

## 1 Identification

- **Product identifier**
- **Trade name:** Universol™
- **Article number:** 882462
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
MP Biomedicals, LLC  
29525 Fountain Parkway  
Solon, OH 44139  
United States  
www.mpbio.com
- **Information department:** Product safety department
- **Emergency telephone number:** CHEMTREC: 1-800-424-9300 (1-703-527-3887)

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS07

Acute Tox. 4 H332 Harmful if inhaled.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A 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**



Harmful

Harmful by inhalation, in contact with skin and if swallowed.



Irritant

Irritating to eyes, respiratory system and skin.



Dangerous for the environment

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

Flammable.

- **Information concerning particular hazards for human and environment:**

The product has to be labeled due to the calculation procedure of international guidelines.

- **Classification system:**

The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

- **Label elements**

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

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Trade name: **Universol™**

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- **Hazard pictograms**



GHS02 GHS07

- **Signal word** Warning

- **Hazard-determining components of labeling:**

1,2,4-trimethylbenzene  
methanol

- **Hazard statements**

Flammable liquid and vapour.

Harmful if inhaled.

Causes skin irritation.

Causes serious eye irritation.

May cause respiratory irritation.

- **Precautionary statements**

If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Read label before use.

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Use explosion-proof electrical/ventilating/lighting/equipment.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



Health = 2

Fire = 2

Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



HEALTH 2 Health = \*2

FIRE 2 Fire = 2

REACTIVITY 0 Reactivity = 0

- **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 the substances listed below with nonhazardous additions.

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<b>· Dangerous components:</b>		
CAS: 95-63-6 EINECS: 202-436-9	1,2,4-trimethylbenzene	50-90%
CAS: 9016-45-9 NLP: 500-024-6	nonylphenol, ethoxylated	25-50%
CAS: 67-56-1 EINECS: 200-659-6 RTECS: PC 1400000	methanol	1-2.5%

## 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:** Immediately call a doctor.
- **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 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** CO<sub>2</sub>, 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

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- **Reference to other sections**  
See Section 7 for information on safe handling.  
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 protection against explosions and fires:**  
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 receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

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

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

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

REL Long-term value: 125 mg/m<sup>3</sup>, 25 ppmTLV Long-term value: 123 mg/m<sup>3</sup>, 25 ppm

### 67-56-1 methanol

PEL Long-term value: 260 mg/m<sup>3</sup>, 200 ppmREL Short-term value: 325 mg/m<sup>3</sup>, 250 ppmLong-term value: 260 mg/m<sup>3</sup>, 200 ppm

Skin

TLV Short-term value: 328 mg/m<sup>3</sup>, 250 ppmLong-term value: 262 mg/m<sup>3</sup>, 200 ppm

Skin; BEI

- **Ingredients with biological limit values:**

### 67-56-1 methanol

BEI 15 mg/L

urine

end of shift

Methanol (background, nonspecific)

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

- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.

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Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **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

· **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:**

<b>Form:</b>	Liquid
<b>Color:</b>	According to product specification
<b>Odor:</b>	Characteristic
<b>Odour threshold:</b>	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	169 °C (336 °F)

· **Flash point:** 50 °C (122 °F)

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

· **Ignition temperature:** 485 °C (905 °F)

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

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· <b>Danger of explosion:</b>	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· <b>Explosion limits:</b>	
<b>Lower:</b>	1.1 Vol %
<b>Upper:</b>	7.0 Vol %
· <b>Vapor pressure at 20 °C (68 °F):</b>	1.3 hPa (1 mm Hg)
· <b>Density at 20 °C (68 °F):</b>	0.93 g/cm <sup>3</sup> (7.761 lbs/gal)
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with Water:</b>	Not miscible or difficult to mix.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	67.6 %
<b>VOC content:</b>	67.6 %
	628.4 g/l / 5.24 lb/gl
· <b>Other information</b>	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:**

· <b>LD/LC50 values that are relevant for classification:</b>		
<b>95-63-6 1,2,4-trimethylbenzene</b>		
Oral	LD50	5000 mg/kg (rat)
<b>9016-45-9 nonylphenol, ethoxylated</b>		
Oral	LD50	1310 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (rabbit)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.

