

# Safety Data Sheet

## SDS acc. Hazard Communication Standard

REF: 910903	UNISOL 113 Indicator solution,1000mL,wo.	Page: 1/7
Printing Date: 01.10.2019	Date of Issue: 14.09.2018	

### Section 1: Identification

#### 1.1 Product Identifier / Product Name

REF	910903
Product Name	UNISOL 113 Indicator solution,1000mL,wo.
-	1 x 1 L UNISOL pH 1-13

#### 1.2 Relevant identified Uses of the Substance or Mixture and Uses advised against

**Relevant identified uses**  
Product for Analytical Use.  
The Exposure scenario is integrated into sections 1-16.

**Uses advised against**  
not described

#### 1.3 Details of the Supplier and of the Safety Data Sheet

**Manufactured by:**  
MACHEREY-NAGEL GmbH & Co. KG  
Neumann-Neander-Str. 6-8, 52355 Dueren, GERMANY  
Tel.: +49 2421 969 0  
E-mail: sds@mn-net.com (msds@mn-net.com)

#### 1.4 Emergency Telephone Number

For Chemical Emergency  
Spill, Leak, Fire, Exposure, or Accident  
Call CHEMTREC Day or Night (CCN685047)  
Within USA and Canada: **1-800-424-9300**  
Outside USA and Canada: **+1 703-527-3887** (collect calls accepted)

You find our current versions of SDS (22 languages) in Internet: <http://www.mn-net.com/SDS>

### Section 2: Hazard(s) Identification

#### 2.1 Classification of the Substance(s) or Mixture(s)

1 L UNISOL pH 1-13



GHS02

Signal Word DANGER

Hazard Identification	Hazard Classes/Categories
H225	Flam. Liq. 2

#### 2.2 Safety, Health and Environmental Regulations/Legislation specific for the Substance or Mixture

According the implementation of GHS immediate packages only must be labelled with product identifier(s), GHS symbol(s), signal word, manufacturer name and phone number (OSHA's interpretation of HCS 2012).

Harmful chemicals/mixtures with signal word: **WARNING** and highly flammable chemicals/mixtures must not be labelled with H and P phrases **until 125 mL** (EU 1272/2008 Annex I - 1.5.2) / **until 100 mL** (Canada WHMIS 2015). This labelling exemption does not apply to U.S.A.

1 L UNISOL pH 1-13



GHS02

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Signal Word: DANGER

H225  
Highly flammable liquid and vapor.

P210, P233  
Keep away from heat/sparks/open flames/hot surfaces. No smoking. Keep container tightly closed.

### 2.3 Other Hazards

**Possible Hazards from physicochemical Properties**

Flammable properties. Vapor forms explosive mixtures with air. ---

**Information pertaining to particular Risks to Human and possible Symptoms**

-

**Information pertaining to particular Risks to the Environment**

PBT: not applicable  
vPvB: not applicable

**Other Hazards**

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## Section 3: Composition/Information on Ingredients

### 3.1 Substances or 3.2 Mixtures

**1 L UNISOL pH 1-13**

Chemical:	<i>ethanol</i>	CAS No.:	64-17-5
	(denatured with 1%IPA/1%MEK, acc.2016/1867/EU)		
Classification:	H225, Flam. Liq. 2		
Chemical Formula:	C <sub>2</sub> H <sub>6</sub> O; C <sub>2</sub> H <sub>5</sub> OH		
Synonyms:	ethyl alcohol, methylated spirit		
TSCA Inventory:	listed		
RTECS:	KQ6300000	MFCD:	00003568
EC No.:	200-578-6	Indice No.:	603-002-00-5
Weight Percent:	75 - <90 %		
acc. GHS:	H225, Flam. Liq. 2		

Chemical:	<i>indicator dye(s)</i>	CAS No.:	-
Classification:	No criteria for classification or naming of chemical is not required.		
TSCA Inventory:	all listed, <1%		
Weight Percent:	0,1 - <1 %		
acc. GHS:	The criteria for classification are not fulfilled.		

### 3.3 Remarks

When not listed, mixtures are added with water [CAS No. 7732-18-5] to 100%.

List of Hazard and Precaution phrases: see section 16.1

## Section 4: First-Aid Measures

### 4.1 Description of First-Aid Measures

Place insured person out of danger zone to fresh air immediately. Ensure quiet, warmth, and provide resuscitation if necessary. If necessary contact medical advice.

#### 4.1.1 After SKIN Contact

Remove contaminated clothing. Rinse the affected skin or mucous membrane thoroughly under running water. (If possible) use soap.

