

Material Safety Data Sheet

Filtration · Testing · Chromatography · Bioanalysis
Filtrieren · Testen · Chromatographie · Bioanalytik

according to EC Directive 1907/2006/EC

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1. Identification of the substance/ mixture and company

1.1 Identification/product name

UNISOL 113 Reagent Solution
REF/Cat. No. 91031

1.2 Use of the substance/ mixture

Product for analytical use (RIP 3.2 Codes: SU 0-2, PC 21, PROC 15, AC 0)

1.3 Manufacturer MACHEREY-NAGEL GmbH & Co. KG
Neumann-Neander-Strasse 6-8, D-52355 Dueren**Information from** MACHEREY-NAGEL GmbH & Co. KG
☎ +49 (0)2421 969 0 e-mail: msds@mn-net.com

1.4 Emergency telephone

DE: Gemeinsames Giftinformationszentrum (GGIZ), D-99089 Erfurt, ☎ +49 (0)361 730 730

Outside Germany (DE):

Call your regional Poisons Information Service or call local Life Saving Service.

2. Hazards identification

2.1 Hazard description

Highly flammable substance/mixture

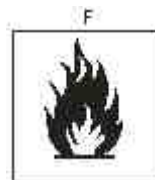
Symbol: F

Subsidiary Symbol:

Hazard symbols

Highly flammable. Liquid causes irritations to skin, eyes and respiratory system.

No labelling, if quantity below 25 ml per bottle (certificate of exemption concerning 67/548/EEC Art. 25, 1999/45/EC Art. 12 and German GefStoffV § 20 (3)), and TRGS 200 7.1)



2.2 Information pertaining to particular dangers to human and the environment

Avoid contact of substance/mixture to environment.

3. Composition/Information on ingredients

Chemical characterisation

Substance(s): Indicator dyes, in concentrations lower than reportable quantities, dissolved in ethanol 75% (C₂H₆O)**CAS No.:** 64-17-5**EC No.:** 200-578-6**INDEX No.:** 603-002-00-5**R reference:** 11**S reference:** 7-16

4. First aid measures

4.1 First aid instructions

In case of contact, immediately flush eyes or skin with copious amounts of water while removing contaminated clothing.

Following inhalation of vapours:

If inhaled, remove to fresh air. Contact medical advice.

After contact with skin:

Rinse the affected skin or mucous membrane thoroughly with water. If necessary, apply a loose dressing.

After contact with the eyes:

Rinse thoroughly for min. 10 minutes under running water with the eyelid wide open. Before (if possible) apply eye drops Proxymetacaine 0.5%, if the opening the eyelid convulsion is painful. Then apply a loose bandage. Further treatment be carried out by an eye specialist.

After oral intake:

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If swallowed, wash out mouth and drink amounts of water. Contact medical advice.

4.2 Further medical treatment/attention

Treat symptomatically. Secure the breathing, heart and circulatory function. Remove the substance quickly from the body. Mechanically induce vomiting or ensure the patient eats medicinal charcoal compressed tablets or drinks liquid paraffin. In order to ensure rapid passage through the colon (administer 2 tablespoons of dissolved Glauber's salt). Alleviation of pain, if necessary sedation. Shock treatment. Administer a prophylaxis to counter pulmonary oedema.

4.3 Specific means of treatment which should always be available at the workplace

An eye bath or spray should be provided at the workplace.

5. Fire-fighting measures

5.1 Suitable extinguishing media

Highly flammable (see 15.2 1999/92/EC). May form explosive vapour-air mixture.

Extinguishing media: Foam. Dry powder. Carbon dioxide.

Only for water soluble solvents (see 9.2 Solubility in water) extinguishing media water is useful.

5.2 Hazards, combustion products/gases

Beware of formation of hazardous and caustic vapours.

5.3 Special protective equipment required

Use only acid-resistant safety equipment. Protective breathing apparatus which is independent of the ambient air (isolated equipment), and sealed protective clothing is necessary in the event of a large-scale formation of toxic substances.

5.4 Additional information

The substance 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. Spray any vapours released with water. Only use equipment which is resistant to chemicals.

6. Accidental release measures

6.1 Personal precautions

Do not breathe vapour. Keep away from sources of ignition. Wear suitable protective gloves and eye protection. Regular staff training is necessary, indicating hazards and precautions on the basis of operating instructions. Restrictions on activity must be observed.

6.2 Methods of cleaning-up

Bind any escaping liquid with universal binder and dispose in accordance to local regulations for the disposal of hazardous chemicals. Clean any contaminated equipment and floors with plenty of water.

6.3 Environmental precautions

Great amounts do not discharge into the drains/surface waters/groundwater.

7. Handling and storage

7.1 Handling

In accordance with the testing instructions, that comes with the product. The original product package allows a safe handling.

7.2 Storage

The original product package of MACHEREY-NAGEL allows a safe storage. Keep packages tightly closed during handling and storage, and store in a well-ventilated place at max. 25 °C, away or preferably separate from substances with which a hazardous reaction could take place, so that they are not immediately accessible to outside parties. Products containing also toxic substances should be kept locked up.

Storage class (German chemical industry): 3 A

8. Exposure controls/personal protection

8.1 Exposure limit values

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TRGS 900/SUVA.CH: 500 ml/m³, 960 mg/m³, Y

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.

