

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

Print date 29.07.2011 (DD.MM.YYYY)


Version number 27

Revision: 29.07.2011

* 1 Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier** Reagent for water analysis
- **Product name:** Vario ECR-Masking RGT
- **Catalog number:** 251400Y
- **1.2 Details of the supplier of the safety data sheet**
- **Supplier:**
YSI
1725 Brannum Lane
Yellow Springs, OH 45387
USA
tel: +1 937-767-7241
- **Informing department:**
MSDSinfo@ysi.com
- **Emergency information:**
Chemtrec toll free (USA and Canada): (800) 424-9300
Chemtrec International Telephone Number: 001 703-527-3887 (Collect Calls Accepted)

* 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.
Acute Tox. 4 H312 Harmful in contact with skin.
Acute Tox. 4 H332 Harmful if inhaled.
Eye Irrit. 2 H319 Causes serious eye irritation.
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



Xn; Harmful

R20/21/22: Harmful by inhalation, in contact with skin and if swallowed.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms** GHS07
- **Signal word** Warning
- **Hazard-determining components of labelling:**
ammonium fluoride
- **Hazard statements**
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H332 Harmful if inhaled.
H319 Causes serious eye irritation.

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Precautionary statements

- P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P302+P352 IF ON SKIN: Wash with plenty of soap and water.
 P309+P311 IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.
 P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

* 3 Composition/information on ingredients

3.2 Chemical characterization: Mixtures
Description: aqueous solution

Dangerous components:

CAS: 3012-65-5 EINECS: 221-146-3	diammonium hydrogen 2-hydroxypropane-1,2,3-tricarboxylate  Xi R36  Eye Irrit. 2, H319	15-25%
CAS: 12125-01-8 EINECS: 235-185-9 Index number: 009-006-00-8	ammonium fluoride  T R23/24/25  Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331	15-25%

- 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

4.1 Description of first aid measures

- General information** Instantly remove any clothing soiled by the product.
- After inhalation** Supply fresh air or oxygen; call for doctor.
- After skin contact**
Instantly rinse with water.
Seek medical treatment.
- After eye contact**
Rinse opened eye for several minutes (at least 10 min) under running water.
Call a doctor immediately.
- After swallowing**
Rinse out mouth and then drink 1-2 glasses of water.
Call a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

after absorption:

breathing difficulty

diarrhoea

gastric pain

sickness

vomiting

After swallowing of large amounts:

drop in blood pressure

CNS disorders

cramps

- Danger** Danger of disturbed cardiac rhythm.

- Indication of any immediate medical attention and special treatment needed** Antidote: calcium gluconate

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* 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**
Formation of toxic gases is possible during heating or in case of fire.
Hydrogen fluoride (HF)
NH₃
nitrogen oxides
 - **5.3 Advice for firefighters**
 - **Protective equipment:**
Wear self-contained breathing apparatus.
Wear full protective suit.
 - **Additional information**
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Collect contaminated fire fighting water separately. It must not enter drains.
Ambient fire may liberate hazardous vapours.
-

* 6 Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
 - **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.
Neutralize with lime sand, lime or sodium bicarbonate.
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.
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* 7 Handling and storage

- **Handling**
- **7.1 Precautions for safe handling**
Prevent formation of aerosols.
Work only in fume cupboard.
- **Information about protection against explosions and fires:** The product is not flammable
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and containers:**
Store only in the original container.
Store in cool location.
Unsuitable material for container: glass
- **Further information about storage conditions:**
Keep container tightly sealed.
Protect from heat and direct sunlight.
Protect from humidity and keep away from water.
Protect from the effects of light.
- **Recommended storage temperature:** 20°C +/- 5°C
- **Storage class** 10-13

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- **7.3 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.

- **8.1 Control parameters**

- **Components with limit values that require monitoring at the workplace:**

12125-01-8 ammonium fluoride (10-20%)

WEL (Great Britain)	Long-term value: 2.5 mg/m ³ as F
IOELV (European Union)	Long-term value: 2.5 mg/m ³ as F
TLV (US)	8 Hour TWA: 2.5 mg/m ³

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

- **8.2 Exposure controls**

- **Personal protective equipment**

- **General protective and hygienic measures**

Avoid contact with the eyes and skin.

