Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 01.12.2011 Version number 1 Revision: 01.12.2011

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

· **1.1. Product identifier**

· **Trade name:** **Silicone solution SERVA for siliconizing glass and metal**

· **Article number:** 35130
· **1.2. Relevant identified uses of the substance or mixture and uses advised against**
· **Application of the substance / the preparation** Laboratory chemicals

· **1.3. Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
SERVA Electrophoresis GmbH
Carl-Benz-Str. 7
D-69115 Heidelberg
Tel.: +49 6221 13840-0
FAX: +49 6221 13840-10
msds.info@serva.de

· **Information department:** Product Safety department Tel.: +49 6221 13840-35
· **1.4. Emergency telephone number:** +49 6131 19240 (university hospital Mainz)

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2 Hazards identification

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

GHS02

Flam. Liq. 2 H225 Highly flammable liquid and vapour.

GHS07

Eye Irrit. 2 H319 Causes serious eye irritation.
STOT SE 3 H336 May cause drowsiness or dizziness.

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

Xi; Irritant

R36: Irritating to eyes.

F; Highly flammable

R11: Highly flammable.

R67: Vapours may cause drowsiness and dizziness.
· **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.
Has a narcotizing effect.
· **Classification system:**
The classification was made according to the latest editions of the EU-lists, and expanded upon fom company and literature data.

· **2.2. Label elements**
· **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
· **Hazard pictograms** GHS02, GHS07
· **Signal word** Danger

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SERVA Electrophoresis GmbH

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· **Hazard statements**
H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
· **Precautionary statements**
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P261 Avoid breathing vapours.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
· **2.3. Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

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3 Composition/information on ingredients

· **3.2. Chemical characterization: Mixtures**
· **Description:** Mixture of the substances listed below with harmless additions.

· **Dangerous components:**

CAS: 67-63-0 EINECS: 200-661-7	propan-2-ol Xi R36; F R11 R67 Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336	80-100%

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

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4 First aid measures

· **4.1. Description of first aid measures**
· **After inhalation** Supply fresh air; consult doctor in case of complaints.
· **After skin contact** Immediately rinse with water.
· **After eye contact** Rinse opened eye for several minutes under running water. Then consult doctor.
· **After swallowing**
Rinse out mouth and then drink plenty of water.
If symptoms persist consult doctor.
· **Information for doctor**
· **4.2. Most important symptoms and effects, both acute and delayed**
Dizziness
Headache
· **4.3. Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

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5 Firefighting measures

· **5.1. Extinguishing media**
· **Suitable extinguishing agents**
CO_2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **5.2. Special hazards arising from the substance or mixture**
In case of fire, the following can be released:
Carbon monoxide and carbon dioxide

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· **5.3. Advice for firefighters**
· **Protective equipment:** *Wear self-contained respiratory protective device.*

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6 Accidental release measures

· **6.1. Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
· **6.2. Environmental precautions:** *Do not allow to enter sewers/ surface or ground water.*
· **6.3. Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.
· **6.4. Reference to other sections**
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

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7 Handling and storage

· **Handling**
· **7.1. Precautions for safe handling**
Keep receptacles tightly sealed.
Carry out filling operations only at sites with extractors available.
· **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

· **7.2. Conditions for safe storage, including any incompatibilities**
· **Storage**
· **Requirements to be met by storerooms and receptacles:** *No special requirements.*
· **Information about storage in one common storage facility:** *Do not store together with oxidizing materials.*
· **Further information about storage conditions:** *Store in cool, dry conditions in well sealed receptacles.*
· **7.3. Specific end use(s)** *No further relevant information available.*

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8 Exposure controls/personal protection

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

· **8.1. Control parameters**

· **Components with limit values that require monitoring at the workplace:**	
67-63-0 propan-2-ol (80-100%)	
WEL ()	Short-term value: 1250 mg/m³, 500 ppm Long-term value: 999 mg/m³, 400 ppm

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

· **8.2. 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.
· **Breathing equipment:**
Short term filter device:
Filter ABEK
· **Protection of hands:**
Protective gloves.

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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 trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**
Nitrile rubber, NBR
Chloroprene rubber, CR

· **Eye protection:** Tightly sealed goggles.

· **Body protection:** Protective work clothing.

