **Physical state**	Solid.
· **Form:**	Powder
· **Colour:**	White
· **Odour:**	Irritant
· **Odour threshold:**	Not determined.
· **Melting point/Freezing point:**	Not determined.
· **Boiling point or initial boiling point and boiling range**	Not determined.
· **Flammability**	The product is not combustible.
· **Explosive properties:**	Product is not explosive.
· **Lower and upper explosion limit**	
Lower:	Not applicable.
Upper:	Not applicable.
· **Flash point:**	Not applicable.
· **Auto-ignition temperature:**	Not applicable (solid).
· **Decomposition temperature:**	Not determined.
· **pH (25 g/l) at 20°C**	12.2
· **Kinematic viscosity**	Not applicable (solid).
· **Solubility**	
· **Water:**	Soluble
· **Partition coefficient n-octanol/water (log value)**	Not applicable (mixture).
· **Vapour pressure:**	Not applicable.
· **Density and/or relative density**	
· **Density:**	Not determined.
· **Relative density:**	Not determined.
· **Relative gas density**	Not applicable (solid).
· **Particle characteristics**	Not determined.

· **9.2 Other information**

· **Information with regard to physical hazard classes**
· **Corrosive to metals** Void

(Contd. on page 6)

Safety data sheet
according to 1907/2006/EC, Article 31

(Contd. of page 5)

· **Other safety characteristics**
· **Oxidising properties:** none
· **Additional information**
· **Solids content:** 100.0 %

SECTION 10: Stability and reactivity

· **10.1 Reactivity** see section 10.3
· **10.2 Chemical stability** Stable at ambient temperature (room temperature).
· **10.3 Possibility of hazardous reactions**
Aqueous solution reacts alkaline.
Aqueous solution reacts with metals.
Reacts with light alloys in the presence of moisture to form hydrogen
Corrodes aluminium
Reacts with acids
· **10.4 Conditions to avoid** Exposure to moisture.
· **10.5 Incompatible materials:**
organic substances
aluminium
zinc
· **10.6 Hazardous decomposition products:**
Chlorine compounds
In case of fire: see section 5.

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 that are relevant for classification:**		
CAS: 1310-66-3 lithium hydroxide monohydrate		
Oral	LD50	578 mg/kg (rat) (Registrant, ECHA) Acute toxicity data are available for oral route of exposure: LD50 (rat, oral): female: 210 mg/kg bw; male: 280 mg/kg bw , both for lithium hydroxide anhydrous. As these values are most likely linked to local tissue damage due to the corrosiveness of the substance and are not only a result of "primary" systemic toxicity the LD50 oral of lithium chloride and lithium carbonate were taken into account after conversion. A LD50 value of 330 mg/kg bw(anhydrous) resp. 578 mg/kg bw (monohydrate) were found to reflect properly the systemic toxicity of the corrosive substance lithium hydroxide.
Dermal	LD50.	>2000 mg/kg (rat) (Registrant, ECHA)
Inhalative	LC50	>6.15 mg/l /4h (rat) (Registrant, ECHA)
CAS: 51580-86-0 sodium dichloroisocyanurate, dihydrate		
Oral	LD50	1671 mg/kg (rat) (EPA OPP 81-1) (Registrant, ECHA)
Dermal	LD50	>5000 mg/kg (rat) (EPA OPP 81-2) (Registrant, ECHA)

· **Skin corrosion/irritation** Causes skin irritation.
· **Serious eye damage/irritation**
Causes serious eye damage.
Risk of corneal clouding.

· **Information on components:**		
CAS: 51580-86-0 sodium dichloroisocyanurate, dihydrate		
Irritation of eyes	OECD 405	(rabbit: burns)

· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

(Contd. on page 7)

Safety data sheet
according to 1907/2006/EC, Article 31

(Contd. of page 6)

· **Information on components:**		
CAS: 51580-86-0 sodium dichloroisocyanurate, dihydrate		
Sensitisation	OECD 406	(guinea pig: negative) (Magnusson / Klingman)

· **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.

· **Information on components:**	
CAS: 51580-86-0 sodium dichloroisocyanurate, dihydrate	
OECD 471	(negative) (Bacterial Reverse Mutation Test - Ames test) (Escherichia coli)

· **STOT (specific target organ toxicity) -single exposure** Based on available data, the classification criteria are not met.
· **STOT (specific target organ toxicity) -repeated exposure** Based on available data, the classification criteria are not met.

· **Aspiration hazard** Based on available data, the classification criteria are not met.

· **Additional toxicological information:**
The following applies to lithium compounds in general:
after absorption: CNS disorders, ataxia (impaired locomotor coordination) due to disturbed electrolyte balance

· **11.2 Information on other hazards**
· **Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.

SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**	
CAS: 1310-66-3 lithium hydroxide monohydrate	
EC50	33.5 mg/l/48h (Daphnia magna) without pH-adjustment
NOEC	17.35 mg/l /34d (zebrafish)
	4 mg/l /21d (Daphnia magna)
	10 mg/l /72h (Pseudokirchneriella subcapitata)
EC50	153.44 mg/l/72h (Pseudokirchneriella subcapitata)
LC50	109 mg/l/96h (zebrafish)
CAS: 51580-86-0 sodium dichloroisocyanurate, dihydrate	
EC50	0.28 mg/l/48h (Daphnia magna) (ECOTOX)
EC50	>5000 mg/l/96h (Algeal toxicity) (OECD 201)
NOEC	2600 mg/l (Daphnia magna) (OECD 2011, 21d) (Registrant, ECHA)
	756 mg/l (fish) (28d) (Registrant, ECHA)
	1000 mg/l (rainbow trout) (OECD 2015, 28d) (Registrant, ECHA)
LC50	0.25 mg/l/96h (rainbow trout) (ECOTOX)

· **Other information:**
The following applies for lithium compounds in general:
fish toxic from 100 mg/l, Daphnia toxic from 16 mg/l, plants toxic from 0,2 mg/l

· **12.2 Persistence and degradability**		
CAS: 51580-86-0 sodium dichloroisocyanurate, dihydrate		
OECD 306	4 (.) (Biodegradation Test – Seawater)	

· **12.3 Bioaccumulative potential** No further relevant information available.
· **12.4 Mobility in soil** No further relevant information available.
· **12.5 Results of PBT and vPvB assessment**
This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.
· **12.6 Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.

(Contd. on page 8)

Safety data sheet
according to 1907/2006/EC, Article 31

(Contd. of page 7)

· **12.7 Other adverse effects**
Harmful effect due to pH shift.
Forms corrosive mixtures with water even if diluted.
Avoid transfer into the environment.
· **Water hazard:**
Do not allow product to reach ground water, water bodies or sewage system.
Danger to drinking water if even small quantities leak into soil.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Hand over to disposers of hazardous waste.

· **European waste catalogue**	
16 05 06*	laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.
· **Recommended cleaning agent:** Water, if necessary with cleaning agent.

SECTION 14: Transport information

· **14.1 UN number or ID number**	
· **ADR, IMDG, IATA**	Void
· **14.2 UN proper shipping name**	
· **ADR, IMDG, IATA**	Void
· **14.3 Transport hazard class(es)**	
· **ADR, IMDG, IATA**	
· **Class**	Void
· **14.4 Packing group**	
· **ADR, IMDG, IATA**	Void
· **14.5 Environmental hazards:**	Not applicable.
· **14.6 Special precautions for user**	Not applicable.
· **14.7 Maritime transport in bulk according to IMO instruments**	Not applicable.
· **Transport/Additional information:**	Not dangerous according to the above specifications.

*
SECTION 15: Regulatory information

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

· **Poisons Act UK**

· **Regulated explosives precursors**
None of the ingredients is listed.

· **Regulated poisons**
None of the ingredients is listed.

· **Reportable explosives precursors**
None of the ingredients is listed.

· **Reportable poisons**
None of the ingredients is listed.

· **Regulation (EU) 2019/1148 on the marketing and use of explosives precursors** not regulated

(Contd. on page 9)

Safety data sheet
according to 1907/2006/EC, Article 31

(Contd. of page 8)

· **Regulation (EU) No 649/2012 concerning the export and import of hazardous chemicals (PIC)**
None of the ingredients is listed.

· **Regulation (EC) No 1334/2000 setting up a Community regime for the control of exports of dual-use items and technology:**
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.

· **Regulation (EC) No 1005/2009 on substances that deplete the ozone layer:**
None of the ingredients is listed.

· **REGULATION (EU) 2019/1021 on persistent organic pollutants (POP)**
None of the ingredients is listed.

· **LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV)**
None of the ingredients is listed.

· **Substances of very high concern (SVHC) according to REACH, Article 57**
This product does not contain any substances of very high concern above the legal concentration limit of ≥ 0.1% (w / w).
· **Substances of very high concern (SVHC) according to UK REACH**
This product does not contain any substances of very high concern above the legal concentration limit of ≥ 0.1% (w / w).

· **Directive 2012/18/EU (SEVESO III):**
· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· **Information about limitation of use:** Not required.

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

*
SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.
This Safety Data Sheets is in compliance with Regulation (EC) No 1907/2006, Article 31 as amended by Regulation (EU) 2020/878.

· **Training hints** Provide adequate information, instruction and training for operators.

· **Relevant phrases**
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
EUH031 Contact with acids liberates toxic gas.

