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according to 1907/2006/EC, Article 31

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

· **1.1 Product identifier**

· **Trade name: Flüssigkeit für SHERAPRESS**

· **Article number:**
508020
508021

· **1.2 Relevant identified uses of the substance or mixture and uses advised against:**
No further relevant information available.

· **Application of the substance / the mixture:** Manufacture of dental products.

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**
Manufacturer:
retec® Kunststofftechnik GmbH
Industriestrasse 2
D-61191 Rosbach v.d.H
+49 (0) 6007 91570
info@retec-dent.de
www.retec-dent.de
Contact person: Dr. Manfred Steinbach

Supplier:
SHERA Material Technology GmbH & Co. KG
Espholstrasse 53
D-49448 Lemfoerde
sdb@shera.de
+ 49 (0) 5443 9933-0

· **Further information obtainable from:** Department of product security.

· **1.4 Emergency telephone number:**
Giftinformationszentrum-Nord +49 (0) 551-19240
(Information in german or english)

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008:**

Flam. Liq. 2	H225 Highly flammable liquid and vapour.
Skin Irrit. 2	H315 Causes skin irritation.
Skin Sens. 1	H317 May cause an allergic skin reaction.
STOT SE 3	H335 May cause respiratory irritation.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008:**
The product is classified and labelled according to the GB CLP regulation.

· **Hazard pictograms:**

GHS02 GHS07

· **Signal word:** Danger

· **Hazard-determining components of labelling:**
methyl methacrylate
tetramethylene dimethacrylate

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· **Hazard statements:**
H225 Highly flammable liquid and vapour.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.
· **Precautionary statements:**
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing dust / fume / gas / mist / vapours / spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
P370+P378 In case of fire: Use CO2, powder or water spray to extinguish.
P403+P235 Store in a well-ventilated place. Keep cool.
P501 Dispose of contents / container in accordance with local / regional / national / international regulations.
· **2.3 Other hazards**
· **Results of PBT and vPvB assessment:**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

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SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**
· **Description:** Mixture based on methyl methacrylate.

· **Dangerous components:**		
CAS: 80-62-6 EINECS: 201-297-1 Index number: 607-035-00-6 Reg.nr.: 01-2119452498-28	methyl methacrylate Flam. Liq. 2, H225; Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335	90-<95%
CAS: 2082-81-7 EINECS: 218-218-1 Index number: 607-134-00-4 Reg.nr.: 01-2119967415-30	tetramethylene dimethacrylate Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	5-<10%

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

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **General information:**
Immediately remove any clothing soiled by the product.
Get medical advice if you feel unwell.
· **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
· **After skin contact:**
Clean with water and soap. If possible, also wash with polyethylene glycol 400.
Seek medical treatment.
· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
· **After swallowing:**
If symptoms persist consult doctor.
Rinse out mouth and then drink plenty of water.
· **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.

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· **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:** CO_2, sand, extinguishing powder. Do not use water.
· **For safety reasons unsuitable extinguishing agents:** Water with full jet.
· **5.2 Special hazards arising from the substance or mixture** Can form explosive gas-air mixtures.
· **5.3 Advice for firefighters**
· **Protective equipment:**
Wear fully protective suit.
Wear self-contained respiratory protective device.
· **Additional information**
Cool endangered receptacles with water spray.
Collect contaminated fire fighting water separately. It must not enter the sewage system.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Keep away from ignition sources.
Ensure adequate ventilation.
Do not breathe vapour or spray.
Avoid contact with skin and eyes.
Wear respiratory protection.
· **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.
Do not flush with water or aqueous cleansing agents
· **6.4 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.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
Ensure good ventilation / exhaustion at the workplace.
Do not breathe vapours.
Do not breathe spray.
· **Information about fire - and explosion protection:**
Fumes can combine with air to form an explosive mixture.
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:**
Keep container tightly closed.
Keep container in a well-ventilated, cool and dry place.
· **Information about storage in one common storage facility:**
Do not store together with:

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Oxidising agent. Pyrophorics or self-heating hazardous material.
· **Further information about storage conditions:** Keep away from sources of ignition and heat.
· **Storage class:** No information available.
· **7.3 Specific end use(s)** No further relevant information available.

