1. Identification

**Product identifier**

Unyvero T1 Sample Tube

**Recommended use of the chemical and restrictions on use**

**Use of the substance/mixture**

Use as laboratory reagent.

**Uses advised against**

not known

**Details of the supplier of the safety data sheet**

- **Company name:** Curetis GmbH
- **Street:** Max-Eyth-Str. 42
- **Place:** 71088 Holzgerlingen, Germany
- **Telephone:** +49-(0)7031 – 49195-55
- **Telefax:** +49-(0)7031 - 4919519
- **Responsible Department:** Dr. Gans-Eichler, Chemieberatung GmbH
- **Street:** Raesfeldstr. 22
- **Place:** 48149 Muenster

**Emergency phone number:** Poison Information Center Mainz, Germany, Tel: +49(0)6131/19240

2. Hazard(s) identification

**Classification of the chemical**

29 CFR Part 1910.1200

**Hazard categories:**

- Acute toxicity: Acute Tox. 4
- Acute toxicity: Acute Tox. 4
- Skin corrosion/irritation: Skin Irrit. 2
- Serious eye damage/eye irritation: Eye Irrit. 2A

**Label elements**

29 CFR Part 1910.1200

**Signal word:** Warning

**Pictograms:**

- !

**Hazard statements**

- Harmful if swallowed or if inhaled
- Causes skin irritation
- Causes serious eye irritation

**Precautionary statements**

- Avoid breathing dust/fume/gas/mist/vapors/spray.
- Wear protective gloves/protective clothing/eye protection/face protection.
- If contact with skin: Wash with plenty of warm water and soap.
- If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if possible.
Unyvero T1 Sample Tube
Safety Data Sheet

According to 29 CFR 1910.1200(g)

Print date: 30.01.2018

Curetis GmbH

Continue rinsing. Call a poison center or doctor if discomfort persists. If eye irritation persists get medical attention. Dispose of contents and container in accordance with local, regional, national and international regulations.

Hazards not otherwise classified
No information available.

3. Composition/information on ingredients

Mixtures

Hazardous components

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Components</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>50-01-1</td>
<td>Guanidine hydrochloride, guanidinium chloride</td>
<td>45-50 %</td>
</tr>
</tbody>
</table>

4. First-aid measures

Description of first aid measures

General information
In case of accident or illness, seek medical advice immediately. Show this safety data sheet to the doctor in attendance.

After inhalation
In case of accident by inhalation, remove subject to fresh air and keep at rest. In all cases of doubt, or when symptoms persist, seek medical advice.

After contact with skin
After contact with skin, wash immediately with warm water and soap. In case of skin irritation, consult a physician.

After contact with eyes
In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.

After ingestion
Rinse mouth thoroughly with water. In all cases of doubt, or when symptoms persist, seek medical advice.

Most important symptoms and effects, both acute and delayed
This information is not available.

Indication of any immediate medical attention and special treatment needed
First Aid, decontamination, treatment of symptoms.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Unsuitable extinguishing media
High power water jet.

Specific hazards arising from the chemical
In case of fire, gases hazardous to health may be released: Carbon monoxide (CO), Carbon dioxide (CO2), Nitrogen oxides (NOx), Hydrogen chloride (HCl).

Special protective equipment and precautions for fire-fighters
In case of fire or explosion do not breathe fumes. Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information
Collect contaminated fire extinguishing water separately. Do not allow contaminated water to enter drains or surface water.
6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**
Ventilate affected area. Wear personal protection equipment (See section 8).

**Environmental precautions**
Do not allow contaminated water to enter into surface water or drains. Inform appropriate managerial or supervisory personnel of all environmental releases.

**Methods and material for containment and cleaning up**
Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

7. Handling and storage

**Precautions for safe handling**
- **Advice on safe handling**
  Keep container tightly closed.
- **Advice on protection against fire and explosion**
  No special fire protection measures are necessary.

**Further information on handling**
General protection and hygiene measures: See section 8.

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

**Requirements for storage rooms and vessels**
Recommended storage temperature: 15-25°C
Keep container tightly closed in a cool, well-ventilated place.

**Advice on storage compatibility**
Do not store together with explosives oxidizing solids, oxidizing liquids, radioactive substances, or infectious substances.