· **Abbreviations and acronyms:**
OECD: Organisation for Economic Co-operation and Development
STOT: specific target organ toxicity
SE: single exposure
RE: repeated exposure
EC50: half maximal effective concentration
IC50: half maximal inhibitory concentration
NOEL or NOEC: No Observed Effect Level or Concentration
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
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)
DNEL: Derived No-Effect Level (UK REACH)
PNEC: Predicted No-Effect Concentration (UK REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

(Contd. on page 10)

Safety data sheet
according to 1907/2006/EC, Article 31

(Contd. of page 9)

PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1A: Skin corrosion/irritation – Category 1A
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
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

· **Sources**
Data arise from safety data sheets, reference works and literature.
ECHA: European CHemicals Agency http://echa.europa.eu
ECOTOX Database

· *** Data compared to the previous version altered.**

Tintometer® Group
Water Testing

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 18.07.2018 Version number 29 Revision: 03.07.2018

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

· **1.1 Product identifier**

· **Product name: Vario Ammonia Salicylate F5 ml**

· **Catalog number:** 00531169, 531160, 4531160

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

· **Application of the substance / the preparation:** Reagent for water analysis

· **1.3 Details of the supplier of the safety data sheet**

· **Supplier:**
Tintometer GmbH
Schleefstraße 8-12
44287 Dortmund
Made in Germany
www.lovibond.com
phone: +49 231 94510-0
e-mail: sales@tintometer.de

Tintometer GmbH
Division AQUALYTIC®
Schleefstr. 12
44287 Dortmund
Made in Germany
www.aqualytic.de
phone: +49 231 94510-755
e-mail: sales@aqualytic.de

The Tintometer Limited
Lovibond® House
Sun Rise Way
Amesbury
Wiltshire SP4 7GR
United Kingdom
phone : +44 1980 664800
e-mail: SDS@tintometer.com

· **Informing department:**
e-mail: sds@tintometer.de
Product Safety Department

· **1.4 Emergency telephone number:**
+44 1235 239670
Languages: English

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**



GHS07

Acute Tox. 4 H302 Harmful if swallowed.
Eye Irrit. 2 H319 Causes serious eye irritation.

· **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

(Contd. on page 2)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 18.07.2018 Version number 29 Revision: 03.07.2018

Product name: Vario Ammonia Salicylate F5 ml

(Contd. of page 1)

· **Hazard-determining components of labelling:**
sodium salicylate
sodium nitroprusside dihydrate
· **Hazard statements**
H302 Harmful if swallowed.
H319 Causes serious eye irritation.
· **Precautionary statements**
P280 Wear protective gloves / eye protection.
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical advice/attention.

· **2.3 Other hazards** No further relevant information available.
· **Results of PBT and vPvB assessment**
This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**
· **Description:** Mixture of organic and inorganic compounds

· **Dangerous components:**			
CAS: 54-21-7 EINECS: 200-198-0	sodium salicylate	Acute Tox. 4, H302; Eye Irrit. 2, H319	40–50%
CAS: 13755-38-9 EINECS: 238-373-9	sodium nitroprusside dihydrate	Acute Tox. 3, H301	0.1–≤2.5%

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

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **General information** Instantly remove any clothing soiled by the product.
· **After inhalation** Supply fresh air; consult doctor in case of symptoms.
· **After skin contact** Instantly rinse with water.
· **After eye contact** Rinse opened eye for several minutes (at least 15 min) under running water. Then consult doctor.
· **After swallowing**
Rinse out mouth and then drink 1-2 glasses of water.
Seek medical treatment.
· **4.2 Most important symptoms and effects, both acute and delayed:**
irritations
absorption
after inhalation:
mucous membrane irritation
coughing
breathing difficulty
after swallowing:
sickness
vomiting
diarrhoea
after swallowing of large amounts:
tinnitus (ringing in the ears)
headache
dizziness
coma
fever
disorientation
drop in blood pressure
disorder of electrolyte balance
cramps
· **Danger** Danger of system failure.

(Contd. on page 3)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 18.07.2018 Version number 29 Revision: 03.07.2018

Product name: Vario Ammonia Salicylate F5 ml

(Contd. of page 2)

· **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** Use fire fighting measures that suit the environment.
· **5.2 Special hazards arising from the substance or mixture**
The product is not combustible.
Formation of toxic gases is possible during heating or in case of fire.
Hydrogen chloride (HCl)
nitrous gases
Nitrogen oxides (NOx)
Sulphur oxides (SOx)
cyanide compounds, sodium monoxide
· **5.3 Advice for firefighters**
· **Protective equipment:**
Wear self-contained breathing apparatus.
Wear full protective suit.
· **Additional information**
Collect contaminated fire fighting water separately. It must not enter drains.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Ambient fire may liberate hazardous vapours.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
· **Advice for non-emergency personnel:**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
· **Advice for emergency responders:** Protective equipment: see section 8
· **6.2 Environmental precautions:** Do not allow product to reach sewage system or water bodies.
· **6.3 Methods and material for containment and cleaning up:**
Ensure adequate ventilation.
Collect mechanically.
Dispose of contaminated material as waste according to item 13.
· **6.4 Reference to other sections**
See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
· **Advice on safe handling:**
Use only in well ventilated areas.
Prevent formation of dust.
· **Hygiene measures:**
Avoid contact with the eyes.
Take off immediately all contaminated clothing.
Wash hands during breaks and at the end of the work.
Do not eat, drink or smoke when using this product.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage**
· **Requirements to be met by storerooms and containers:** Store in cool location.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:**
Store in cool, dry conditions in well sealed containers.
Protect from heat and direct sunlight.
Protect from the effects of light.
Store under dry conditions.
Protect from humidity and keep away from water.
This product is hygroscopic.