#### 4.1.2 After EYE Contact

After contact with the eyes rinse thoroughly under running water with the eyelid wide open for min. 10 minutes with eye washing bottle, eye douche or running water (protect intact eye). Before (if possible) apply eye drops Proxymetacaine 0.5%, if the opening the eyelid convulsion is painful. Further treatment to be carried out by an eye specialist.

#### 4.1.3 After INHALATION of Vapors

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After inhalation of foam or vapor fresh air should be inhaled. Keep airways free.

**4.1.4 After ORAL Intake**

After oral intake lots of water should be drunk after it has been ingested.

**4.2 Most important Symptoms and Effects, both acute and delayed**

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**4.3 Indication of any immediate Medical Attention and Special Treatment needed**

After SKIN CONTACT rinse with water for a long time. Apply glucocorticosteroides following inflammatory reactions. ---

### Section 5: Fire-Fighting Measures

**5.1 Extinguishable Media**

Fire extinguishers appropriate to the fire classification, and, if applicable, a fire blanket must be available in a prominent location in the work area. All extinguishers like WATER FOG, WATER SPRAY, alcohol-resistant FOAM, DRY CHEMICAL, CARBON DIOXIDE can be used.

**5.2 Special Hazards arising from the Substance or Mixture**

DANGER: Highly flammable. Forms explosive vapor-air mixtures. Formation of hazardous and caustic vapor-air mixtures possible. ---

**5.3 Advice for Firefighters**

No, for listed product. The substance/mixture is highly flammable. Product package burns like paper or plastic. Cool any undamaged containers in water, and remove from the danger zone if possible. Heating will lead to an increase in pressure, and a danger of bursting.

**5.4 Additional Information**

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### Section 6: Accidental Release Measures

**6.1 Personal Precautions, Protective Equipment and Emergency Procedure**

Do not breathe vapors. Wear suitable protective gloves (see 8.2.2). Wear eye protection. Keep product away from sources of ignition - No smoking. Regular staff training is necessary.

**6.2 Environmental Precautions**

not necessary

**6.3 Methods and Material for Containment and Cleaning up**

Bind any escaping liquid with inert absorbent. Collect small amounts of leaked liquid and flush with water into sewer.

**6.4 Reference to other Sections**

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### Section 7: Handling and Storage

**7.1 Precautions for Safe Handling**

Handling in accordance with the test instruction, that comes with the product. Use only in well-ventilated working areas.

**7.2 Conditions for Safe Storage, including any Incompatibilities**

The original product package of MACHEREY-NAGEL allows a safe storage. Classification into storage class A (Flammable).

Storage class (VCI): 3

Water hazard class (DE): 1

**7.2.1 Conditions for Safe Storage, including any Incompatibilities**

Keep original product packages tightly closed during handling and storage, and store in a well-ventilated place at max. 77°F (25 °C), away or preferably separate from substances with which a hazardous reaction could take place. Use inbreakable container for transport of glass bottles.

**7.3 Specific End Use(s)**

Product for analytical use.



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### Section 8: Exposure Controls/Personal Protection

#### 8.1 Control Parameters

**1 L UNISOL pH 1-13**

Chemical: *ethanol* CAS No.: 64-17-5

DNEL: [derm] 343 mg/kg; [inh] 950 mg/m<sup>3</sup>  
DNEL = Derived No-Effect Level (for workers)

PNEC<sub>(fresh water)</sub>: 0.96 mg/L  
PNEC = Predicted No Effect Concentration

NIOSH: [TWA] 1000 ppm / 1900 mg/m<sup>3</sup>  
[TWA] Time-weighted average to a reference period of 8 hours, [STEL] Short-term exposure limit related to a 15-minute period

OSHA: [TWA] 1000 ppm / 1900 mg/m<sup>3</sup>

Chemical: *indicator dye(s)* CAS No.: -

#### 8.2 Exposure Controls

Good ventilation and extraction system in the room, floor resistant to chemicals with floor drainage and washing facilities. The highest level of cleanliness must be maintained at the workplace.

##### 8.2.1 Respiratory Protection

No additional recommendations.

##### 8.2.2 Hand Protection

Yes, gloves (permeation time >30 min - level 2), consist of PVC, Natural latex, Neopren, or Nitril. Use for short times chemical resistant Latex gloves f.ex. with code EN 374-3 level 1.

##### 8.2.3 Eye/Face Protection

Yes, Splash Goggles.

##### 8.2.4 Skin Protection

Recommended.