Respiratory protection: see 7.2

Hand protection: yes, rubber gloves acc. EN 374

Eye protection: yes, safety glasses

Skin protection: yes, recommended

Personal hygiene:

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.

9. Physical and chemical properties

9.1 General information

Appearance: liquid

Colour:

Odour:

9.2 Important health, safety and environmental information

pH in aqueous solution: 7

Melting point [°C]: -114

Boiling point [°C]: 78

Flash point [°C]: > 12

Ignition temperature [°C]: 425

Explosion limits [vol%]: 3.5 ...15

Vapour pressure [hPa]: (at 20 °C) 59

(at 50 °C) 296

Relative density: (at 20 °C) 0.79-0.86 g/cm³

Solubility in water: (at 20 °C) 0-100%

10. Stability and reactivity

10.1 Conditions to avoid

Forms with air explosive gases

10.2 Materials to avoid

Reactions with oxidising agents

10.3 Hazardous decomposition products

For safety separation the reagents should be stored in the original package. Decompositions are not observed during the expiration period under recommended conditions (see instruction leaflet).

11. Toxicological information

11.1 Toxicological effects

The acute and chronic effects of harmful substances can differ markedly. They can have a toxic respiratory effect, an irritant effect on the skin and the mucous membranes, they can damage the skin, have a narcotic effect, be centrally stimulating and in particular have a damaging effect on the organs or lead to super-sensitisation.

11.2 Toxicological tests

Corrosive effects: not observed

Irritant effects: possible

Effects after multiple exposition: not observed

Carcinogen/mutagen effects:

Other effects:

LD₅₀ oral rat 6200 mg/kg LC₅₀ ihl rat 20 g/m³/10h

LD₅₀ drm rbt 20 g/kg LCLo ihl gpg 21.9 g/m³

Quantitative data on the toxicity of this product are not available.

12. Ecological information

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12.1 Ecotoxicity

The potential effect of a single package on the environment is considerably low. Hazardous to drinking water, only if large amounts enter the subsoil and waters.

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 disposal (waste code number 07 07 04). Close container tightly.

14. Transport information

Proper shipping name: Chemical Kit

UN No.: 3316

Class: 9

Packaging group: II

Commercial transport-

- road/railway

ADR/RID

Class Code: M11, ADR 3.3.1/251: LQ 4 = 10 kg

Maritime transport:

IMDG

EmS: F-A,S-P

Air transport:

IATA-DGR

PAX+CAO 915

Other data: For the declaration as **chemical kit** the total quantity of dangerous goods in any one outer package must not exceed 10 kg.

Alternative transport information

Transport name: Flammable liquid, n.o.s. (ethanol solution)

UN No: 1993

Class: 3

Packaging group (PG): II

- road ADR **Cl.Code:**

F1, LQ 4 = 3 L/ 30 kg

15. Regulatory information

15.1 Labelling

No labelling, if quantity below 25 g or ml per bottle (exemption for small quantities)

Code:

F

Subsidiary Code:

Description:

Highly flammable

Constituents which are

crucial to the hazard:

Indicator dyes, in concentrations lower than reportable quantities, dissolved in ethanol 75%

R reference:

11

S reference:

7-16

15.2 International and national regulations

1. European Community Directive 67/548/EEC governing the classification, packaging and labelling of dangerous substances, including Adaptation to Technical Progress (ATP), 2006/121/EC
2. German act governing protection from hazardous substances (Chemicals Act / Chemikaliengesetz- ChemG), revised on May 2008
3. German order governing protection from hazardous substances (Ordinance on Hazardous Substances / Gefahrstoffverordnung - GefStoffV), revised on December 2004, according to Directive 98/24/EC
4. Directive 1998/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work
5. Directive 1999/45/EC concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations
6. Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens or mutagens at work
7. Regulation (EC) 1907/2006/EC concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency
8. TRGS 200, German engineering rules governing the classification and labelling of hazardous substances, preparations and products, updated February 2007
9. Announcement 220 (DE), Safety Data Sheet, September 2007
10. TRGS 900, German engineering rules governing limits in air at work, updated January/December 2006
11. SUVA.CH, Limits in air at work 2009, revised on 01.2009
12. TRGS 905, German engineering rules governing carcinogens and mutagens, updated May 2008

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13. Directive 1999/92/EC Minimum requirements for improving the safety and health protection of workers at risk from potentially explosive atmospheres

15.3 Other national regulations

DE: Water hazard class: WGK 1

16. Other information

R references

R 11 Highly flammable

S references

S 7 Keep container tightly closed

S 16 Keep away from sources of ignition - No smoking

Recommended usage and restriction: only for trained staff

Look about employ restrictions for young people, pregnant women and nursing women.

An individual package of this product or of this test kit has considerably less hazardous potential.

You find our current versions of MSDS in Internet:

www.mn-net.com link "Services"

Bibliographical sources

KÜHN, BIRETT: Merkblätter Gefährliche Arbeitsstoffe E 034
(Data Sheets of Hazardous Substances)

Reason for alteration: REACH Regulation 1907/2006/EC, RIP 3.2

Further information from

Customer Service Center ☎ +49 (0)2421 969 0 📠 +49 (0)2421 969 199

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