(Contd. on page 4)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 18.07.2018 Version number 29 Revision: 03.07.2018

Product name: Vario Ammonia Salicylate F5 ml

(Contd. of page 3)

· **Recommended storage temperature:** 20°C +/- 5°C
· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**
· **Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· **DNELs**
Derived No Effect Level (DNEL)

CAS: 54-21-7 sodium salicylate		
Oral	DNEL	4 mg/kg (Worker / long-term /systemic effects)
Dermal	DNEL	4 mg/kg (Worker / long-term /systemic effects)
		2 mg/kg (Consumer / long-term / systemic effects)
Inhalative	DNEL	7.051 mg/m³ (Worker / long-term /systemic effects)
		1.738 mg/m³ (Consumer / long-term / systemic effects)

· **Recommended monitoring procedures:**
Methods for measurement of the workplace atmosphere have to correspond to the requirements of norms DIN EN 482 and DIN EN 689.

· **Additional information:** The lists that were valid during the compilation were used as basis.

· **8.2 Exposure controls**

· **Engineering measures:**
Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.
See item 7.

· **Personal protective equipment**
· **Breathing equipment:** Use breathing protection against the effects of fumes/dust/aerosol.
· **Recommended filter device for short term use:** Filter P2
· **Protection of hands:**
Protective gloves.
Preventive skin protection by use of skin-protecting agents is recommended.
After use of gloves apply skin-cleaning agents and skin cosmetics.
· **Material of gloves**
nitrile rubber, NBR
Recommended thickness of the material: ≥ 0.11 mm
· **Penetration time of glove material**
Value for the permeation: Level = 1 (< 10 min)
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Eye protection:** Safety glasses
· **Body protection:** Protective work clothing.

· **Limitation and supervision of exposure into the environment:** Avoid release to the environment.

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **Appearance:**	
Form / Physical state:	Powder
Colour:	Whitish
· **Odour:**	Odourless
· **Odour threshold:**	Not applicable
· **pH-value (50 g/l) at 20°C:**	8.1
· **Melting point/Freezing point:**	Not determined
· **Initial boiling point and boiling range:**	Not determined
· **Flash point:**	Not applicable
· **Flammability (solid, gas):**	The product is not combustible.

(Contd. on page 5)

Safety data sheet
according to 1907/2006/EC, Article 31

(Contd. of page 4)

· **Ignition temperature:**	Not determined.
· **Decomposition temperature:**	Not determined.
· **Auto-ignition temperature:**	Product is not self-igniting.
· **Explosive properties:**	Product is not explosive.
· **Flammability or explosive limits:**	
Lower:	Not applicable
Upper:	Not applicable
· **Oxidising properties:**	none
· **Vapour pressure:**	Not applicable.
· **Density at 20°C:**	1.25 g/cm³
· **Relative density:**	Not determined.
· **Vapour density:**	Not applicable.
· **Evaporation rate:**	Not applicable.
· **Solubility(ies):**	
Water:	Soluble
· **Partition coefficient: n-octanol/water:**	Not applicable.
· **Viscosity:**	Not applicable.
· **Solvent content:**	
Organic solvents:	0.0 %
Solids content:	100.0 %
· **9.2 Other information**	No further relevant information available.

SECTION 10: Stability and reactivity

· **10.1 Reactivity** see section 10.3
· **10.2 Chemical stability** Stable at ambient temperature (room temperature).
· **10.3 Possibility of hazardous reactions**
Contact with acids releases toxic gases
Reacts with acids, alkalis and oxidizing agents
Reacts with oxidizing agents
--> forms heat
· **10.4 Conditions to avoid** Strong heating (decomposition)
· **10.5 Incompatible materials:** No further relevant information available.
· **10.6 Hazardous decomposition products:**
hydrogen cyanide (prussic acid HCN)
see section 5

SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity**
Classification according to calculation procedure:
Harmful if swallowed.

· **Acute toxicity estimate ($ATE_{(MIX)}$) - Calculation method:**		
Oral	CLP $ATE_{(MIX)}$	1560 mg/kg (.)

