

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

Printing date 03.05.2022

Version number 7 (replaces version 6)

Revision: 03.05.2022

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

- **1.1 Product identifier**
 - Trade name: **Technovit 7100 liquid**
- **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** Resin for histological examinations
- **1.3 Details of the supplier of the safety data sheet**
 - **Manufacturer/Supplier:**
Kulzer GmbH
Leipziger Straße 2, 63450 Hanau (Germany)
Tel.: +49 (0)6181 9689-2570 (Wehrheim)
 - **Informing department:** email: technik.wehrheim@kulzer-dental.com
- **1.4 Emergency telephone number:** Emergency CONTACT (24-Hour-Number): +49 (0)6132-84463

SECTION 2: Hazards identification

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

Skin Irrit. 2	H315 Causes skin irritation.
Eye Irrit. 2	H319 Causes serious eye irritation.
Skin Sens. 1	H317 May cause an allergic skin reaction.
Aquatic Chronic 3	H412 Harmful to aquatic life with long lasting effects.
- **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**

GHS07
 - **Signal word** Warning
 - **Hazard-determining components of labelling:**
2-hydroxyethyl methacrylate
 - **Hazard statements**
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H412 Harmful to aquatic life with long lasting effects.
 - **Precautionary statements**

P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
- **2.3 Other hazards -**
 - **Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.

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· **vPvB:** Not applicable.

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SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**

· **Dangerous components:**

CAS: 868-77-9 EINECS: 212-782-2 Reg.nr.: 01-2119490169-29-xxxx	2-hydroxyethyl methacrylate Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317	75-90%
CAS: 63393-96-4 EINECS: 264-120-7	Quaternary ammonium compounds, tri-C8-10-alkylmethyl, chlorides Acute Tox. 3, H301 Repr. 2, H361 Skin Corr. 1C, H314; Eye Dam. 1, H318 Aquatic Acute 1, H400 (M=10); Aquatic Chronic 1, H410 (M=1) ATE: LD50 oral: 200 mg/kg	≥0.25-<1%

· **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**

Instantly remove any clothing soiled by the product.
Personal protection for the First Aider.

· **After inhalation**

Supply fresh air; consult doctor in case of symptoms.
In case of unconsciousness bring patient into stable side position for transport.

· **After skin contact**

Instantly wash with water and soap and rinse thoroughly.
If skin irritation or rash occurs: Get medical advice/attention.

· **After eye contact**

Rinse opened eye for several minutes under running water. Then consult doctor.
Remove contact lenses, if present and easy to do. Continue rinsing.

· **After swallowing**

Rinse out mouth and then drink plenty of water.
In case of persistent symptoms consult doctor.

· **4.2 Most important symptoms and effects, both acute and delayed Allergic reactions**

· **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**

CO₂, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

· **For safety reasons unsuitable extinguishing agents** Water with a full water jet.

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

Formation of toxic gases is possible during heating or in case of fire.

Can be released in case of fire

Carbon dioxide (CO₂)

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Carbon monoxide (CO)
Hydrogen chloride (HCl)
Nitrogen oxides (NOx)

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5.3 Advice for firefighters**Protective equipment:**

Wear self-contained breathing apparatus.

(EN 133)

Additional information

Cool endangered containers with water spray jet.

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

Collect contaminated fire fighting water separately. It must not enter drains.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Avoid contact with eyes and skin.

Ensure adequate ventilation

Wear protective equipment. Keep unprotected persons away.

6.2 Environmental precautions:

No special measures required.

Do not allow to enter the ground/soil.

Do not allow to enter drainage system, surface or ground water.

Keep dirty washing water for appropriate disposal.

6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (diatomite, universal binders, for small amounts tissues).

Dispose of the material collected according to regulations.

Send for recovery or disposal in suitable containers.

6.4 Reference to other sections

See Section 8 for information on personal protection equipment.

See Section 7 for information on safe handling

SECTION 7: Handling and storage**7.1 Precautions for safe handling**

Avoid contact with eyes and skin.

Ensure good ventilation/exhaustion at the workplace.

Keep away from heat and direct sunlight.

Information about protection against explosions and fires:

Protect against electrostatic charges.

Do not spray on flames or red-hot objects.

Protect from heat.

Keep ignition sources away - Do not smoke.