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SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**	
80-62-6 methyl methacrylate	
WEL (Great Britain)	Short-term value: 416 mg/m³, 100 ppm Long-term value: 208 mg/m³, 50 ppm
AGW (Germany)	Long-term value: 210 mg/m³, 50 ppm 2(I);DFG, EU, Y
IOELV (EU)	Short-term value: 100 ppm Long-term value: 50 ppm
2082-81-7 tetramethylene dimethacrylate	
MAK (Germany)	cf. Section IV

· **DNELs:**		
80-62-6 methyl methacrylate		
Dermal	DNEL Worker - Long Term - Systemic effects	17 mg/kg /KG/d (workers)
Inhalative	DNEL Worker - Long Term - Systemic effects	208 mg/m³ (workers)

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

· **8.2 Exposure controls**
· **Appropriate engineering controls** No further data; see item 7.
· **Individual protection measures, such as personal protective equipment**
· **General protective and hygienic measures:**
The usual precautionary measures are to be adhered to when handling chemicals.
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.
· **Hand protection**

Protective gloves

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

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· **Eye/face protection**

Tightly sealed goggles

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

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SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **General Information**	
· **Colour:**	Colorless
· **Odour:**	Odourless
· **Melting point/freezing point:**	-48 °C
· **Boiling point or initial boiling point and boiling range**	101 °C
· **Flammability**	Not applicable.
· **Lower and upper explosion limit**	
· **Lower:**	2.1 Vol %
· **Upper:**	12.5 Vol %
· **Flash point:**	10 °C
· **Ignition temperature:**	421 °C
· **Decomposition temperature:**	Not determined.
· **pH**	Not determined.
· **Viscosity:**	
· **Kinematic viscosity**	Not determined.
· **Dynamic:**	Not determined.
· **Solubility**	
· **water at 20 °C:**	12.5 g/l
· **Partition coefficient n-octanol/water (log value)**	1.38 log POW

	Flüssigkeit für SHERAPRESS	1,38 Log Pow
80-62-6	methyl methacrylate	1,38 Log Pow
2082-81-7	tetramethylene dimethacrylate	3,1 Log Pow

· **Vapour pressure at 20 °C:**	36 hPa
· **Density and/or relative density**	
· **Density at 20 °C:**	0.949 g/cm³
· **Relative density**	Not determined.
· **Vapour density**	Not determined.
· **9.2 Other information**	
· **Appearance:**	
· **Form:**	Fluid
· **Important information on protection of health and environment, and on safety.**	
· **Auto-ignition temperature:**	Product is not selfigniting.
· **Explosive properties:**	Product is not explosive. However, formation of explosive air / vapour mixtures are possible.
· **Solvent content:**	
· **VOC (EC):**	90.00 %
· **Solids content:**	0.0 %
· **Change in condition:**	
· **Evaporation rate**	Not determined.

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· **Information with regard to physical hazard classes**	
· **Explosives**	Void.
· **Flammable gases**	Void.
· **Aerosols**	Void.
· **Oxidising gases**	Void.
· **Gases under pressure**	Void.
· **Flammable liquids**	
Highly flammable liquid and vapour.	
· **Flammable solids**	Void.
· **Self-reactive substances and mixtures**	Void.
· **Pyrophoric liquids**	Void.
· **Pyrophoric solids**	Void.
· **Self-heating substances and mixtures**	Void.
· **Substances and mixtures, which emit flammable gases in contact with water**	Void.
· **Oxidising liquids**	Void.
· **Oxidising solids**	Void.
· **Organic peroxides**	Void.
· **Corrosive to metals**	Void.
· **Desensitised explosives**	Void.

SECTION 10: Stability and reactivity

· **10.1 Reactivity** Flammable, risk of ignition.
· **10.2 Chemical stability** Stable under normal storage and handling conditions.
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **10.3 Possibility of hazardous reactions** No dangerous reactions known.
· **10.4 Conditions to avoid** Keep away from heat.
· **10.5 Incompatible materials** No further relevant information available.
· **10.6 Hazardous decomposition products** No dangerous decomposition products known.

SECTION 11: Toxicological information

· **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
· **Acute toxicity:** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**		
80-62-6 methyl methacrylate		
Oral	LD50	7,872 mg/kg (Rat)
Dermal	LD50	>5,000 mg/kg (Rabbit)
Inhalative	LC50/4 h	29.8 mg/l (Rat)
2082-81-7 tetramethylene dimethacrylate		
Oral	LD50	>10,000 mg/kg (Rat)
Dermal	LD50	>3,000 mg/kg (Rabbit)

· **Skin corrosion/irritation**
Causes skin irritation.
· **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
· **Respiratory or skin sensitisation**
May cause an allergic skin reaction.
· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.