· **LD/LC50 values that are relevant for classification:**		
CAS: 54-21-7 sodium salicylate		
Oral	LD50	930 mg/kg (rat) (RTECS)
	LDLo	700 mg/kg (human) (RTECS)
CAS: 13755-38-9 sodium nitroprusside dihydrate		
Oral	LD50	99 mg/kg (rat) (RTECS, anhydrous substance)

(Contd. on page 6)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 18.07.2018 Version number 29 Revision: 03.07.2018

Product name: Vario Ammonia Salicylate F5 ml

(Contd. of page 5)

· **Primary irritant effect:**
· **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
· **Serious eye damage/irritation** Causes serious eye irritation.
· **Information on components:** CAS 54-21-7: chronic: dermatitis

· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)** The following statements refer to the mixture:
· **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 (specific target organ toxicity) -single exposure** Based on available data, the classification criteria are not met.
· **STOT (specific target organ toxicity) -repeated exposure** Based on available data, the classification criteria are not met.
· **Aspiration hazard** Based on available data, the classification criteria are not met.

· **Additional toxicological information:**
The following complies to cyanogen compounds / nitriles in general:
Utmost caution! Release of hydrocyanic acid is possible - blockade of cellular respiration.
The following applies to soluble iron compounds: nausea and vomiting after swallowing. The absorption of large quantities is followed by cardiovascular disorders. Toxic effect on liver and kidneys.
CAS 54-21-7: skin resorption (effects similar to those of ingestion)
CAS 54-21-7: chronic: central nervous system effects

SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**	
CAS: 54-21-7 sodium salicylate	
EC10	304 mg/l (Daphnia magna) (24) (ECOTOX)
LC50	1370 mg/l/96h (fathhead minnow) (ECOTOX)
CAS: 13755-38-9 sodium nitroprusside dihydrate	
EC50	1 mg/l/24h (Daphnia magna)
LC50	0.05 mg/l (fish)

· **Other information:**
Toxic for fish:
the following applies to dissolved iron compounds in general:
toxic as from 0.9 mg/l at pH 6.5 - 7.5
lethal as from 1.0 mg/l at pH 5.5 - 6.7
· **12.2 Persistence and degradability** No further relevant information available.
· **12.3 Bioaccumulative potential**
Pow = n-octanol/wasser partition coefficient
log Pow < 1 = Does not accumulate in organisms.

CAS: 54-21-7 sodium salicylate	
log Pow	-1.43 (.) (calculated)

· **12.4 Mobility in soil** No further relevant information available.
· **12.5 Results of PBT and vPvB assessment**
This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.
· **12.6 Other adverse effects** Avoid transfer into the environment.
· **Water hazard:**
Do not allow product to reach ground water, water bodies or sewage system.
Danger to drinking water if even small quantities leak into soil.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

(Contd. on page 7)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 18.07.2018 Version number 29 Revision: 03.07.2018

Product name: Vario Ammonia Salicylate F5 ml

(Contd. of page 6)

Hand over to disposers of hazardous waste.

· **European waste catalogue**	
16 05 06*	laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.
· **Recommended cleaning agent:** Water, if necessary with cleaning agent.

SECTION 14: Transport information

· **14.1 UN-Number** · **ADR, IMDG, IATA**	Void
· **14.2 UN proper shipping name** · **ADR, IMDG, IATA**	Void
· **14.3 Transport hazard class(es)** · **ADR, IMDG, IATA** · **Class**	Void
· **14.4 Packing group** · **ADR, IMDG, IATA**	Void
· **14.5 Environmental hazards:**	Not applicable.
· **14.6 Special precautions for user**	Not applicable.
· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable.
· **Transport/Additional information:**	Not dangerous according to the above specifications.

*
SECTION 15: Regulatory information

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

· **Regulation (EC) No 1005/2009 on substances that deplete the ozone layer:**
None of the ingredients is listed.

· **Directive 2012/18/EU (SEVESO III):**
· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· **Regulation (EU) No 649/2012**
None of the ingredients is listed.

· **Information about limitation of use:** Employment restrictions concerning young persons must be observed.

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

SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H319 Causes serious eye irritation.

· **Training hints** Provide adequate information, instruction and training for operators.

· **Abbreviations and acronyms:**
OECD: Organisation for Economic Co-operation and Development
STOT: specific target organ toxicity
SE: single exposure
RE: repeated exposure
EC50: half maximal effective concentration
IC50: hallf maximal inhibitory concentration
NOEL or NOEC: No Observed Effect Level or Concentration

(Contd. on page 8)

Safety data sheet
according to 1907/2006/EC, Article 31

Product name: Vario Ammonia Salicylate F5 ml

(Contd. of page 7)

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
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)
DNEL: Derived No-Effect Level (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

· **Sources**
Data arise from safety data sheets, reference works and literature.
ECOTOX Database
RTECS (Registry of Toxic Effects of Chemical Substances)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 14.11.2023 Version number 31 (replaces version 30) Revision: 14.11.2023

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

· **1.1 Product identifier**

· **Product name: Vario Ammonia Salicylate F5 ml**

· _SDS valid from Lot: T09A

· **Catalog number:** 00531169, 531160, 4531160

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

· **Application of the substance / the preparation:** Reagent for water analysis

· **1.3 Details of the supplier of the safety data sheet**

· **Supplier:**
Tintometer GmbH
Schleefstraße 8-12
44287 Dortmund
Made in Germany
www.lovibond.com
phone: +49 (0)231 94510-0
e-mail: sales@lovibond.com

The Tintometer Limited
Lovibond® House
Sun Rise Way
Amesbury
Wiltshire SP4 7GR
United Kingdom
phone : +44 1980 664800
e-mail: SDS@lovibond.uk

· **Informing department:**
e-mail: sds@lovibond.com
Product Safety Department

· **1.4 Emergency telephone number:**
+44 1235 239670
Languages: English

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**



GHS07

Acute Tox. 4 H302 Harmful if swallowed.
Eye Irrit. 2 H319 Causes serious eye irritation.