Handling

do not mix with

organic peroxides

Radical initiator

reducing agent

Strong oxidizers

Strong acids

amine

metals

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- **7.2 Conditions for safe storage, including any incompatibilities**
 - **Storage**
 - **Requirements to be met by storerooms and containers:** Store in cool location.
 - **Information about storage in one common storage facility:** Not required.
 - **Further information about storage conditions:**
Store cool (not above 25 °C).
Protect from humidity and keep away from water.
Do not seal container gastight.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
 - **Components with critical values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
Not required.

· **DNELs**

868-77-9 2-hydroxyethyl methacrylate

Oral	general population, long term, systemic	0.83 mg/Kg (not defined)
Dermal	worker industrial, long term, systemic	1.3 mg/Kg/d (not defined)
	general population, long term, systemic	0.83 mg/Kg/d (not defined)
Inhalative	worker industrial, long term, systemic	4.9 mg/m3 (not defined)
	general population, long term, systemic	2.9 mg/m3 (not defined)

63393-96-4 Quaternary ammonium compounds, tri-C8-10-alkylmethyl, chlorides

Inhalative	worker professional, long term, systemic	0.42 mg/m3 (not defined)
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· **PNECs**

868-77-9 2-hydroxyethyl methacrylate

freshwater	0.482 mg/l (not defined)
marine water	0.482 mg/l (not defined)
sewage treatment plant	10 mg/l (not defined)
sediment, dry weight, freshwater	3.79 mg/Kg (not defined)
sediment, dry weight, marine water	3.79 mg/Kg (not defined)
soil, dry weight	0.476 mg/Kg (not defined)

63393-96-4 Quaternary ammonium compounds, tri-C8-10-alkylmethyl, chlorides

freshwater	0.00015 mg/l (not defined)
marine water	0.00000002 mg/l (not defined)
sewage treatment plant	0.44 mg/l (not defined)
sediment, dry weight, freshwater	0.00063 mg/Kg (not defined)
sediment, dry weight, marine water	0.00000006 mg/Kg (not defined)
soil, dry weight	0.00000004 mg/Kg (not defined)

· **Additional information:** The lists that were valid during the compilation 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**
Keep away from foodstuffs, beverages and food.

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Do not eat or drink while working.

The usual precautionary measures should be adhered to in handling the chemicals.

Instantly remove any soiled and impregnated garments.

Wash hands during breaks and at the end of the work.

Avoid contact with the eyes and skin.

· Breathing equipment:

Use breathing protection in case of insufficient ventilation.

Filter A/P2.

· Hand protection

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

Check protective gloves prior to each use for their proper condition.

· 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.

NBR: acrylonitrile-butadiene rubber (0,11 mm)

· 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.

>30 min

· Eye/face protection eye protection (EN 166)

· Body protection: Light weight protective clothing

· Environmental exposure controls

Do not allow to enter the ground/soil.

Do not allow to enter drainage system, surface or ground water.

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Physical state

Fluid

· Colour:

Colourless

· Smell:

Characteristic

· Odour threshold:

Not determined.

· Melting point/freezing point:

Not determined

· Boiling point or initial boiling point and boiling range

213 °C (868-77-9 2-hydroxyethyl methacrylate)

· Flammability

Not applicable.

· Lower and upper explosion limit

· Lower:

Not determined.

· Upper:

Not determined.

· Flash point:

106 °C (868-77-9 2-hydroxyethyl methacrylate)

· Ignition temperature:

360 °C (25322-68-3 polyethylene glycol)

· Decomposition temperature:

Not determined.

· SAPT

Technovit 7100 liquid >100 °C

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· SADT	
· pH	Not determined.
· Viscosity:	
· Kinematic viscosity	Not determined.
· dynamic:	Not determined.
· Solubility	
· Water:	Not miscible or difficult to mix
· Partition coefficient n-octanol/water (log value)	Not determined.
· Steam pressure at 20 °C:	0.1 hPa
· Density and/or relative density	
· Density at 20 °C	1.1 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.

· 9.2 Other information	No further relevant information available.
· Appearance:	
· Form:	Fluid
· Important information on protection of health and environment, and on safety.	
· Self-inflammability:	Product is not selfigniting.
· Explosive properties:	Product is not explosive.
· Change in condition	
· Evaporation rate	Not determined.

