

Safety Data Sheet acc. to OSHA HCS (HazCom 2012)

Printing date 11/14/2017

Reviewed on 11/14/2017

1 Identification

- **Product identifier**
- **Trade name:** Vario Ammonia Cyanurate F10 ml
- **Catalogue number:** 00531379, 531370, 4531370, 531372
- **Application of the substance / the mixture:** Reagent for water analysis
- **Manufacturer/Supplier:**
Tintometer Inc.
6456 Parkland Drive
Sarasota, FL 34243
USA
phone: (941) 756-6410
fax: (941) 727-9654
www.lovibond.us
Made in Germany
- **Emergency telephone number:** + 1 866 928 0789 (English, French, Spanish)

2 Hazard(s) identification

- **Classification of the substance or mixture**



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.

- **Label elements**

- **GHS label elements** The product is classified and labeled according to the Hazard Communication Standard (HCS).

- **Hazard pictograms**



GHS05

- **Signal word** Danger

- **Hazard-determining components of labeling:**

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/shower.

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.

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- **Other hazards** No further relevant information available.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of organic and inorganic compounds
- **Composition and Information on Ingredients:**
Percent ranges are used due to the confidential product information.

CAS: 1310-66-3 EINECS: 215-183-4	lithium hydroxide monohydrate ⚠ Skin Corr. 1A, H314; Eye Dam. 1, H318; ⚠ Acute Tox. 4, H302	2.5–5%
CAS: 51580-86-0 EINECS: 220-767-7 Index number: 613-030-01-7 RTECS: XZ1910000	sodium dichloroisocyanurate, dihydrate ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302; Eye Irrit. 2A, H319; STOT SE 3, H335	0.25–≤2.5%

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

4 First-aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air and to be sure call for a doctor.
- **After skin contact:**
Immediately rinse with plenty of 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; immediately call for medical help.
- **Most important symptoms and effects, both acute and delayed**
burns
after inhalation:
coughing
breathing difficulty
damage to the affected mucous membranes possible
after swallowing:
strong caustic effect
resorption
after absorption of large amounts:
sickness
vomiting
ataxia (impaired locomotor coordination)
CNS disorders
cramps
- **Danger:**
Danger of circulatory collapse.
Danger of gastric perforation.
- **Indication of any immediate medical attention and special treatment needed:**
If swallowed or in case of vomiting, danger of entering the lungs.
Later observation for pneumonia and pulmonary edema.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **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.
In case of fire, the following can be released:

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Hydrogen chloride (HCl)
 nitrous gases
 Carbon monoxide (CO) and carbon dioxide (CO₂)
 LiOx

- **Advice for firefighters**

- **Protective equipment:**

Wear self-contained respiratory protective device.
 Wear fully protective suit.

- **Additional information**

Collect contaminated fire fighting water separately. It must not enter the sewage system.
 Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
 Ambient fire may liberate hazardous vapours.

6 Accidental release measures

- **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

- **Environmental precautions:**

Do not allow product to reach sewage system or any water course.
 Inform respective authorities in case of seepage into water course or sewage system.

- **Methods and material for containment and cleaning up:**

Ensure adequate ventilation.
 Pick up mechanically.
 Dispose contaminated material as waste according to item 13.

- **Reference to other sections**

See Section 8 for information on personal protection equipment.
 See Section 13 for disposal information.

7 Handling and storage

- **Handling:**

- **Precautions for safe handling**

- **Advice on safe handling:**

Thorough dedusting.
 Prevent formation of dust.

- **Hygiene measures:**

Avoid contact with the skin.
 Avoid contact with the eyes.
 Take off immediately all contaminated clothing.
 Wash hands before breaks and at the end of work.
 Do not eat, drink or smoke when using this product.

- **Conditions for safe storage, including any incompatibilities**

- **Storage:**

- **Requirements to be met by storerooms and receptacles:** Store in a cool location.

- **Information about storage in one common storage facility:**

Store away from oxidizing agents.
 Do not store together with acids.

- **Further information about storage conditions:**

Store in cool, dry conditions in well sealed receptacles.
 Protect from heat and direct sunlight.
 Protect from exposure to the light.
 Store in dry conditions.
 Protect from humidity and water.
 This product is hygroscopic.

- **Recommended storage temperature:** 20°C +/- 5°C (approx. 68°F)

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

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8 Exposure controls/personal protection

- **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 creation were used as basis.
- **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 respiratory protective device against the effects of fumes/dust/aerosol.
- **Recommended filter device for short term use:** Filter P2
- **Protection of hands:**
Protective 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 through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Tightly sealed goggles
- **Body protection:** Protective work clothing
- **Limitation and supervision of exposure into the environment:**
Do not allow product to reach sewage system or any water course.

9 Physical and chemical properties

· Information on basic physical and chemical properties	
· Appearance:	
Form / Physical state:	Powder
Color:	White
· Odor: Pungent	
· Odor threshold: Not determined.	
· pH-value at 20 °C (68 °F): 12,4 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: 290 °C (554 °F) Not applicable.	
· Decomposition temperature: Not determined.	
· Auto-ignition temperature: Product is not self-igniting.	
· Danger of explosion: Product does not present an explosion hazard.	
· Flammability or explosive limits:	
Lower:	Not applicable.
Upper:	Not applicable.
· Oxidizing properties: none	
· Vapor Pressure: Not applicable.	
· Density: Not determined.	
· Relative density: Not determined.	
· Vapor density: Not applicable.	
· Evaporation rate: Not applicable.	