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



GHS07

· **Signal word** Warning
· **Hazard-determining components of labelling:**
sodium salicylate
sodium nitroprusside dihydrate

(Contd. on page 2)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 14.11.2023 Version number 31 (replaces version 30) Revision: 14.11.2023

Product name: Vario Ammonia Salicylate F5 ml

(Contd. of page 1)

· **Hazard statements**
H302 Harmful if swallowed.
H319 Causes serious eye irritation.
· **Precautionary statements**
P280 Wear protective gloves / eye protection.
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical advice/attention.

· **2.3 Other hazards** No further relevant information available.

· **Results of PBT and vPvB assessment**
This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.
· **Determination of endocrine-disrupting properties**
The product does not contain substances with endocrine disrupting properties.

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**
· **Description:** Mixture of organic compounds.

· **Dangerous components:**			
CAS: 54-21-7 EINECS: 200-198-0	sodium salicylate	Acute Tox. 4, H302; Eye Irrit. 2, H319	60–70%
CAS: 13755-38-9 EINECS: 238-373-9	sodium nitroprusside dihydrate	Acute Tox. 3, H301	≤2.5%

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

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **General information** Instantly remove any clothing soiled by the product.
· **After inhalation** Supply fresh air; consult doctor in case of symptoms.
· **After skin contact** Instantly rinse with water.
· **After eye contact** Rinse opened eye for several minutes (at least 15 min) under running water. Then consult doctor.
· **After swallowing**
Rinse out mouth and then drink 1-2 glasses of water.
Seek medical treatment.
· **4.2 Most important symptoms and effects, both acute and delayed:**
irritations
absorption
after inhalation:
mucosal irritations, cough, shortness of breath
after swallowing:
sickness
vomiting
diarrhoea
after swallowing of large amounts:
tinnitus (ringing in the ears)
headache
dizziness
disorientation
drop in blood pressure
disorder of electrolyte balance
fever
cramps
coma
· **Danger** Danger of system failure.
· **4.3 Indication of any immediate medical attention and special treatment needed:** No further relevant information available.

(Contd. on page 3)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 14.11.2023 Version number 31 (replaces version 30) Revision: 14.11.2023

Product name: Vario Ammonia Salicylate F5 ml

(Contd. of page 2)

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents** Use fire fighting measures that suit the environment.
· **5.2 Special hazards arising from the substance or mixture**
The product is not combustible.
Formation of toxic gases is possible during heating or in case of fire.
nitrous gases
Nitrogen oxides (NOx)
cyanide compounds, sodium monoxide
· **5.3 Advice for firefighters**
· **Protective equipment:**
Wear self-contained breathing apparatus.
Wear full protective suit.
· **Additional information**
Collect contaminated fire fighting water separately. It must not enter drains.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Ambient fire may liberate hazardous vapours.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
· **Advice for non-emergency personnel:**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
· **Advice for emergency responders:** Protective equipment: see section 8

· **6.2 Environmental precautions:** Do not allow product to reach sewage system or water bodies.
· **6.3 Methods and material for containment and cleaning up:**
Ensure adequate ventilation.
Collect mechanically.
Dispose of contaminated material as waste according to item 13.
· **6.4 Reference to other sections**
See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
· **Advice on safe handling:**
Use only in well ventilated areas.
Prevent formation of dust.
· **Hygiene measures:**
Avoid contact with the eyes.
Avoid contact with the skin.
Take off immediately all contaminated clothing.
Wash hands during breaks and at the end of the work.
Do not eat, drink or smoke when using this product.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Requirements to be met by storerooms and containers:** Store in cool location.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:**
Protect from heat and direct sunlight.
Protect from the effects of light.
Store under dry conditions.
Protect from humidity and keep away from water.
· **Recommended storage temperature:** 10-25°C

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

(Contd. on page 4)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 14.11.2023 Version number 31 (replaces version 30) Revision: 14.11.2023

Product name: Vario Ammonia Salicylate F5 ml

(Contd. of page 3)

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**
· **Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· **DNELs**
Derived No Effect Level (DNEL)

CAS: 54-21-7 sodium salicylate		
Oral	DNEL	4 mg/kg (Worker / long-term /systemic effects)
Dermal	DNEL	4 mg/kg (Worker / long-term /systemic effects)
		2 mg/kg (Consumer / long-term / systemic effects)
Inhalative	DNEL	7.051 mg/m³ (Worker / long-term /systemic effects)
		1.738 mg/m³ (Consumer / long-term / systemic effects)

· **Recommended monitoring procedures:**
Methods for measurement of the workplace atmosphere have to correspond to the requirements of norms DIN EN 482 and DIN EN 689.

