

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

Printing date 07/19/2017

Reviewed on 07/19/2017

1 Identification

- **Product identifier**
- **Trade name:** Urea Reagent 2
- **Catalogue number:** 424247, 459400
- **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** The product is not classified as hazardous.
- **Label elements**
- **GHS label elements** none
- **Hazard pictograms** none
- **Signal word** none
- **Hazard statements** none
- **Other hazards**
Vapours of the product are heavier than air and may accumulate on the ground, in mines, drains or cellars with higher concentration.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** urease glycerol solution
- **Composition and Information on Ingredients:**
Percent ranges are used due to the confidential product information.

CAS: 56-81-5 EINECS: 200-289-5 RTECS: MA 8050000	glycerol	40-50%
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- **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.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
Rinse opened eye for several minutes (at least 15 min) under running water. If symptoms persist, consult a doctor.
- **After swallowing:**
Rinse out mouth and then drink 1-2 glasses of water.
If symptoms persist consult doctor.
- **Most important symptoms and effects, both acute and delayed**
mucous membrane irritation
after swallowing of large amounts:

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abdominal pain
vomiting
diarrhoea
drowsiness
headache

· **Indication of any immediate medical attention and special treatment needed:** No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture**
Can burn in fire.
Formation of toxic gases is possible during heating or in case of fire.
In case of fire, the following can be released:
acrolein
Carbon monoxide (CO) and carbon dioxide (CO₂)
Nitrogen oxides (NO_x)
Ammonia (NH₃)
- **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.
Suppress (knock down) gases/vapors/mists with a water spray jet.
Ambient fire may liberate hazardous vapours.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
- **Advice for non-emergency personnel:** No special measures required.
- **Advice for emergency responders:** Protective equipment: see section 8
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Dilute with plenty of water.
- **Methods and material for containment and cleaning up:**
Ensure adequate ventilation.
Absorb with liquid-binding material (sand, diatomite, universal binders).
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:**
Prevent formation of aerosols.
No special precautions are necessary if used correctly.
- **Hygiene measures:**
The usual precautionary measures for handling chemicals should be followed.
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.

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- **Information about storage in one common storage facility:** Not required.
- **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.
 - Protect from humidity and water.
- **Recommended storage temperature:** 2-8°C / 36-46°F
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Control parameters**

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

CAS: 56-81-5 glycerol

PEL (USA)	Long-term value: 15* 5** mg/m ³ mist; *total dust **respirable fraction
TLV (USA)	TLV withdrawn-insufficient data human occup. exp.
EL (Canada)	Long-term value: 10* 3** mg/m ³ *mist; **mist, respirable
EV (Canada)	Long-term value: 10 mg/m ³

- **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 A
- **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**
 - 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:**
 - Safety glasses
 - use against the effects of fumes / dust
- **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:	Fluid
Color:	Colorless

· Odor:	Recognizable
· Odor threshold:	Not determined.

· pH-value at 20°C (68 °F):	8
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· Melting point/freezing point:	Not determined.
· Initial boiling point and boiling range:	Not determined.

· Flash point:	> 190°C (> 374 °F) (CAS 56-81-5, c.c.)
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· Flammability (solid, gas):	Not applicable.
· Decomposition temperature:	> 45°C (> 113 °F) (CAS 9002-13-5)
· Auto-ignition temperature:	Product is not self-igniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· Flammability or explosive limits:	
Lower:	Not determined.
Upper:	Not determined.
· Oxidizing properties:	none
· Vapor Pressure:	Not determined.
· Density at 20°C (68 °F):	1.1 g/cm ³ (9.18 lbs/gal)
· Relative density:	Not determined.
· Vapor density:	Not determined.
· Evaporation rate:	Not determined.
· Solubility(ies)	
Water:	Fully miscible.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	Not determined.
· Solvent content:	
Organic solvents:	45-55 %
Water:	> 20 %
Solids content:	< 30 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** Fumes can combine with air to form an explosive mixture.
- **Chemical stability**
Stable at ambient temperature (room temperature).
Sensitivity to light
heat-sensitive
- **Possibility of hazardous reactions** Reacts with strong acids and alkali.
- **Conditions to avoid** To avoid thermal decomposition do not overheat.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:**
Nitrogen oxides (NO_x)
Ammonia (NH₃)
Carbon monoxide (CO) and carbon dioxide (CO₂)
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: 56-81-5 glycerol

Oral	LD50	12,600 mg/kg (rat) (IUCRID)
Dermal	LD50	>18,700 mg/kg (rabbit) (IUCRID)

- **Primary irritant effect:**
- **on the skin:** Based on available data, the classification criteria are not met.
- **on the eye:** Based on available data, the classification criteria are not met.

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- **Sensitization:** Based on available data, the classification criteria are not met.

- **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.

- **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.

12 Ecological information

- **Toxicity**

- **Aquatic toxicity:**

CAS: 56-81-5 glycerolEC50 >10,000 mg/l/24h (Daphnia magna)
(IUCLID)

EC5 3,200 mg/l (Entosiphon sulcatum) (72h)

- **Bacterial toxicity:**

CAS: 56-81-5 glycerol

EC5 >10,000 mg/l (Pseudomonas putida) (16h)

- **Persistence and degradability**

CAS: 56-81-5 glycerol

OECD 301 C 63 (.)

- **Bioaccumulative potential**

CAS: 56-81-5 glycerollog Pow ≤1.76 (.) (experimental)
(Merck)

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

- **Other adverse effects** Avoid transfer into the environment.

13 Disposal considerations

- **Waste treatment methods**

- **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Disposal must be made according to official regulations.

- **Uncleaned packaging:**

- **Recommendation:** Disposal must be made according to official regulations.

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- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· UN-Number · DOT, IMDG, IATA	none
· UN proper shipping name · DOT, IMDG, IATA	none
· Transport hazard class(es) · DOT, IMDG, IATA · Class	none
· Packing group · DOT, IMDG, IATA	none
· Environmental hazards:	Not applicable.
· Special precautions for user	Not applicable.
· 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

- **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: 56-81-5 glycerol
· New Jersey Special Hazardous Substance List:	None of the ingredients is listed.
· Pennsylvania Right-to-Know List:	CAS: 56-81-5 glycerol
· 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.

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- **US-VOC content:** 0.0 g/l / 0.00 lb/gl
- **Information about limitation of use:** Not required.
- **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.

- **Date of preparation / last revision** 07/19/2017 / 16
- **Abbreviations and acronyms:**
 - 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
- **Sources** Data arise from safety data sheets, reference works and literature.