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9 Physical and chemical properties

· **9.1. Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Liquid
Colour:	Colourless
· **Odour:**	Characteristic
· **pH-value (- g/l) at 20°C:**	neutral
· **Change in condition**	
Melting point/Melting range:	-88°C
Boiling point/Boiling range:	82°C
· **Flash point:**	13°C
· **Ignition temperature:**	425°C
· **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:	2 Vol %
Upper:	13.4 Vol %
· **Vapour pressure at 20°C:**	43 hPa
· **Density at 20°C:**	0.785 g/cm³
· **Solubility in / Miscibility with**	
Water:	Fully miscible
· **Solvent content:**	
Organic solvents:	97.0 %
· **VOC %:**	97.00 %
· **VOC g/l:**	970.0 g/l
· **Solids content:**	3.0 %

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· **9.2. Other information** *The physico-chemical data correspond to absolute propan-2-ol.*

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10 Stability and reactivity

· **10.1. Reactivity**
· **10.2. Chemical stability**
· **Thermal decomposition / conditions to be avoided:** *No decomposition if used according to specifications.*
· **10.3. Possibility of hazardous reactions**
Forms explosive gas mixture with air
Reacts with strong oxidizing agents
Used empty containers may contain product gases which form explosive mixtures with air
Danger of bursting
· **10.4. Conditions to avoid** *No further relevant information available.*
· **10.5. Incompatible materials:** *No further relevant information available.*
· **10.6. Hazardous decomposition products:** *Carbon monoxide and carbon dioxide*

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11 Toxicological information

· **11.1. Information on toxicological effects**
· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

Oral	LD50	5000 mg/kg (rat)
Dermal	LD50	12800 mg/kg (rabbit)
Inhalative	LC50/4h	30 mg/l (rat)
	LC50/96h	9640 mg/l (Fish)

· **Primary irritant effect:**
· **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:
Irritant

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12 Ecological information

· **12.1. Toxicity**

· **Acquatic toxicity:**

EC50/48h	13299 mg/l (Daphnia magna)
EC50/72h	> 1000 mg/l (Scenedesmus subspicatus)

· **12.2. Persistence and degradability** *No further relevant information available.*
· **Behaviour in environmental systems:**
· **12.3. Bioaccumulative potential** *No further relevant information available.*
· **12.4. Mobility in soil** *No further relevant information available.*
· **Additional ecological information:**
· **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
· **12.5. Results of PBT and vPvB assessment**
· **PBT:** *PBT - assessment not available.*
· **vPvB:** *vPvB - assessment not available.*

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· **12.6. Other adverse effects** No further relevant information available.

13 Disposal considerations

· **13.1. 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.
· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

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14 Transport information

· **14.1. UN-Number**	
· **ADR, IMDG, IATA**	UN1219
· **14.2. UN proper shipping name**	
· **ADR**	1219 ISOPROPANOL (ISOPROPYL ALCOHOL)
· **IMDG, IATA**	ISOPROPANOL (ISOPROPYL ALCOHOL)
· **14.3. Transport hazard class(es)**	
· **ADR**	
· **Class**	3 Flammable liquids.
· **Label**	3
· **IMDG, IATA**	
· **Class**	3 Flammable liquids.
· **Label**	3
· **14.4. Packing group**	
· **ADR, IMDG, IATA**	II
· **14.5. Environmental hazards:**	
· **Marine pollutant:**	No
· **14.6. Special precautions for user**	Warning: Flammable liquids.
· **Danger code (Kemler):**	33
· **EMS Number:**	F-E,S-D
· **14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **ADR**	
· **Tunnel restriction code**	D/E

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· **UN "Model Regulation":** UN1219, ISOPROPANOL (ISOPROPYL ALCOHOL), 3, II

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15 Regulatory information

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

· **National regulations**

· **Technical instructions (air):**

Class	Share in %
NK	80-100

· **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.
· **15.2. 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.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

R11 Highly flammable.
R36 Irritating to eyes.
R67 Vapours may cause drowsiness and dizziness.

· **Department issuing MSDS:** Product safety department
· **Contact:** +49 6221 13840-35
· **Abbreviations and acronyms:**
PBT: persistent, bioaccumulative, toxic substance (REACH)
vPvB: very persistent, very bioaccumulative substance (REACH)
REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
CLP: Regulation on classification, labelling and packaging of substances and mixtures
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
· *** Data compared to the previous version altered.**