



# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Revision Date 19.11.2012

Version 1.3

## SECTION 1. Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

Catalogue No. 103973  
Product name Merckoglas® liquid cover glass for microscopy  
REACH Registration Number This product is a mixture. REACH Registration Number see section 3.

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses In vitro diagnostic reagent, Reagent for analysis  
For additional information on uses please refer to the Merck Chemicals portal ([www.merck-chemicals.com](http://www.merck-chemicals.com)).

### 1.3 Details of the supplier of the safety data sheet

Responsible Department EQ-RS \* e-mail: [prodsafe@merckgroup.com](mailto:prodsafe@merckgroup.com)  
Regional representation Merck Chemicals Ltd \* Boulevard Industrial Park \* Padge Road \*  
Beeston \* Nottingham \* NG9 2JR \* Tel. 01159 430840 \*  
[information@merckchem.co.uk](mailto:information@merckchem.co.uk).

1.4 Emergency telephone number +49 (0) 6151 722440

## SECTION 2. Hazards identification

### 2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Flammable liquid, Category 2, H225  
Skin irritation, Category 2, H315  
Reproductive toxicity, Category 2, H361d  
Specific target organ toxicity - single exposure, Category 3, H336  
Specific target organ toxicity - repeated exposure, Category 2, H373  
Aspiration hazard, Category 1, H304

For the full text of the H-Statements mentioned in this Section, see Section 16.

Classification (67/548/EEC or 1999/45/EC)

F	Highly flammable	R11
Xn	Harmful	R48/20
Repr.Cat.3	Toxic to Reproduction Category 3	R63
Xi	Irritant	R38
		R67

For the full text of the R-phrases mentioned in this Section, see Section 16.

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## 2.2 Label elements

### Labelling (REGULATION (EC) No 1272/2008)

#### Hazard pictograms



*Signal word*  
Danger

#### Hazard statements

H225 Highly flammable liquid and vapour.  
H304 May be fatal if swallowed and enters airways.  
H315 Causes skin irritation.  
H336 May cause drowsiness or dizziness.  
H361d Suspected of damaging the unborn child.  
H373 May cause damage to organs through prolonged or repeated exposure.

#### Precautionary statements

##### Prevention

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
P233 Keep container tightly closed.  
P280 Wear protective gloves/ protective clothing.

##### Response

P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.  
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.

##### Storage

P403 + P235 Store in a well-ventilated place. Keep cool.

### Reduced labelling ( $\leq 125$ ml)

#### Hazard pictograms



*Signal word*  
Danger

#### Hazard statements

H304 May be fatal if swallowed and enters airways.  
H361d Suspected of damaging the unborn child.

#### Precautionary statements

P280 Wear protective gloves/ protective clothing.  
P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.

Contains: toluene

### Labelling (67/548/EEC or 1999/45/EC)



*Symbol(s)*  F Highly flammable  
 Xn Harmful

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*R*-phrase(s) 11-38-48/20-63-67 Highly flammable. Irritating to skin. Harmful: danger of serious damage to health by prolonged exposure through inhalation. Possible risk of harm to the unborn child. Vapours may cause drowsiness and dizziness.  
*S*-phrase(s) 16-36/37 Keep away from sources of ignition - No smoking. Wear suitable protective clothing and gloves.

**Reduced labelling (≤125 ml)**

*Symbol(s)*  F Highly flammable  
 Xn Harmful  
*R*-phrase(s) 48/20-63-65 Harmful: danger of serious damage to health by prolonged exposure through inhalation. Possible risk of harm to the unborn child. Harmful: may cause lung damage if swallowed.  
*S*-phrase(s) 36/37-45 Wear suitable protective clothing and gloves. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Contains: toluene

**2.3 Other hazards**

None known.

**SECTION 3. Composition/information on ingredients**

Chemical nature Mixture of organic compounds

**3.1 Substance**

not applicable

**3.2 Mixture**

**Hazardous components (REGULATION (EC) No 1272/2008)**

*Chemical Name (Concentration)*

CAS-No.	Registration number	Classification
<i>toluene (&gt;= 50 % - &lt;= 100 %)</i>		
108-88-3	*)	Flammable liquid, Category 2, H225 Skin irritation, Category 2, H315 Specific target organ toxicity - repeated exposure, Category 2, H373 Reproductive toxicity, Category 2, H361d Aspiration hazard, Category 1, H304 Specific target organ toxicity - single exposure, Category 3, H336

\*) A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

For the full text of the H-Statements mentioned in this Section, see Section 16.