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- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Harmful  
Irritant

- **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.

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Toxic for fish
- **Additional ecological information:**
- **General notes:**  
Water hazard class 2 (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 of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

- |                                |  |
|--------------------------------|--|
| <b>UN-Number</b>               |  |
| <b>DOT, ADR, IMDG, IATA</b>    | UN1993   |
| <b>UN proper shipping name</b> |  |
| <b>DOT</b>                     | Flammable liquids, n.o.s. (1,2,4-trimethylbenzene, nonylphenol, ethoxylated) |

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· **ADR** 1993 *Flammable liquids, n.o.s. (1,2,4-trimethylbenzene, nonylphenol, ethoxylated), ENVIRONMENTALLY HAZARDOUS*  
 · **IMDG** *FLAMMABLE LIQUID, N.O.S. (1,2,4-trimethylbenzene, nonylphenol, ethoxylated), MARINE POLLUTANT*  
 · **IATA** *FLAMMABLE LIQUID, N.O.S. (1,2,4-trimethylbenzene, nonylphenol, ethoxylated)*

· **Transport hazard class(es)**· **DOT**

· **Class** 3 *Flammable liquids.*  
 · **Label** 3

· **ADR, IMDG**

· **Class** 3 *Flammable liquids*  
 · **Label** 3

· **IATA**

· **Class** 3 *Flammable liquids.*  
 · **Label** 3

· **Packing group**· **DOT, ADR, IMDG, IATA** III

· **Environmental hazards:** *Product contains environmentally hazardous substances: 1,2,4-trimethylbenzene*

· **Marine pollutant:** *Yes*  
*Symbol (fish and tree)*

· **Special marking (ADR):** *Symbol (fish and tree)*

· **Special precautions for user** *Warning: Flammable liquids*

· **Danger code (Kemler):** 36

· **EMS Number:** F-E,S-D

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** *Not applicable.*

· **UN "Model Regulation":** *UN1993, Flammable liquids, n.o.s. (1,2,4-trimethylbenzene, nonylphenol, ethoxylated), ENVIRONMENTALLY HAZARDOUS, 3, III*

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## 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):**

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

67-56-1 | methanol

· **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:**

67-56-1 | methanol

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS02    GHS07

· **Signal word** Warning

· **Hazard-determining components of labeling:**

1,2,4-trimethylbenzene

methanol

· **Hazard statements**

Flammable liquid and vapour.

Harmful if inhaled.

Causes skin irritation.

Causes serious eye irritation.

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*May cause respiratory irritation.*

· **Precautionary statements**

*If medical advice is needed, have product container or label at hand.*

*Keep out of reach of children.*

*Read label before use.*

*Keep away from heat/sparks/open flames/hot surfaces. - No smoking.*

*Use explosion-proof electrical/ventilating/lighting/equipment.*

*IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.*

*IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.*

*Continue rinsing.*

*Store locked up.*

*Dispose of contents/container in accordance with local/regional/national/international regulations.*

· **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.*

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

· **Date of preparation / last revision** *02/28/2014 / -*

· **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*

*DOT: US Department of Transportation*

*IATA: International Air Transport Association*

*ACGIH: American Conference of Governmental Industrial Hygienists*

*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)*

*NFPA: National Fire Protection Association (USA)*

*HMIS: Hazardous Materials Identification System (USA)*

*VOC: Volatile Organic Compounds (USA, EU)*

*LC50: Lethal concentration, 50 percent*

*LD50: Lethal dose, 50 percent*

*Flam. Liq. 3: Flammable liquids, Hazard Category 3*

*Acute Tox. 4: Acute toxicity, Hazard Category 4*

*Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2*

*Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A*

*STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3*

USA