

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.

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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:

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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 (CO₂)

- **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.

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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

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· 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_(MX)) - Calculation method:		
Oral	CLP ATE _(MX)	2894 mg/kg (.)

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· 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) (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)

- **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 (carcinogenicity, 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 (Algal toxicity) (OECD 201)	
NOEC	2600 mg/l (Daphnia magna) (OECD 2011, 21d) (Registrant, ECHA)	
	756 mg/l (fish) (28d) (Registrant, ECHA)	

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LC50	1000 mg/l (rainbow trout) (OECD 2015, 28d) (Registrant, ECHA)
	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.

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· 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) · Excepted quantities (EQ)	1 kg Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
· Transport category · Tunnel restriction code	2 E
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	1 kg 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

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EC50: half maximal effective concentration
IC50: half 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.

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