**Hazardous components (1999/45/EC)**

*Chemical Name (Concentration)*

CAS-No.	Classification
<i>toluene (&gt;= 50 % - &lt;= 100 %)</i>	
108-88-3	F, Highly flammable; R11 Repr.Cat.3; R63 Xi, Irritant; R38 Xn, Harmful; R48/20-65 R67

For the full text of the R-phrases mentioned in this Section, see Section 16.

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**SECTION 4. First aid measures**

**4.1 Description of first aid measures**

After inhalation: fresh air. Consult a physician.

After skin contact: wash off with plenty of water. Remove contaminated clothing. Consult a physician.

After eye contact: rinse out with plenty of water. Call in ophthalmologist.

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

**4.2 Most important symptoms and effects, both acute and delayed**

irritant effects, respiratory paralysis, respiratory arrest, Dizziness, Unconsciousness, inebriation, Nausea, Vomiting, Circulatory collapse, Headache, Convulsions, drowsiness, CNS disorders, death

Drying-out effect resulting in rough and chapped skin.

**4.3 Indication of any immediate medical attention and special treatment needed**

No information available.

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**SECTION 5. Firefighting measures**

**5.1 Extinguishing media**

*Suitable extinguishing media*

Carbon dioxide (CO<sub>2</sub>), Foam, Dry powder

*Unsuitable extinguishing media*

For this substance/mixture no limitations of extinguishing agents are given.

**5.2 Special hazards arising from the substance or mixture**

Combustible.

Vapours are heavier than air and may spread along floors.

Forms explosive mixtures with air at ambient temperatures.

Pay attention to flashback.

Development of hazardous combustion gases or vapours possible in the event of fire.

**5.3 Advice for firefighters**

*Special protective equipment for firefighters*

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

*Further information*

Cool closed containers exposed to fire with water spray. Prevent fire extinguishing water from contaminating surface water or the ground water system.

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**SECTION 6. Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures**

Advice for non-emergency personnel: Do not breathe vapours, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders: Protective equipment see section 8.

**6.2 Environmental precautions**

Do not empty into drains. Risk of explosion.

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**6.3 Methods and materials for containment and cleaning up**

Cover drains. Collect, bind, and pump off spills.

Observe possible material restrictions (see sections 7 and 10).

Take up with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

**6.4 Reference to other sections**

Indications about waste treatment see section 13.

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**SECTION 7. Handling and storage**

**7.1 Precautions for safe handling**

*Advice on safe handling*

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

Observe label precautions.

*Advice on protection against fire and explosion*

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

*Hygiene measures*

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

**7.2 Conditions for safe storage, including any incompatibilities**

*Storage conditions*

Keep away from heat and sources of ignition. Keep container tightly closed in a dry and well-ventilated place.

Store at +15°C to +25°C.

**7.3 Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

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**SECTION 8. Exposure controls/personal protection**

**8.1 Control parameters**

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**Components with workplace control parameters**

*Components*

Basis	Value	Threshold limits	Remarks
<i>toluene (108-88-3)</i>			
ECTLV	Time Weighted Average (TWA):	50 ppm 192 mg/m <sup>3</sup>	
	Short Term Exposure Limit (STEL):	100 ppm 384 mg/m <sup>3</sup>	
	Skin designation:		Can be absorbed through the skin.
EH40 WEL	Short Term Exposure Limit (STEL):	100 ppm 384 mg/m <sup>3</sup>	
	Skin designation:		Can be absorbed through the skin.
	Time Weighted Average (TWA):	50 ppm 191 mg/m <sup>3</sup>	

**Recommended monitoring procedures**

Methods for measurement of the workplace atmosphere have to correspond to the requirements of norms DIN EN 482 and DIN EN 689.