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· **Carcinogenicity** Based on available data, the classification criteria are not met.
· **Reproductive toxicity** Based on available data, the classification criteria are not met.
· **STOT-single exposure**
May cause respiratory irritation.
· **STOT-repeated exposure** Based on available data, the classification criteria are not met.
· **Aspiration hazard** Based on available data, the classification criteria are not met.
· **11.2 Information on other hazards**

· **Endocrine disrupting properties**
None of the ingredients is listed.

SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**	
80-62-6 methyl methacrylate	
LC50/96 h	>79 mg/l (Fish) (OECD 203)
EC50/48 h	69 mg/l (Daphnia (Daphnia magna)) (OECD 202)
NOEC, 21d	37 mg/l (Daphnia (Daphnia magna)) (OECD 202)
EC50/72 h	>110 mg/l (Algae) (OECD 201)
2082-81-7 tetramethylene dimethacrylate	
EC50/48h	7.51 mg/l (Daphnia (Daphnia magna)) (OECD 211)
LC50/96 h	32.5 mg/l (Fish)
NOEC	7.51 mg/l (Algae)

· **12.2 Persistence and degradability** No further relevant information available.
· **Other information:** Biodegradable.
· **12.3 Bioaccumulative potential**
Based on the available data concerning eliminibility/degradation and bio-accumulation potential, longer-term environmental damage is unlikely.
· **12.4 Mobility in soil** No adsorption in soil or sediment.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **12.6 Endocrine disrupting properties**
The product does not contain substances with endocrine disrupting properties.
· **12.7 Other adverse effects**
· **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.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation:**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Waste disposal according to official state regulations.
· **Waste disposal key:**
The waste disposal code as prescribed in the EuropeanWaste Catalogue (EWC) depends on the waste producer and can thus vary for a product. The waste disposal code should thus be obtained separately from the waste producer in each case.

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· **Uncleaned packaging:**
· **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

· **14.1 UN number or ID number**	
· **ADR, IMDG, IATA**	UN1247
· **14.2 UN proper shipping name**	
· **ADR**	1247 METHYL METHACRYLATE MONOMER, STABILIZED solution
· **IMDG, IATA**	METHYL METHACRYLATE MONOMER, STABILIZED solution
· **14.3 Transport hazard class(es)**	
· **ADR, IMDG, IATA**	
· **Class**	3 Flammable liquids.
· **Label**	3
· **14.4 Packing group**	
· **ADR, IMDG, IATA**	II
· **14.5 Environmental hazards:**	Not applicable.
· **14.6 Special precautions for user**	Warning: Flammable liquids.
· **Hazard identification number (Kemler code):**	339
· **EMS Number:**	F-E,S-D
· **Stowage Category**	B
· **Stowage Code**	SW2 Clear of living quarters.
· **14.7 Maritime transport in bulk according to IMO instruments**	Not applicable.
· **Transport/Additional information:**	
· **ADR**	
· **Limited quantities (LQ):**	1L
· **Excepted quantities (EQ):**	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· **Transport category:**	2
· **Tunnel restriction code:**	D/E
· **IMDG**	
· **Limited quantities (LQ):**	1L
· **Excepted quantities (EQ):**	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· **UN "Model Regulation":**	UN 1247 METHYL METHACRYLATE MONOMER, STABILIZED SOLUTION, 3, II

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SECTION 15: Regulatory information

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

· **Directive 2012/18/EU**
· **Named dangerous substances - ANNEX I** None of the ingredients is listed.
· **Seveso category** P5c FLAMMABLE LIQUIDS
· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t

· **National regulations:**

· **Information about limitation of use:**
Employment restrictions concerning juveniles must be observed.
Employment restrictions concerning pregnant and lactating women must be observed.
· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on the state of knowledge and experience pertaining on the date of issue. The information is not to be taken as a guarantee of product properties and do not constitute the basis for a contractual legal relationship. The details must not be changed or transferred to other products. Duplication in an unchanged state is permissible.

· **Relevant phrases**
H225 Highly flammable liquid and vapour.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

· **Department issuing SDS:** Department of product security.
· **Abbreviations and acronyms:**
ADR: Accord relatif au transport international 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 Harmonised System of Classification and Labelling of Chemicals
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)
VOC: Volatile Organic Compounds (USA, EU)
DNEL: Derived No-Effect Level (UK REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids ï Category 2
Skin Irrit. 2: Skin corrosion/irritation ï Category 2
Eye Irrit. 2: Serious eye damage/eye irritation ï Category 2
Skin Sens. 1: Skin sensitisation ï Category 1
STOT SE 3: Specific target organ toxicity (single exposure) ï Category 3
· *** Data compared to the previous version altered.**