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· Solubility(ies) Water:	Soluble.
· Partition coefficient (n-octanol/water):	Not applicable.
· Viscosity:	Not applicable.
· Solvent content: Organic solvents: Solids content:	0,0 % 100,0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** see section "Possibility of hazardous reactions"
- **Chemical stability** Stable at ambient temperature (room temperature).
- **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 and zinc.
- **Conditions to avoid** Exposure to moisture.
- **Incompatible materials:**
organic substances
aluminum
zinc
- **Hazardous decomposition products:**
Chlorine compounds
In case of fire: see section 5.

*11 Toxicological information

- **Information on toxicological effects**
- **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	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:**
- **on the skin:** Causes skin irritation.
- **on the eye:**
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)
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- **Sensitization:** Based on available data, the classification criteria are not met.

· Information on components:

CAS: 51580-86-0 sodium dichloroisocyanurate, dihydrate

Sensitization	OECD 406	(guinea pig: negative) (Magnusson / Klingman)
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- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

- **Other information:** see section 8 / 15

- **Synergistic Products:** None

- **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)
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- **Additional toxicological information:**

The following applies to lithium compounds in general:

after absorption: CNS disorders, ataxia (impaired locomotor coordination) due to disturbed electrolyte balance

12 Ecological information

- **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) 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

- **Persistence and degradability**

- **CAS: 51580-86-0 sodium dichloroisocyanurate, dihydrate**

OECD 306	4 (.) (Biodegradation Test – Seawater)
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- **Bioaccumulative potential** No further relevant information available.

- **Mobility in soil** No further relevant information available.

- **Other adverse effects**

Harmful effect due to pH shift.

Avoid transfer into the environment.

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13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Hand over to hazardous waste disposers.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

<ul style="list-style-type: none"> · UN-Number · DOT, IMDG, IATA 	<p style="margin: 0;">UN2680</p>
<ul style="list-style-type: none"> · UN proper shipping name · DOT · IMDG, IATA 	<p style="margin: 0;">Lithium hydroxide mixture LITHIUM HYDROXIDE mixture</p>
<ul style="list-style-type: none"> · Transport hazard class(es) · DOT 	<div style="text-align: center;">  <p style="margin: 0;">CORROSIVE 8</p> </div>
<ul style="list-style-type: none"> · Class · Label 	<p style="margin: 0;">8 Corrosive substances 8</p>
<ul style="list-style-type: none"> · IMDG, IATA 	<div style="text-align: center;">  <p style="margin: 0;">CORROSIVE 8</p> </div>
<ul style="list-style-type: none"> · Class · Label 	<p style="margin: 0;">8 Corrosive substances 8</p>
<ul style="list-style-type: none"> · Packing group · DOT, IMDG, IATA 	<p style="margin: 0;">II</p>
<ul style="list-style-type: none"> · Environmental hazards: 	<p style="margin: 0;">Not applicable.</p>
<ul style="list-style-type: none"> · Special precautions for user · Danger code (Kemler): · EMS Number: · Segregation groups · Stowage Category · Segregation Code 	<p style="margin: 0;">Warning: Corrosive substances 80 F-A,S-B Alkalis A SG35 Stow "separated from" acids.</p>
<ul style="list-style-type: none"> · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code 	<p style="margin: 0;">Not applicable.</p>
<ul style="list-style-type: none"> · Transport/Additional information: · DOT · Quantity limitations · Limited quantity (LQ): · Excepted quantities (EQ) 	<p style="margin: 0;">On passenger aircraft/rail: 15 kg On cargo aircraft only: 50 kg 1 kg Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g</p>
<ul style="list-style-type: none"> · IMDG · Limited quantities (LQ) 	<p style="margin: 0;">1 kg</p>

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<ul style="list-style-type: none"> · Excepted quantities (EQ) 	Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
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15 Regulatory information

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

· Section 355 (Extremely hazardous substances):
None of the ingredients is listed.

· Section 313 (Specific toxic chemical listings):
None of the ingredients is listed.

· TSCA (Toxic Substances Control Act):
All ingredients are listed.

· Proposition 65
· Chemicals known to cause cancer:
None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for females:
None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:
None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:
None of the ingredients is listed.

· New Jersey Right-to-Know List:
CAS: 1310-66-3 lithium hydroxide monohydrate

· New Jersey Special Hazardous Substance List:
CAS: 1310-66-3 lithium hydroxide monohydrate
CO, R1

· Pennsylvania Right-to-Know List:
CAS: 51580-86-0 sodium dichloroisocyanurate, dihydrate

· Pennsylvania Special Hazardous Substance List:
None of the ingredients is listed.

· EPA (Environmental Protection Agency)
None of the ingredients is listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)
None of the ingredients is listed.

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

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

16 Other information

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

- **Relevant phrases**

- 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.

- **Date of preparation / last revision** 11/14/2017 / 34

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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

ACGIH[®] - American Conference of Governmental Industrial Hygienists

•A1 - Confirmed human carcinogen

•A2 - Suspected human carcinogen

•A3 - Confirmed animal carcinogen with unknown relevance to humans

•A4 - Not classifiable as a human carcinogen

•A5 - Not suspected as a human carcinogen

IARC - International Agency for Research on Cancer

•Group 1 - Carcinogenic to humans

•Group 2A - Probably carcinogenic to humans

•Group 2B - Possibly carcinogenic to humans

•Group 3 - Not classifiable as to carcinogenicity to humans

•Group 4 - Probably not carcinogenic to humans

NTP - National Toxicology Program, U.S. Department of Health and Human Services

•Group K - Known to be Human Carcinogens

•Group R - Reasonably Anticipated to be Human Carcinogens

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

DOT: US Department of Transportation

IATA: International Air Transport Association

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

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

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. 2A: Serious eye damage/eye irritation – Category 2A

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)

ECOTOX Database

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