**8.2 Exposure controls**

**Engineering measures**

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

**Individual protection measures**

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

*Eye/face protection*

Safety glasses

*Hand protection*

splash contact:

Glove material:	Viton (R)
Glove thickness:	0.70 mm
Break through time:	> 10 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 890 Vitoject® (splash contact). This recommendation applies only to the product stated in the safety data sheet (>,<) supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

*Other protective equipment*

Flame retardant antistatic protective clothing

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*Respiratory protection*

required when vapours/aerosols are generated.

Recommended Filter type: Filter A (acc. to DIN 3181) for vapours of organic compounds

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

**Environmental exposure controls**

Do not empty into drains.

Risk of explosion.

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**SECTION 9. Physical and chemical properties**

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

Form	liquid
Colour	colourless
Odour	of toluene
Odour Threshold	No information available.
pH	No information available.
Melting point	No information available.
Boiling point	No information available.
Flash point	8 °C
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	1.2 %(V) toluene
Upper explosion limit	8 %(V) toluene
Vapour pressure	No information available.
Relative vapor density	No information available.
Relative density	0.91 g/cm <sup>3</sup> at 20 °C
Water solubility	at 20 °C practically insoluble
Partition coefficient: n-octanol/water	No information available.
Auto-ignition temperature	No information available.

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Decomposition temperature	No information available.
Viscosity, dynamic	No information available.
Explosive properties	Not classified as explosive.
Oxidizing properties	none

#### 9.2 Other data

Ignition temperature	> 250 °C
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### SECTION 10. Stability and reactivity

#### 10.1 Reactivity

Vapours may form explosive mixture with air.

#### 10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

#### 10.3 Possibility of hazardous reactions

Risk of explosion with:

fuming sulfuric acid, Nitric acid, silver, perchlorates, nitrogen dioxide, nonmetallic halides, acetic acid, halogen-halogen compounds, uranium hexafluoride, organic nitro compounds

Violent reactions possible with:

Strong oxidizing agents, Strong acids, sulfur

#### 10.4 Conditions to avoid

Warming.

A range from approx. 15 Kelvin below the flash point is to be rated as critical.

#### 10.5 Incompatible materials

rubber, various plastics

#### 10.6 Hazardous decomposition products

no information available

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### SECTION 11. Toxicological information

#### 11.1 Information on toxicological effects

##### Mixture

##### *Acute oral toxicity*

Symptoms: Nausea, Vomiting

absorption

##### *Acute inhalation toxicity*

Symptoms: Irritation symptoms in the respiratory tract., After uptake of large quantities, .

Pneumonia

##### *Acute dermal toxicity*

absorption

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*Skin irritation*

Mixture causes skin irritation.

*Eye irritation*

Irritation of mucous membranes

*Sensitisation*

This information is not available.

*Germ cell mutagenicity*

This information is not available.

*Carcinogenicity*

This information is not available.

*Reproductive toxicity*

This information is not available.

*Teratogenicity*

This information is not available.

*CMR effects*

Teratogenicity:

Suspected of damaging the unborn child.

*Specific target organ toxicity - single exposure*

Mixture may cause drowsiness or dizziness.

*Specific target organ toxicity - repeated exposure*

Mixture may cause damage to organs through prolonged or repeated exposure.

*Aspiration hazard*

Aspiration hazard, Aspiration may cause pulmonary oedema and pneumonitis.

## 11.2 Further information

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

Systemic effects:

After absorption of large quantities:

CNS disorders, inebriation, Convulsions, Unconsciousness, Headache, Dizziness, Circulatory collapse, respiratory paralysis, respiratory arrest, death

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

## Components

*toluene*

*Acute oral toxicity*

LD50 rat: 636 mg/kg (IUCLID)

*Acute inhalation toxicity*

LC50 rat: 28.1 mg/l; 4 h (IUCLID)

*Acute dermal toxicity*

LD50 rabbit: 12,124 mg/kg (IUCLID)

*Skin irritation*

rabbit

Result: Irritations

OECD Test Guideline 404

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*Eye irritation*  
rabbit  
Result: Eye irritation  
OECD Test Guideline 405  
(Regulation (EC) No 1272/2008, Annex VI)

*Germ cell mutagenicity*  
*Genotoxicity in vitro*  
Mutagenicity (mammal cell test): micronucleus.  
Result: negative  
(IUCLID)

Ames test  
Result: negative  
(Lit.)

