Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 03/07/2014 Reviewed on 03/07/2014

* 1 Identification

· **Product identifier**

· **Trade name:** **Vario Ammonia Cyanurate F10 ml**

· **Catalogue number:** 00531379, 531370, 4531370

· **Relevant identified uses of the substance or mixture and uses advised against:** No further relevant information available.

· **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:** Chemtrec®: (US & Canada) 800-424-9300 (International) +1 (703) 527-3887

* 2 Hazard(s) identification

· **Classification of the substance or mixture**

US-GHS


GHS05 Corrosion

Skin Corr. 1A H314 Causes severe skin burns and eye damage.


GHS07

Acute Tox. 4 H302 Harmful if swallowed.

· **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**


C; Corrosive

R35: Causes severe burns.

R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

· **Label elements**
· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms** GHS05, GHS07
· **Signal word** Danger
· **Hazard-determining components of labeling:**
lithium hydroxide
sodium dichloroisocyanurate, dihydrate
· **Hazard statements**
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
· **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.
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.

(Contd. on page 2)

Safety Data Sheet
acc. to ISO/DIS 11014

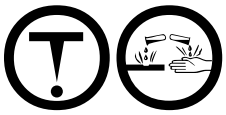
Printing date 03/07/2014 Reviewed on 03/07/2014

Trade name: Vario Ammonia Cyanurate F10 ml

(Contd. of page 1)

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

· **Canadian Hazard Symbols:**



· **WHMIS classification:**
E
Corrosive material
D2B
Toxic material causing other toxic effects

· **NFPA ratings (scale 0 - 4)**

Health = 3
Fire = 0
Reactivity = 1

* 3 Composition/information on ingredients

· **Chemical characterization: Mixtures**
· **Description:** mixture of inorganic compounds

· **Composition and Information on Ingredients:**

CAS: 1310-65-2 EINECS: 215-183-4	lithium hydroxide C R35; Xn R22 Acute Tox. 3, H301; Acute Tox. 3, H331; Skin Corr. 1A, H314; Eye Dam. 1, H318	5-10%
CAS: 51580-86-0 EINECS: 220-767-7 Index number: 613-030-01-7 RTECS: XZ1910000	sodium dichloroisocyanurate, dihydrate Xn R22; Xi R36/37; N R50/53 R31 Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H302; Eye Irrit. 2, H319; STOT SE 3, H335	≤ 2.5%

· **REACH - pre-registered substances** All components are REACH pre-registered.
· **Additional information:** For the wording of the listed risk 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.
Seek medical treatment.
· **After skin contact:**
Immediately rinse with plenty of water.
Immediately wash with polyethylene glycol 400.
Immediate medical treatment necessary. Failure to treat burns can prevent wounds from healing.
· **After eye contact:**
Rinse opened eye for several minutes (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**
after inhalation:
damage to the affected mucous membranes
breathing difficulty
coughing
after swallowing:
daze
strong caustic effect
headache
pain

(Contd. on page 3)

Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 03/07/2014 Reviewed on 03/07/2014

Trade name: Vario Ammonia Cyanurate F10 ml

(Contd. of page 2)

· **Danger:**
Danger of circulatory collapse.
Danger of gastric perforation.
Danger of impaired breathing.
· **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**
Formation of toxic gases is possible during heating or in case of fire.
Nitrogen oxides (NOx)
Hydrogen chloride (HCl)
· **Advice for firefighters**
· **Protective equipment:** Wear self-contained respiratory protective device.
· **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.

*
6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
· **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:**
Use neutralizing agent.
Dispose contaminated material as waste according to item 13.
Pick up mechanically.
Ensure adequate ventilation.
(citric acid)
· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

*
7 Handling and storage

· **Precautions for safe handling**
Prevent formation of dust.
Keep away from heat and direct sunlight.
Thorough dedusting.
Open and handle receptacle with care.
Ensure good ventilation/exhaustion at the workplace.
· **Information about protection against explosions and fires:** The product is not flammable.

· **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:**
Do not store together with acids.
Store away from oxidizing agents.
· **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store in dry conditions.
Protect from humidity and water.
This product is hygroscopic.
Protect from exposure to the light.