##### 8.2.5 Hygiene Measures

Eating, drinking, smoking, taking snuff and storage of food in work areas and at outdoor workplaces is prohibited. Avoid contact with the skin, eyes and clothing. Rinse any clothing on which the substance has been spilled, and soak it in water. Wash hands thoroughly with soap and water when stopping work and before eating, and then apply protective skin cream.

### Section 9: Physical and Chemical Properties

#### 9.1 Information on Basic Physical and Chemical Properties

**1 L UNISOL pH 1-13**

- |  |                        |                    |
|--|------------------------|--------------------|
| a) Appearance: liquid                      | Color: green           | b) Odor: alcoholic |
| c) Odor Threshold:                         | data not available     |                    |
| d) pH:                                     | data not available     |                    |
| e) Melting Point:                          | data not available     |                    |
| f) Boiling Point:                          | data not available     |                    |
| g) Flash Point:                            | 20 °C                  |                    |
| h) Evaporation Rate <sub>(ether=1)</sub> : | data not available     |                    |
| i) Flammability (solid, gas):              | data not available     |                    |
| j) Explosive Limits:                       | data not available     |                    |
| k) Vapor Pressure (68°F):                  | data not available     |                    |
| l) Vapor Density <sub>(air=1)</sub> :      | data not available     |                    |
| m) Specific Gravity:                       | 0,85 g/cm <sup>3</sup> |                    |
| n) Soluble in Water:                       | 0-100 %                |                    |
| o) Partition Coefficient (o-w):            | data not available     |                    |
| p) Autoignition Temperature:               | data not available     |                    |
| q) Decomposition temperature:              | data not available     |                    |
| r) Viscosity:                              | data not available     |                    |
| s) Explosive properties:                   | data not available     |                    |
| t) Oxidizing properties:                   | ---                    |                    |

#### 9.2 Other Information

Data for the other parameters of the mixtures are not available.

**Relevant Properties of Substance Group**

Substances are very volatile and form flammable vapor-air mixtures. ---

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### Section 10: Stability and Reactivity

#### 10.1 Reactivity

No further data available.

#### 10.2 Chemical Stability

No known instability.

#### 10.3 Possibility of Hazardous Reactions

But avoid reactions with oxidizing agents. No further data available.

#### 10.4 Conditions to avoid

Not necessary. But can form explosive gases/vapour with air. Use only in a well-ventilated working areas. ---

#### 10.5 Incompatible Materials

Avoid storage with oxidizing substances. ---

#### 10.6 Hazardous Decomposition Products

In the original package all parts/all reagents are safety and separated stored. Decompositions are not observed during the expiration period under recommended conditions.

### Section 11: Toxicological Information

#### 11.1 Information on Toxicological Effects

Following information is valid for pure chemicals. Quantitative data on the toxicity of this product are not available.

##### 1 L UNISOL pH 1-13

Chemical:	<i>ethanol</i>	CAS No.:	64-17-5
TSCA Inventory:	listed	California Prop. 65 List:	not listed
ACGIH:	1000 ppm		
Exposure Routes:	inhalation, ingestion, skin and/or eye contact		
Target Organs:	Eyes, skin, respiratory system, central nervous system, liver, blood, reproductive system		
Symptoms:	irritation eyes, skin, nose; headache, drowsiness, lassitude (weakness, exhaustion), narcosis; cough; liver damage; anemia; reproductive, teratogenic		
Canada CEPA 1999:	DSL yes		
LD50 <sub>oral</sub> rat :	6200 mg/kg		
LC <sub>LoW</sub> <sub>ihl</sub> gpg :	21.9 g/m <sup>3</sup>		
LC <sub>LoW</sub> <sub>orl</sub> hmn :	1400 mg/kg		
LC50 <sub>ihl</sub> mouse :	[4h] 39 g/m <sup>3</sup>		
LC50 <sub>ihl</sub> rat :	[10h] 20 g/m <sup>3</sup>		
LD50 <sub>drm</sub> rbt :	20 000 mg/kg		
LD50 <sub>oral</sub> mouse :	3450 mg/kg		

Chemical:	<i>indicator dye(s)</i>	CAS No.:	-
TSCA Inventory:	all listed, <1%		

### Section 12: Ecological Information

#### 12.1 Toxicity

Following information is valid for pure chemicals.