· **Additional information:** The lists that were valid during the compilation were used as basis.

· **8.2 Exposure controls**

· **Engineering measures:**
Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.
See item 7.

· **Individual protection measures, such as personal protective equipment**
Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled.
· **Eye/face protection** Safety glasses
· **Hand protection**
Protective gloves.
Preventive skin protection by use of skin-protecting agents is recommended.
After use of gloves apply skin-cleaning agents and skin cosmetics.
· **Material of gloves**
nitrile rubber, NBR
Recommended thickness of the material: ≥ 0.11 mm
· **Penetration time of glove material**
Value for the permeation: Level = 1 (< 10 min)
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Other skin protection (body protection):** Protective work clothing.
· **Breathing equipment:** Use breathing protection against the effects of fumes/dust/aerosol.
· **Recommended filter device for short term use:** Filter P2

· **Environmental exposure controls** Do not allow product to reach sewage system or water bodies.

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **Physical state**	Solid.
· **Form:**	Powder
· **Colour:**	Light coloured.
· **Odour:**	Odourless
· **Odour threshold:**	Not applicable.
· **Melting point/Freezing point:**	Not determined.
· **Boiling point or initial boiling point and boiling range**	Not determined.
· **Flammability**	The product is not combustible.
· **Explosive properties:**	Product is not explosive.
· **Lower and upper explosion limit**	
Lower:	Not applicable.
Upper:	Not applicable.
· **Flash point:**	Not applicable.
· **Auto-ignition temperature:**	Not applicable (solid).
· **Decomposition temperature:**	Not determined.

(Contd. on page 5)

Safety data sheet
according to 1907/2006/EC, Article 31

(Contd. of page 4)

· **pH (50 g/l) at 20°C**	8.1
· **Kinematic viscosity**	Not applicable (solid).
· **Solubility**	
· **Water:**	Soluble
· **Partition coefficient n-octanol/water (log value)**	Not applicable (mixture).
· **Vapour pressure:**	Not applicable.
· **Density and/or relative density**	
· **Density at 20°C:**	1.25 g/cm³
· **Relative density:**	Not determined.
· **Relative gas density**	Not applicable (solid).
· **Particle characteristics**	Not determined.

· **9.2 Other information**

· **Information with regard to physical hazard classes**	
· **Corrosive to metals**	Void
· **Other safety characteristics**	
· **Oxidising properties:**	none
· **Additional information**	
· **Solids content:**	100.0 %

SECTION 10: Stability and reactivity

· **10.1 Reactivity** see section 10.3
· **10.2 Chemical stability** Stable at ambient temperature (room temperature).
· **10.3 Possibility of hazardous reactions** Contact with acids releases toxic gases
· **10.4 Conditions to avoid** Strong heating (decomposition)
· **10.5 Incompatible materials:** No further relevant information available.
· **10.6 Hazardous decomposition products:**
hydrogen cyanide (prussic acid HCN)
see section 5

SECTION 11: Toxicological information

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

· **Acute toxicity**
Classification according to calculation procedure:
Harmful if swallowed.

· **Acute toxicity estimate ($ATE_{(MIX)}$) - Calculation method:**		
Oral	CLP $ATE_{(MIX)}$	1257 mg/kg (.)

· **LD/LC50 values that are relevant for classification:**		
CAS: 54-21-7 sodium salicylate		
Oral	LD50	930 mg/kg (rat) (RTECS)
	LDLo	700 mg/kg (human) (RTECS)
CAS: 13755-38-9 sodium nitroprusside dihydrate		
Oral	LD50	99 mg/kg (rat) (RTECS, anhydrous substance)

· **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
· **Serious eye damage/irritation** Causes serious eye irritation.
· **Information on components:** CAS 54-21-7: chronic: dermatitis

· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

· **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 (specific target organ toxicity) -single exposure** Based on available data, the classification criteria are not met.

(Contd. on page 6)

Safety data sheet
according to 1907/2006/EC, Article 31

(Contd. of page 5)

· **STOT (specific target organ toxicity) -repeated exposure** Based on available data, the classification criteria are not met.

· **Aspiration hazard** Based on available data, the classification criteria are not met.

· **Additional toxicological information:**
The following applies to cyanogen compounds/nitriles in general: Extreme caution! Hydrogen cyanide release possible - Blockage of cell respiration. Cardiovascular disorders, shortness of breath, unconsciousness.
The following applies to soluble iron compounds: nausea and vomiting after swallowing. The absorption of large quantities is followed by cardiovascular disorders. Toxic effect on liver and kidneys.
CAS 54-21-7: skin resorption (effects similar to those of ingestion)
CAS 54-21-7: chronic: central nervous system effects

· **11.2 Information on other hazards**
· **Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.