(Contd. on page 4)

Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 03/07/2014 Reviewed on 03/07/2014

Trade name: Vario Ammonia Cyanurate F10 ml

(Contd. of page 3)

· **Recommended storage temperature:** 20 °C +/- 5 °C (approx. 68°F)
· **Storage class:** 8 B
· **Specific end use(s)** No further relevant information available.

* 8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**	
1310-65-2 lithium hydroxide (5-10%)	
WEEL (USA)	Ceiling limit value: 1 mg/m³
EL (Canada)	Short-term value: C 1 mg/m³
EV (Canada)	Short-term value: 1 mg/m³ anyhydrous

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

· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.

· **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:**
Alkaline resistant 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**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
Value for the permeation: Level ≤ 1 (10 min)
· **Eye protection:** Tightly sealed goggles
· **Body protection:** Alkaline resistant protective clothing

* 9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
Odor Threshold:	Not applicable.
· **Appearance:**	
Form:	Powder
Color:	White
· **Odor:**	Pungent
· **pH-value (40.4 g/l) at 20 °C (68 °F):**	12.5
· **Melting point/Melting range:**	Undetermined.
· **Boiling point/Boiling range:**	Not applicable.
· **Freezing Point:**	Not applicable.
· **Flash point:**	Not applicable.
· **Ignition temperature:**	Undetermined.
· **Auto igniting:**	Product is not selfigniting.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Specific Gravity:**	Not applicable.
· **Density:**	Not determined.
· **Vapour density**	Not applicable.

(Contd. on page 5)

Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 03/07/2014 Reviewed on 03/07/2014

Trade name: Vario Ammonia Cyanurate F10 ml

(Contd. of page 4)

· **Evaporation rate**	Not applicable.
· **Solubility in / Miscibility with Water:**	Soluble.
· **Coefficient of Water / Oil Distribution:**	Not applicable.
· **Solvent content:**	
Organic solvents:	0.0 %
Solids content:	100.0 %
· **Other information**	No further relevant information available.

* 10 Stability and reactivity

· **Reactivity**
· **Thermal decomposition / conditions to be avoided:** To avoid thermal decomposition do not overheat.
· **Possibility of hazardous reactions**
Reacts with water.
Aqueous solution reacts alkaline.
Reacts with light alloys to form hydrogen.
Reacts with acids.
· **Conditions to avoid** No further relevant information available.
· **Incompatible materials:**
aluminum
zinc
organic substances
alkali metals
acids
oxidizing agents
· **Hazardous decomposition products:**
Hydrogen chloride (HCl)
Chlorine compounds
see chapter 5

* 11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:** Quantitative data on the toxicity of the preparation are not available.

· **LD/LC50 values that are relevant for classification:**		
Oral	$ATE_{(MIX)}$	1276 mg/kg (rat)
Inhalative	$ATE_{(MIX)}$	9.6 mg/l/4h (rat)

1310-65-2 lithium hydroxide		
Oral	LD50	210 mg/kg (rat)
Inhalative	LC50	0.96 mg/l/4h (rat) (GESTIS)
51580-86-0 sodium dichloroisocyanurate, dihydrate		
Oral	LD50	1400 mg/kg (rat)
Dermal	LD50	> 5000 mg/kg (rabbit)

· **Primary irritant effect:**
· **on the skin:** Strong caustic effect on skin and mucous membranes.
· **on the eye:** strong caustic effect
· **Sensitization:** No sensitizing effects known.
· **Subacute to chronic toxicity:** chronic: central nervous system effects
· **Experience with humans:**
May cause lung damages.
Can cause liver damage.
Can cause kidney damages.

· **Additional toxicological information:**
Corrosive

(Contd. on page 6)

Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 03/07/2014 Reviewed on 03/07/2014

Trade name: Vario Ammonia Cyanurate F10 ml

(Contd. of page 5)

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

· **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.

· **Carcinogenicity: NTP? IARC Monographs? OSHA Regulated?** see chapter 8 / 15
· **Teratogenicity:** Not found.
· **Mutagenicity:** Not found.
· **Reproductive Toxicity:** Not found.
· **Synergistic Products:** None
· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction):** no further data available

* 12 Ecological information

· **Toxicity**

· **Aquatic toxicity:**	
7647-14-5 sodium chloride	
EC50	1000 mg/l/48h (Daphnia magna) (IUCLID)
LC50	7650 mg/l/96h (Pimephales promelas) (IUCLID)
51580-86-0 sodium dichloroisocyanurate, dihydrate	
EC50	0.28 mg/l/48h (Daphnia magna) (ECOTOX)

· **Persistence and degradability** No further relevant information available.