**Further information on storage conditions**
Protect against UV-radiation and sunlight.

8. Exposure controls/personal protection

**Control parameters**
**Exposure controls**
- **Appropriate engineering controls**
  No special measures are necessary.
- **Protective and hygiene measures**
  Keep away from food, drink and animals. Remove contaminated, saturated clothing immediately. Wash hands before and after contact with soap and warm water. Avoid contact with eyes and skin.

**Eye/face protection**
Wear safety glasses or chemical goggles (if splashing is possible). Standards: EN 166 or 29 CFR 1910.133.

**Hand protection**
In case of prolonged or frequently repeated skin contact, wear suitable gloves and personal protective equipment.
Suitable material:
Breakthrough time ≥8h
CR (polychloroprenes, Chloroprene rubber) (0,5 mm)
NBR (Nitrile rubber) (0,35 mm)
FKM (fluororubber) (0,4 mm)
PVC (Polyvinyl chloride) (0,5 mm)
Butyl rubber (0,5 mm)
Skin protection
Suitable protective clothing: Lab apron.

Respiratory protection
Respiratory protection necessary at:
Generation/formation of dust
Suitable respiratory protective equipment: Particulate Respirators, Standard: 42 CFR Part 84, Filter: R/N/P-99/100
The filter class must be suitable for the maximum contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, closed-circuit breathing apparatus must be used!

Environmental exposure controls
No special measures are necessary.

9. Physical and chemical properties

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Test method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state:</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color:</td>
<td>Colorless</td>
</tr>
<tr>
<td>Odor:</td>
<td>Characteristic</td>
</tr>
<tr>
<td>pH-Value:</td>
<td>Not determined</td>
</tr>
<tr>
<td>Changes in the physical state:</td>
<td></td>
</tr>
<tr>
<td>Melting point/freezing point:</td>
<td>Not determined</td>
</tr>
<tr>
<td>Initial boiling point and boiling range:</td>
<td>Not determined</td>
</tr>
<tr>
<td>Pour point:</td>
<td>Not determined</td>
</tr>
<tr>
<td>Flash point:</td>
<td>&gt;100 °C</td>
</tr>
<tr>
<td>Sustaining combustion:</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties:</td>
<td>Non</td>
</tr>
<tr>
<td>Lower explosion limits:</td>
<td>Not determined</td>
</tr>
<tr>
<td>Upper explosion limits:</td>
<td>Not determined</td>
</tr>
<tr>
<td>Ignition temperature:</td>
<td>Not determined</td>
</tr>
<tr>
<td>Decomposition temperature:</td>
<td>Not determined</td>
</tr>
<tr>
<td>Oxidizing properties:</td>
<td>Non</td>
</tr>
<tr>
<td>Vapor pressure:</td>
<td>Not determined</td>
</tr>
<tr>
<td>Density:</td>
<td>~1 g/cm³</td>
</tr>
<tr>
<td>Water solubility:</td>
<td>Completely miscible</td>
</tr>
<tr>
<td>Solubility in other solvents:</td>
<td></td>
</tr>
<tr>
<td>Viscosity / dynamic:</td>
<td>Not determined</td>
</tr>
<tr>
<td>Viscosity / kinematic:</td>
<td>Not determined</td>
</tr>
<tr>
<td>Flow time:</td>
<td>Not determined</td>
</tr>
<tr>
<td>Vapor density:</td>
<td>Not determined</td>
</tr>
</tbody>
</table>
Evaporation rate: Not determined
Solvent separation test: Not determined
Solvent content: 0%

Other information
Solid content: Not determined

10. Stability and reactivity

Reactivity
This information is not available.

Chemical stability
Stability: Stable
The product is chemically stable under recommended conditions of storage, use and temperature.

Possibility of hazardous reactions
Hazardous reactions: Will not occur
This information is not available.

Conditions to avoid
Keep away from heat.

Incompatible materials
Reacts with acid, oxidizing agents and strong alkalis.

Hazardous decomposition products
In case of fire, hazardous gases may be released: carbon monoxide (CO), carbon dioxide (CO2), nitrogen oxides (NOx), and/or hydrogen chloride (HCl).

11. Toxicological information

Information on toxicological effects

Route(s) of Entry
Ingestion: harmful. Inhalation: harmful. Skin contact: Causes skin irritation. May cause sensitization by inhalation. Eye contact: Causes eye irritation.