· **Other information**
According to the information available to us, the chemical, physical and toxicological properties of the substances mentioned in Chapter 3 have not been thoroughly investigated.

SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**	
CAS: 54-21-7 sodium salicylate	
EC10	304 mg/l (Daphnia magna) (24) (ECOTOX)
LC50	1370 mg/l/96h (fathhead minnow) (ECOTOX)
CAS: 13755-38-9 sodium nitroprusside dihydrate	
EC50	1 mg/l/24h (Daphnia magna)
LC50	0.05 mg/l (fish)

· **Other information:**
Toxic for fish:
the following applies to dissolved iron compounds in general:
toxic as from 0.9 mg/l at pH 6.5 - 7.5
lethal as from 1.0 mg/l at pH 5.5 - 6.7
· **12.2 Persistence and degradability** No further relevant information available.
· **12.3 Bioaccumulative potential**
Pow = n-octanol/wasser partition coefficient
log Pow < 1 = Does not accumulate in organisms.

CAS: 54-21-7 sodium salicylate	
log Pow	-1.43 (.) (calculated)

· **12.4 Mobility in soil** No further relevant information available.
· **12.5 Results of PBT and vPvB assessment**
This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.
· **12.6 Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.
· **12.7 Other adverse effects** Avoid transfer into the environment.
· **Water hazard:**
Do not allow product to reach ground water, water bodies or sewage system.
Danger to drinking water if even small quantities leak into soil.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Hand over to disposers of hazardous waste.

· **European waste catalogue**	
16 05 08*	discarded organic chemicals consisting of or containing hazardous substances

(Contd. on page 7)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 14.11.2023 Version number 31 (replaces version 30) Revision: 14.11.2023

Product name: Vario Ammonia Salicylate F5 ml

(Contd. of page 6)

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.
· **Recommended cleaning agent:** Water, if necessary with cleaning agent.

SECTION 14: Transport information

· **14.1 UN number or ID number**	
· **ADR, IMDG, IATA**	Void
· **14.2 UN proper shipping name**	
· **ADR, IMDG, IATA**	Void
· **14.3 Transport hazard class(es)**	
· **ADR, IMDG, IATA**	
· **Class**	Void
· **14.4 Packing group**	
· **ADR, IMDG, IATA**	Void
· **14.5 Environmental hazards:**	Not applicable.
· **14.6 Special precautions for user**	Not applicable.
· **14.7 Maritime transport in bulk according to IMO instruments**	Not applicable.
· **Transport/Additional information:**	Not dangerous according to the above specifications.

*
SECTION 15: Regulatory information

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

· **Poisons Act UK**

· **Regulated explosives precursors**
None of the ingredients is listed.

· **Regulated poisons**
None of the ingredients is listed.

· **Reportable explosives precursors**
None of the ingredients is listed.

· **Reportable poisons**
None of the ingredients is listed.

· **Regulation (EU) 2019/1148 on the marketing and use of explosives precursors** not regulated

· **Regulation (EU) No 649/2012 concerning the export and import of hazardous chemicals (PIC)**
None of the ingredients is listed.

· **Regulation (EC) No 1334/2000 setting up a Community regime for the control of exports of dual-use items and technology:**
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.

· **Regulation (EC) No 1005/2009 on substances that deplete the ozone layer:**
None of the ingredients is listed.

· **REGULATION (EU) 2019/1021 on persistent organic pollutants (POP)**
None of the ingredients is listed.

· **LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV)**
None of the ingredients is listed.

(Contd. on page 8)

Safety data sheet
according to 1907/2006/EC, Article 31

(Contd. of page 7)

· **Substances of very high concern (SVHC) according to REACH, Article 57**
This product does not contain any substances of very high concern above the legal concentration limit of ≥ 0.1% (w / w).
· **Substances of very high concern (SVHC) according to UK REACH**
This product does not contain any substances of very high concern above the legal concentration limit of ≥ 0.1% (w / w).

· **Directive 2012/18/EU (SEVESO III):**
· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· **Information about limitation of use:** Not required.

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

* SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.
This Safety Data Sheets is in compliance with Regulation (EC) No 1907/2006, Article 31 as amended by Regulation (EU) 2020/878.

· **Training hints** Provide adequate information, instruction and training for operators.

· **Relevant phrases**
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H319 Causes serious eye irritation.

· **Abbreviations and acronyms:**
OECD: Organisation for Economic Co-operation and Development
STOT: specific target organ toxicity
SE: single exposure
RE: repeated exposure
EC50: half maximal effective concentration
IC50: half maximal inhibitory concentration
NOEL or NOEC: No Observed Effect Level or Concentration
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
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)
DNEL: Derived No-Effect Level (UK REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

· **Sources**
Data arise from safety data sheets, reference works and literature.
ECOTOX Database
RTECS (Registry of Toxic Effects of Chemical Substances)

· *** Data compared to the previous version altered.**