· **Other information:**
Quantitative data on the ecological effect of this preparation are not available.
The following statements refer to the individual components.
Does not cause biolocigal oxygen deficit.
· **Bioaccumulative potential** No further relevant information available.
· **Behavior in environmental systems:**
· **Mobility in soil** No further relevant information available.

· **Ecotoxical effects:**
· **Remark:**
Harmful effect due to pH shift.
Forms corrosive mixtures with water even if diluted.
Harmful to aquatic organisms
Harmful to fish
· **Additional ecological information:**
The following applies to lithium compounds in general:
MERCK - biological effects:
fish toxic from 100 mg/l up
Daphnia toxic from 16 mg/ up
plants toxic from 0.2 mg/l up (value calculated as Li)

· **General notes:**
Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms.
Water hazard class 2 (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
· **Results of PBT and vPvB assessment** no further data available
· **Other adverse effects** No further relevant information available.

(Contd. on page 7)

Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 03/07/2014 Reviewed on 03/07/2014

Trade name: Vario Ammonia Cyanurate F10 ml

(Contd. of page 6)

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

· **UN-Number**	
· **DOT, ADR, IMDG, IATA**	UN2680
· **UN proper shipping name**	
· **DOT / TDG**	Lithium hydroxide, mixture
· **ADR**	2680 Lithium hydroxide, mixture
· **IMDG, IATA**	LITHIUM HYDROXIDE, mixture
· **Transport hazard class(es)**	
· **DOT / TDG**	
· **Class**	8 Corrosive substances.
· **Label**	8
· **ADR**	
· **Class**	8 (C6) Corrosive substances
· **Label**	8
· **IMDG, IATA**	
· **Class**	8 Corrosive substances.
· **Label**	8
· **Packing group**	
· **DOT, ADR, IMDG, IATA**	II
· **Environmental hazards:**	
· **Marine pollutant:**	No
· **Special precautions for user**	Warning: Corrosive substances
· **Danger code (Kemler):**	80
· **EMS Number:**	F-A,S-B
· **Segregation groups**	Alkalis
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.

(Contd. on page 8)

Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 03/07/2014 Reviewed on 03/07/2014

Trade name: Vario Ammonia Cyanurate F10 ml

(Contd. of page 7)

· **Transport/Additional information:**

· **ADR**
· **Limited quantity (LQ):** 1 kg

* 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):**

1310-65-2	lithium hydroxide

· **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.

· **Canadian Ingredient Disclosure List**

· **Limit 0,1%**
None of the ingredients is listed.

· **Limit 1%**

1310-65-2	lithium hydroxide

· **Canadian Domestic Substances List (DSL)**

1310-65-2	lithium hydroxide

· **Canadian Non-domestic 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.

· **OSHA-Ca (Occupational Safety & Health Administration)**
None of the ingredients is listed.

· **Australian Inventory of Chemical Substances**
All ingredients are listed.

· **European EINECS**
All ingredients are listed.

· **Standard for the Uniform Scheduling of Drugs and Poisons**
None of the ingredient is listed.

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

· **This product has been classified in accordance with the hazard criteria of the CPR and the SDS contains all of the information required by the CPR**
.

(Contd. on page 9)

Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 03/07/2014 Reviewed on 03/07/2014

Trade name: Vario Ammonia Cyanurate F10 ml

(Contd. of page 8)

· **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**
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H335 May cause respiratory irritation.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

R22 Harmful if swallowed.
R31 Contact with acids liberates toxic gas.
R35 Causes severe burns.
R36/37 Irritating to eyes and respiratory system.
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

· **Date of preparation / last revision** 03/07/2014 / 32

· **Abbreviations and acronyms:**
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organization
EC50: effective concentration, 50 percent (in vivo)
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
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)
NFPA: National Fire Protection Association (USA)
WHMIS: Workplace Hazardous Materials Information System (Canada)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

· **Sources**
ECOTOX Database
IUCLID (International Uniform Chemical Information Database)
GESTIS-Stoffdatenbank
Data arise from manufacturers' data sheets, reference works and literature.

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