Do not eat, drink or smoke while working.

- **Breathing equipment:** Use breathing protection against the effects of fumes/dust/aerosol.

- **Recommended filter device for short term use:** Combination filter B-P2

- **Protection of hands:**

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** 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:**

Safety glasses

use against the effects of fumes / dust

- **Body protection:** Protective work clothing.

* 9 Physical and chemical properties

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

- **Appearance:**

Form: Fluid

Colour: Colourless

- **Odour:** Odourless

- **pH-value at 20°C:** 5.1

- **Melting point/Melting range:** Not determined

- **Boiling point/Boiling range:** 100°C

- **Flash point:** Not applicable

- **Danger of explosion:** Product is not explosive.

- **Density at 20°C** 1.108 g/cm³

- **Solubility in / Miscibility with**

Water: Fully miscible

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· Solvent content:	
Organic solvents:	0.0 %
Water:	< 70 %
· Solids content: < 40 %	
· 9.2 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**
Contact with strong acids releases hydrogen fluoride
Attacks materials containing glass and silicate
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:**
acids
metals
halogen compounds
- **Hazardous decomposition products:**
Poisonous gases/vapours
Corrosive gases/vapours
ammonia (NH₃)
Nitrogen oxides (NO_x)
see chapter 5

* 11 Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**
Quantitative data on the toxicity of the preparation are not available.
The following statements refer to the individual components.

· LD/LC50 values that are relevant for classification:	
12125-01-8 ammonium fluoride	
LD50 IPR	32 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritant effect.
- **Sensitization:** No sensitizing effect known.
- **Subacute to chronic toxicity:**
chronic ingestion: contains fluoride which may affect behaviour / central nervous system, respiration, cardiovascular system, liver, urinary system, brain, metabolism
chronic toxic effect: fluorosis
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:
Harmful
- **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)** no data available

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* 12 Ecological information

- **12.1 Toxicity**

- **Aquatic toxicity:**

12125-01-8 ammonium fluoride

LC 50 (NaF) 660 mg/l (Leuciscus idus)

LC50 3638 mg/l/96h (Pimephales promelas)

- **12.2 Persistence and degradability** No further relevant information available.

- **Other information:**

Quantitative data on the ecological effect of this product are not available.

The following statements refer to the individual components.

- **Behaviour in environmental systems:**

- **12.3 Bioaccumulative potential** No further relevant information available.

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

- **Ecotoxicological effects:**

- **Remark:**

Toxic for fish:

NH₄⁺ > 0.3 mg/l

- **Additional ecological information:**

- **General notes:**

Water hazard class 1 (German Regulation) (Self-assessment acc. VwVwS Annex 4): slightly hazardous for water.

Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.

Must not reach sewage water or drainage ditch undiluted or unneutralized.

- **12.5 Results of PBT and vPvB assessment** no data available

- **12.6 Other adverse effects** No further relevant information available.

* 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 dangerous 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.

14 Transport information

- **14.1 UN-Number**

· ADR, ADN, IMDG, IATA

Void

- **14.2 UN proper shipping name**

· ADR, ADN

Void

- **14.3 Transport hazard class(es)**

· ADR, ADN, IMDG, IATA

· Class

Void

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· 14.4 Packing group · ADR, IMDG, IATA	Void
· 14.5 Environmental hazards: · Marine pollutant:	No
· 14.6 Special precautions for user	Not applicable.
· 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	Not dangerous according to the above specifications.

*15 Regulatory information

- **15.4 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **National regulations**
- **Information about limitation of use:**
Observe employment restrictions for pregnant and nursing mothers according to the 'mother protection guideline' (92/85/EEC)
- Employment restrictions concerning young persons must be observed.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

*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.
H311 Toxic in contact with skin.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
R23/24/25 Toxic by inhalation, in contact with skin and if swallowed.
R36 Irritating to eyes.
- **Recommended restriction of use:** professional/industrial use only
- **Abbreviations and acronyms:**
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)
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
ICAO: International Civil Aviation Organization
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
- **Sources**
Data arise from reference works and literature.
GESTIS-Stoffdatenbank
- *** Data compared to the previous version altered.**