

1 Identification of the substance/mixture and of the company/undertaking

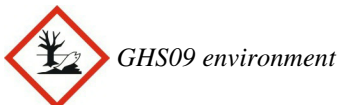
- **Product identifier**
- **Trade name:** Universol™
- **Article number:** 882462
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the preparation** Research Use Only
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
MP Biomedicals Europe
Parc d'Innovation BP 50067
Rue Geiler de Kaysersberg
Illkirch Cedex 67402
France
tel: +33 3.88.67.54.25
www.mpbio.com
- **Further information obtainable from:** Product safety department
- **Emergency telephone number:** :n° ORFILA" (01-45-42-59-59)

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



Flam. Liq. 3 H226 Flammable liquid and vapour.

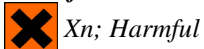


Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

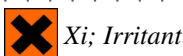


Acute Tox. 4 H332 Harmful if inhaled.
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.
STOT SE 3 H335 May cause respiratory irritation.

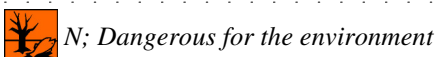
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



R20/21/22: Harmful by inhalation, in contact with skin and if swallowed.



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



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R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R10: Flammable.

Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

Label elements

Labelling according to EU guidelines:

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

Code letter and hazard designation of product:



Xn Harmful

N Dangerous for the environment

Hazard-determining components of labelling:

1,2,4-trimethylbenzene

Surfonic® N-95

Risk phrases:

10 Flammable.

20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

36/37/38 Irritating to eyes, respiratory system and skin.

51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases:

2 Keep out of the reach of children.

29/56 Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.

36/37 Wear suitable protective clothing and gloves.

46 If swallowed, seek medical advice immediately and show this container or label.

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterization: Mixtures

Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:

<p>CAS: 95-63-6 EINECS: 202-436-9 Index number: 601-043-00-3</p>	<p>1,2,4-trimethylbenzene Xn R20; Xi R36/37/38; N R51/53 R10 <hr style="border-top: 1px dashed black;"/> Flam. Liq. 3, H226; Aquatic Chronic 2, H411; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335</p>	<p>60-70%</p>
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


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CAS: 9016-45-9 NLP: 500-024-6	Surfonic® N-95  Xn R21/22 -----  Acute Tox. 4, H302	30-40%
CAS: 67-56-1 EINECS: 200-659-6 Index number: 603-001-00-X	methanol  T R23/24/25-39/23/24/25;  F R11 -----  Flam. Liq. 2, H225;  Acute Tox. 3, H301;  Acute Tox. 3, H311;  Acute Tox. 3, H331;  STOT SE 1, H370	1-10%

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

4 First aid measures

- **Description of first aid measures**
- **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Call for a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
- **Reference to other sections**
See Section 7 for information on safe handling.

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See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:** 15-30 °C
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

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

95-63-6 1,2,4-trimethylbenzene	
IOELV	100 mg/m ³ , 20 ppm
67-56-1 methanol	
IOELV	260 mg/m ³ , 200 ppm
	Skin

- **Additional information:** The lists valid during the making were used as basis.

- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
- **Respiratory protection:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

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- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form: Fluid
Colour: According to product specification

- **Odour:** Characteristic

- **Odour threshold:** Not determined.

- **pH-value:** Not determined.

- **Change in condition**

Melting point/Melting range: Undetermined.
Boiling point/Boiling range: 169 °C

- **Flash point:** 50 °C

- **Flammability (solid, gaseous):** Not applicable.

- **Ignition temperature:** 485 °C

- **Decomposition temperature:** Not determined.

- **Self-igniting:** Product is not selfigniting.

- **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

- **Explosion limits:**

Lower: 1,1 Vol %
Upper: 7,0 Vol %

- **Vapour pressure at 20 °C:** 1,3 hPa

- **Density at 20 °C:** 0,93 g/cm³
- **Relative density** Not determined.
- **Vapour density** Not determined.
- **Evaporation rate** Not determined.

- **Solubility in / Miscibility with water:** Not miscible or difficult to mix.

- **Partition coefficient (n-octanol/water):** Not determined.

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- | | |
|----------------------------|--|
| · Viscosity: | |
| Dynamic: | Not determined. |
| Kinematic: | Not determined. |
| · Solvent content: | |
| Organic solvents: | 60-70 % |
| VOC (EC) | 60-70 % |
| · Solids content: | 1-10 % |
| · Other information | No further relevant information available. |

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values relevant for classification:**

95-63-6 1,2,4-trimethylbenzene

Oral	LD50	5000 mg/kg (rat)
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9016-45-9 Surfonic® N-95

Oral	LD50	1310 mg/kg (rat)
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Dermal	LD50	>2000 mg/kg (rabbit)
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- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.

- **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Harmful

Irritant

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.

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- **Ecotoxicological effects:**
- **Remark:** Toxic for fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|--|---|
| <ul style="list-style-type: none"> · UN-Number · ADR, IMDG, IATA | UN1992 |
| <ul style="list-style-type: none"> · UN proper shipping name · ADR · IMDG · IATA | 1992 FLAMMABLE LIQUID, TOXIC, N.O.S. (1,2,4-trimethylbenzene, Surfonic® N-95), ENVIRONMENTALLY HAZARDOUS FLAMMABLE LIQUID, TOXIC, N.O.S. (1,2,4-trimethylbenzene, Surfonic® N-95), MARINE POLLUTANT FLAMMABLE LIQUID, TOXIC, N.O.S. (1,2,4-trimethylbenzene, Surfonic® N-95) |
| <ul style="list-style-type: none"> · Transport hazard class(es) · ADR, IMDG | <div style="display: flex; align-items: center; gap: 10px;">    </div> |
| <ul style="list-style-type: none"> · Class · Label | 3 Flammable liquids.
3+6.1 |
| <ul style="list-style-type: none"> · IATA | <div style="display: flex; align-items: center; gap: 10px;">   </div> |
| <ul style="list-style-type: none"> · Class | 3 Flammable liquids. |

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· Label	3+6.1
· Packing group · ADR, IMDG, IATA	III
· Environmental hazards: · Marine pollutant:	Product contains environmentally hazardous substances: 1,2,4-trimethylbenzene Yes
· Special marking (ADR):	Symbol (fish and tree) Symbol (fish and tree)
· Special precautions for user · Danger code (Kemler): · EMS Number:	Warning: Flammable liquids. 36 F-E,S-D
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR · Limited quantities (LQ) · Transport category · Tunnel restriction code	5L 3 D/E
· UN "Model Regulation":	UN1992, FLAMMABLE LIQUID, TOXIC, N.O.S. (1,2,4-trimethylbenzene, Surfonic® N-95), ENVIRONMENTALLY HAZARDOUS, 3 (6.1), III

15 Regulatory information

- **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.

- **Relevant phrases**

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H370	Causes damage to organs.
H411	Toxic to aquatic life with long lasting effects.
R10	Flammable.
R11	Highly flammable.
R20	Harmful by inhalation.
R21/22	Harmful in contact with skin and if swallowed.

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R23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

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

R39/23/24/25 Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.

R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

· **Department issuing MSDS:** Product safety department

· **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)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

EU