

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

Print date 26.07.2011 (DD.MM.YYYY)

Version number 19

Revision: 26.07.2011

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

- **1.1 Product identifier** Reagent for water analysis
- **Product name:** Vario Aluminum ECR F20 ml
- **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**  
 The product is not classified as hazardous according to the CLP regulation.
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC** Void
- **Information concerning particular hazards for human and environment:**  
 The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" (1999/45/EC) in the latest valid version.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements**  
 Safety data sheet available on request.

### 3 Composition/information on ingredients

- **3.2 Chemical characterization: Mixtures**
- **Description:** Mixture of organic and inorganic compounds

- **Dangerous components:**

CAS: 70-49-5	mercaptosuccinic acid	5-10%
EINECS: 200-736-4	 Xn R22;  Xi R36/37/38	
	 Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	

- **REACH - Pre-registered substances** All components are REACH pre-registered.

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- **Additional information** For the wording of the listed risk phrases refer to section 16.
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### 4 First aid measures

- **4.1 Description of first aid measures**

- **After inhalation** Supply fresh air; consult doctor in case of symptoms.
- **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 minutes). 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**

- After swallowing of large amounts:
    - diarrhoea
    - drop in blood pressure
    - CNS disorders
    - respiratory paralysis
    - cramps
    - sickness
    - vomiting
  - **Danger** Danger of disturbed cardiac rhythm.
  - **Indication of any immediate medical attention and special treatment needed** No further relevant information available.
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### 5 Firefighting measures

- **5.1 Extinguishing media**

- **Suitable extinguishing agents**  
CO<sub>2</sub>, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

- **5.2 Special hazards arising from the substance or mixture**

- Formation of toxic gases is possible during heating or in case of fire.
- Hydrogen chloride (HCl)
- dipotassium oxide
- nitrogen oxides

- **5.3 Advice for firefighters**

- **Protective equipment:**  
Wear self-contained breathing apparatus.  
Wear full protective suit.
  - **Additional information**  
Ambient fire may liberate hazardous vapours.  
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.
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### 6 Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**

- Wear protective equipment. Keep unprotected persons away.
- **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:**  
Dispose of contaminated material as waste according to item 13.  
Collect mechanically.  
Ensure adequate ventilation.

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- **6.4 Reference to other sections** No dangerous materials are released.
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### \* 7 Handling and storage

- **Handling**
  - **7.1 Precautions for safe handling** Thorough dedusting.
  - **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 in cool location.
  - **Information about storage in one common storage facility:** Not required.
  - **Further information about storage conditions:**
    - Protect from heat and direct sunlight.
    - Store under dry conditions.
    - 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
  - **7.3 Specific end use(s)** No further relevant information available.
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### \* 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:**
    - 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**
  - **Personal protective equipment**
  - **General protective and hygienic measures**
    - Wash hands during breaks and at the end of the work.
    - 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:** Filter P1
  - **Protection of hands:** Preventive skin protection by use of skin-protecting agents is recommended.
  - **Material of gloves**
    - nitrile rubber, NBR
    - Recommended thickness of the material:  $\geq 0.11$  mm
  - **Penetration time of glove material**
    - Value for the permeation: Level  $\geq 1$  (>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:**
    - use against the effects of fumes / dust
    - Safety glasses
  - **Body protection:** Protective work clothing.
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### \* 9 Physical and chemical properties

· <b>9.1 Information on basic physical and chemical properties</b>	
· <b>Appearance:</b>	
<b>Form:</b>	Powder
<b>Colour:</b>	Orange
· <b>Odour:</b>	Sulphurous
· <b>pH-value (22 g/l) at 20°C:</b>	2.8
· <b>Melting point/Melting range:</b>	Not determined
· <b>Boiling point/Boiling range:</b>	Not determined
· <b>Flash point:</b>	Not applicable
· <b>Danger of explosion:</b>	Product is not explosive.
· <b>Density</b>	Not determined
· <b>Solubility in / Miscibility with Water:</b>	Soluble
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	0.0 %
<b>Solids content:</b>	100.0 %
· <b>9.2 Other information</b>	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 alkalis releasing ammonia
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** oxidizing agents
- **Hazardous decomposition products:** 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.

· <b>LD/LC50 values that are relevant for classification:</b>		
<b>70-49-5 mercaptosuccinic acid</b>		
Oral	LD50	800 mg/kg (rat)
	LD50 IPR	200 mg/kg (mouse)
	LD50 IVN	>1 mg/kg (rabbit) (Fremd-MSDS)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritant effect.
- **Sensitization:** No sensitizing effect known.
- **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.  
The usual precautionary measures should be adhered to general rules for handling chemicals.

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- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)** no data available

### \* 12 Ecological information

- **12.1 Toxicity**
- **Acquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **Other information:** Quantitative data on the ecological effect of this product are not available.

· <b>Behaviour in environmental systems:</b>	
<b>70-49-5 mercaptosuccinic acid</b>	
log P(o/w)	-0.88 (.)

- **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:

NH<sub>4</sub><sup>+</sup> > 0.3 mg/l

sulphates &gt; 7 g/l

- **Bacterial toxicity:** sulphates toxic > 2.5 g/l

- **Additional ecological information:**

- **General notes:**

Water danger class 3 (German Regulation) (Self-assessment acc. VwVwS Annex 4): extremely hazardous for water.

Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into soil.

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

- **vPvB assessments:** 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.

· <b>European waste catalogue</b>	
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.

- **Recommended cleaning agent:** Water, if necessary with cleaning agent.

### 14 Transport information

· <b>14.1 UN-Number</b>	
· <b>ADR, ADN, IMDG, IATA</b>	Void
· <b>14.2 UN proper shipping name</b>	
· <b>ADR, ADN</b>	Void
· <b>14.3 Transport hazard class(es)</b>	
· <b>ADR, ADN, IMDG, IATA</b>	
· <b>Class</b>	Void

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

### \*15 Regulatory information

- **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**

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

R22 Harmful if swallowed.

R36/37/38 Irritating to eyes, respiratory system and skin.

- **Abbreviations and acronyms:**

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**

IUCLID (International Uniform Chemical Information Database)

Data arise from reference works and literature.

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