· Information with regard to physical hazard classes	
· Explosives	Void
· Flammable gases	Void
· Aerosols	Void
· Oxidising gases	Void
· Gases under pressure	Void
· Flammable liquids	Void
· 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** No further relevant information available.
- **10.2 Chemical stability**
 - **Conditions to be avoided:** No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions**
 - No dangerous reactions known
 - Exothermic polymerisation

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- **10.4 Conditions to avoid**
moisture exposure
Heat, flames and sparks.
- **10.5 Incompatible materials:**
organic peroxides
Radical initiator
reducing agent
Strong oxidizers
Strong acids
amine
metals
- **10.6 Hazardous decomposition products:** None

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 that are relevant for classification:**

868-77-9 2-hydroxyethyl methacrylate

Oral	LD50	5,564 mg/kg (rat)
Dermal	LD50	>5,000 mg/kg (rabbit)

63393-96-4 Quaternary ammonium compounds, tri-C8-10-alkylmethyl, chlorides

Oral	LD50	200 mg/kg (ATE)
		>200-<2,000 mg/kg (rat) (OECD 401)

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

868-77-9 2-hydroxyethyl methacrylate

EC50/72h	345 mg/l (algae) (OECD 201)
EC50/21d	90.1 mg/L (daphnia) (OECD 211)
EC50/48h (static)	380 mg/l (daphnia) (OECD 202)
LC50/96h	>100 mg/l (fish) (OECD 203)

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NOEC / 21d	24.1 mg/l (daphnia) (OECD 211)
ErC50 / 72 h	836 mg/l (algae) (OECD 201)
NOEC / 72h	400 mg/l (algae) (OECD 201)
NOEC / 48h	171 mg/l (daphnia) (OECD 202)

63393-96-4 Quaternary ammonium compounds, tri-C8-10-alkylmethyl, chlorides

EC50/48h	0.16 mg/l (daphnia) (OECD 202)
LC50/96h	0.15 mg/l (fish) (OECD 203)
ErC50 / 72 h	0.29 mg/l (algae) (OECD 201)
ErC10/72h	0.138 mg/L (algae) (OECD 201)

12.2 Persistence and degradability

868-77-9 2-hydroxyethyl methacrylate

Biodegradation 92-100 % /14d (not defined) (OECD 301C)

63393-96-4 Quaternary ammonium compounds, tri-C8-10-alkylmethyl, chlorides

Biodegradation 10-<20 % /60d (not defined) (OECD 301B; ISO/ 9439/ EEC 92/69/V, C.4-C)

· **12.3 Bioaccumulative potential** No further relevant information available.

· **12.4 Mobility in soil** No further relevant information available.

· **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:**

Avoid transfer into the environment.

Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into soil.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**

· **Recommendation**

Small quantities can be polymerized with the matching system component(s) and the cured solid material can be disposed of with the regular garbage. Larger quantities must be disposed of following the regulations of the local authorities.

· **Uncleaned packagings:**

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

SECTION 14: Transport information

· **14.1 UN number or ID number**

· **ADR, IMDG, IATA** Void

· **14.2 UN proper shipping name**

· **ADR, IMDG, IATA** Void

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· 14.3 Transport hazard class(es)	
· ADR, ADN, IMDG, IATA	
· Class	Void
· 14.4 Packing group	
· ADR, IMDG, IATA	Void
· 14.5 Environmental hazards:	
· Marine pollutant:	No
· 14.6 Special precautions for user	Not applicable.
· 14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
· Transport/Additional information:	-
· UN "Model Regulation":	Void

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.
 - **Information about limitation of use:**
 - Employment restrictions concerning young persons 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

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**

H301 Toxic if swallowed.

H314 Causes severe skin burns and eye damage.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H361 Suspected of damaging fertility or the unborn child.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

- **Abbreviations and acronyms:**

SADT: Self Accelerating Decomposition Temperature

SAPT: Self Accelerating Polymerisation Temperature

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)

DNEL: Derived No-Effect Level (GB REACH)

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*PNEC: Predicted No-Effect Concentration (GB REACH)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Acute Tox. 3: Acute toxicity – Category 3**Skin Corr. 1C: Skin corrosion/irritation – Category 1C**Skin Irrit. 2: Skin corrosion/irritation – Category 2**Eye Dam. 1: Serious eye damage/eye irritation – Category 1**Eye Irrit. 2: Serious eye damage/eye irritation – Category 2**Skin Sens. 1: Skin sensitisation – Category 1**Repr. 2: Reproductive toxicity – Category 2**Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1**Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1**Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3***Sources***(EC) 1272/2008: classification, labelling and packaging of substances and mixtures**(EC) 1907/2006: GB REACH**ADR/RID/ADN - IDMG - IATA: transport of dangerous goods by road, rail, inland waterway, with maritime vessels and for the air transport*** Data compared to the previous version altered.*

GB