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## SECTION 12. Ecological information

### Mixture

#### 12.1 Toxicity

No information available.

#### 12.2 Persistence and degradability

No information available.

#### 12.3 Bioaccumulative potential

No information available.

#### 12.4 Mobility in soil

No information available.

#### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

#### 12.6 Other adverse effects

*Additional ecological information*

Discharge into the environment must be avoided.

### Components

#### *toluene*

*Toxicity to fish*  
LC50 *Oncorhynchus mykiss* (rainbow trout): 5.8 mg/l; 96 h (ECOTOX Database)

*Toxicity to daphnia and other aquatic invertebrates*  
EC50 *Daphnia magna* (Water flea): 6 mg/l; 48 h (ECOTOX Database)

NOEC *E.sulcatum*: 456 mg/l; 72 h (IUCLID)

*Toxicity to algae*  
IC50 *Pseudokirchneriella subcapitata* (green algae): 12 mg/l; 72 h (Lit.)

*Toxicity to bacteria*  
EC50 *Photobacterium phosphoreum*: 20 mg/l; 30 min (Lit.)

*Theoretical oxygen demand (ThOD)*  
3,130 mg/g  
(Lit.)

*Distribution among environmental compartments*  
Adsorption/Soil  
log K<sub>oc</sub>: 2.15  
(experimental)  
Moderately mobile in soils

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*Henry constant*  
683 Pa\*m<sup>3</sup>/mol  
(Lit.) Distribution preferentially in air.

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**SECTION 13. Disposal considerations**

*Waste treatment methods*

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

See [www.retrologistik.com](http://www.retrologistik.com) for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

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**SECTION 14. Transport information**

**Land transport (ADR/RID)**

14.1 UN number	UN 1866
14.2 Proper shipping name	RESIN SOLUTION
14.3 Class	3
14.4 Packing group	II
14.5 Environmentally hazardous	--
14.6 Special precautions for user	yes
Tunnel restriction code	D/E

**Inland waterway transport (ADN)**

Not relevant

**Air transport (IATA)**

14.1 UN number	UN 1866
14.2 Proper shipping name	RESIN SOLUTION
14.3 Class	3
14.4 Packing group	II
14.5 Environmentally hazardous	--
14.6 Special precautions for user	no

**Sea transport (IMDG)**

14.1 UN number	UN 1866
14.2 Proper shipping name	RESIN SOLUTION
14.3 Class	3
14.4 Packing group	II
14.5 Environmentally hazardous	--
14.6 Special precautions for user	yes
EmS	F-E S-E

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**14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**  
Not relevant

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**SECTION 15. Regulatory information**

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

*EU regulations*

Major Accident Hazard 96/82/EC  
Legislation Highly flammable  
7b  
Quantity 1: 5,000 t  
Quantity 2: 50,000 t

Occupational restrictions Take note of Dir 94/33/EC on the protection of young people at work. Take note of Dir 92/85/EEC on the safety and health at work of pregnant workers.

*National legislation*

Storage class 3

**15.2 Chemical Safety Assessment**

For this product a chemical safety assessment was not carried out.

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**SECTION 16. Other information**

**Full text of H-Statements referred to under sections 2 and 3.**

H225 Highly flammable liquid and vapour.  
H304 May be fatal if swallowed and enters airways.  
H315 Causes skin irritation.  
H336 May cause drowsiness or dizziness.  
H361d Suspected of damaging the unborn child.  
H373 May cause damage to organs through prolonged or repeated exposure.

**Full text of R-phrases referred to under sections 2 and 3**

R11 Highly flammable.  
R38 Irritating to skin.  
R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.  
R63 Possible risk of harm to the unborn child.  
R65 Harmful: may cause lung damage if swallowed.  
R67 Vapours may cause drowsiness and dizziness.

**Training advice**

Provide adequate information, instruction and training for operators.

**Key or legend to abbreviations and acronyms used in the safety data sheet**

Used abbreviations and acronyms can be looked up at [www.wikipedia.org](http://www.wikipedia.org).

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*The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.*

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