Acute toxicity
Harmful if swallowed or if inhaled.

ATEmix calculated
ATE (oral) 1010.6 mg/kg; ATE (vapor inhalation) 11.28 mg/l

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Components</th>
<th>Exposure route</th>
<th>Dose</th>
<th>Species</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>50-01-1</td>
<td>Guanidine hydrochloride, guanidinium chloride</td>
<td>Oral</td>
<td>LD50</td>
<td>475 mg/kg</td>
<td>Rat</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Vapor inhalation (4 h)</td>
<td>LC50</td>
<td>5.3 mg/l</td>
<td>Rat</td>
</tr>
</tbody>
</table>

Irritation and corrosivity
Causes skin irritation.
Causes serious eye irritation.

Sensitizing effects
Based on available data, the classification criteria are not met.
Guanidine hydrochloride, guanidinium chloride (50-01-1).
No evidence for: Respiratory or skin irritation (Buehler-Test).
Carcinogenic/mutagenic/toxic effects for reproduction
Based on available data, the classification criteria are not met.
Guanidine hydrochloride, guanidinium chloride (50-01-1)
No evidence for carcinogenicity
No evidence for in-vitro mutagenicity (Ames-Test)
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Specific target organ toxicity (STOT) - single exposure
Based on available data, the classification criteria are not met.

Specific target organ toxicity (STOT) - repeated exposure
Based on available data, the classification criteria are not met.
NOAEL: This information is not available.

Carcinogenicity (NTP):
No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Carcinogenicity (IARC):
No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Carcinogenicity (OSHA):
No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by OSHA.

Aspiration hazard
Based on available data, the classification criteria are not met.

12. Ecological information

Ecotoxicity
This information is not available.

Persistence and degradability
This information is not available.

Bioaccumulative potential
This information is not available.

Mobility in soil
This information is not available.

Other adverse effects
This information is not available.

13. Disposal considerations

Waste treatment methods

Advice on disposal
Dispose in accordance with all applicable regulations. Non-contaminated packages may be recycled.

Contaminated packaging
Since emptied containers may retain product residue, follow warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

US DOT 49 CFR 172.101

Proper shipping name:
Not a hazardous material with respect to these transport regulations. Not controlled under DOT.

Marine transport (IMDG)

UN proper shipping name:
Not restricted
Unyvero T1 Sample Tube

Other applicable information
Not restricted

Air transport (ICAO)
UN proper shipping name: Not restricted
Other applicable information
Not restricted

Environmental hazards
Environmentally Hazardous: No

Special precautions for user
Refer to chapter 6-8.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable.

15. Regulatory information

U.S. Regulations
National Inventory TSCA
Unyvero T1 Sample Tube:
Guanidine hydrochloride is listed in the TSCA inventory.
No TSCA 12(b) components exist in this product.

National regulatory information
SARA Section 311/312 Hazards:
Guanidine hydrochloride, guanidinium chloride (50-01-1): Immediate (acute) health hazard

State Regulations
Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65, State of California)
This product contains no chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

16. Other information

Hazardous Materials Information Label (HMIS)
Health: 2
Flammability: 0
Physical Hazard: 1
Personal Protection: B

NFPA Hazard Ratings
Health: 1
Flammability: 0
Reactivity: 0
Unique Hazard: -

Changes
Revision date: 30.01.2018
Revision No: 2.0
Rev 1.0 Initial release 03.08.2016
Rev 2.0: Editorial changes

Abbreviations and acronyms
CAS: Chemical Abstracts Service
CFR: Code of Federal Regulations
DOT: Department of Transportation
IARC: International Agency for Research on Cancer
IBC: Intermediate Bulk Container
IMDG: International Maritime Code for Dangerous Goods
ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
MARPOL: marine pollution
NOAEL: No observed adverse effect level
NTP: National Toxicology Program
NOAEL: No observed adverse effect level
NTP: National Toxicology Program
NOAEL: No observed adverse effect level
NTP: National Toxicology Program
NOAEL: No observed adverse effect level
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
SARA: Superfund Amendments and Reauthorization Act
TSCA: Toxic Substances Control Act
UN: United Nations

Other data

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The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor’s safety data sheet.)