##### 1 L UNISOL pH 1-13

Chemical:	<i>ethanol</i>	CAS No.:	64-17-5
PNEC (fresh water) :	0.96 mg/L		
PNEC = Predicted No Effect Concentration			
LC50 <sub>daphnia magna</sub> /48h :	>100 mg/L		
LC50 <sub>pimephales promelas</sub> /96h :	13400 - 15100 mg/L		
LC50 <sub>leuciscus idus</sub> /96h :	[48h] 8140 mg/L		
LC50 <sub>fish</sub> /96h :	13 g/L		
EC50 <sub>daphnia</sub> /48h :	9.3-14.2 g/L		
IC50 <sub>scenedesmus quadricauda</sub> /72h :	[7d] 5000 mg/L		
EC10 <sub>pseudomonas putida</sub> /16h :	[EC5] 6500 mg/L		
Partition Coefficient (o-w):	-0.31		

Chemical:	<i>indicator dye(s)</i>	CAS No.:	-
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- 12.2 Persistence and Degradability**  
not necessary
- 12.3 Bioaccumulative Potential**  
not necessary
- 12.4 Mobility in Soil**  
not necessary
- 12.5 Results of PBT and vPvB Assessment**  
no data available
- 12.6 Other Adverse Effects**  
no additional data available

### Section 13: Disposal Considerations

Please observe local regulations for collection and disposal of hazardous waste and contact waste disposal company, where you will obtain information on laboratory waste disposal (RCRA Code D002/D003, EU waste code number 16 05 06).

- 13.1 Waste Treatment Methods**  
Normally it is possible to empty small amounts (diluted!) into drains.

### Section 14: Transport Information

<b>14.1. UN/NA:</b> 1993	<b>14.2. Proper Shipping Name:</b> Flammable liquid, n.o.s. (ethanol mixture)
<b>14.3. Hazard Class:</b> 3	<b>14.4. Packing Group:</b> II
<i>Transportation by Road</i>	
Classification code: F1	Tunnel restriction code: E
Limited Quantity: 1 L	Special instructions: 640C
Excepted Quantity: E 2	
<i>Air Transportation</i>	
PAX: 353	max. weight PAX: 5 L
CAO: 364	max. weight CAO: 60 L
<i>Maritime Transport</i>	
EmS: F-E, S-E	Storage Category: B

- 14.5 Environmental Hazards**  
none, contains only small quantities of hazardous substances
- 14.6 Special Precautions for User**  
not necessary
- 14.7 Transport in Bulk according to Annex II of MARPOL and the IBC Code**  
not applicable

### Section 15: Regulatory Information

- 15.1 Safety, Health and Environmental Regulations/Legislation specific for the Substance or Mixture**
  - U.S. Federal Regulations**  
OSHA "A Guide to The Globally Harmonized System of Classification and Labelling of Chemicals (GHS)"  
<https://www.osha.gov/dsg/hazcom/ghs.html>  
29 CFR 1910.1200 Hazard communication.  
NIOSH Pocket Guide to Chemical Hazards  
NIOSH Workplace Safety & Health Topics  
TSCA Inventory
  - U.S. State Regulations**  
California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986
  - Canada**  
Canada CEPA 1999 - Domestic Substances List (DSL), List of Toxic Substances (Schedule 1)

MN Leaflet/User manual, also see [www.mn-net.com](http://www.mn-net.com)
- 15.2 Chemical Safety Assessment**  
not necessary for these small amounts ---

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### Section 16: Other Information

#### 16.1 List of Hazard and Precaution Phrases

##### 16.1.1 List of relevant H Phrases

H225 Highly flammable liquid and vapor.

##### 16.1.2 List of relevant P Phrases

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
P233 Keep container tightly closed.

#### 16.2 Training Advice

Multiple safety training of staffs about danger and protection by using hazards in working area.

#### 16.3 Recommended Restriction on Use

Only for Professional User.

An individual package of this product or test kit has a moderate hazardous potential.

#### 16.4 Further Information

MACHEREY-NAGEL GmbH & Co. KG provides the information contained herein in good faith being up-to-date of own realizations at revision time. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgement in determining its appropriateness for a particular purpose.

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#### 16.5 Sources of Key Data

GHS: EU Regulation 1272/2008/EC on Classification, Labelling and Packaging of Substances and Mixtures, amending and repealing EU Directives 67/548/EEC and 1999/45/EC, and amending EU Regulation 1907/2006/EC

SDS: EU Regulation 453/2010/EU REACH - Requirements for the Compilation of Safety Data Sheets

EU-Directive 1999/92/EC Minimum Requirements for Improving the Safety and Health Protection of Workers at Risk from potentially Explosive Atmospheres

KÜHN, BIRETT (German), Data Sheets of Hazardous Substances

#### Revisions/Updates

Reason for Revision: 2016-03 Adaptation of European Regulation 1221/2015/EU

You find our current Versions of SDS in Internet:

<http://www.mn-net.com/SDS> [U.S. English]