

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

Printing date 28.04.2021

Version number 5

Revision: 28.04.2021

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

- **1.1 Product identifier**
 - Trade name: **Technovit 4006 SE powder**
- **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 metallographic testing
- **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
 Aquatic Chronic 2 H411 Toxic 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 CLP regulation.
 - Hazard pictograms



GHS09

- **Signal word** Void
- **Hazard statements**
 H411 Toxic to aquatic life with long lasting effects.
- **Precautionary statements**
 P273 Avoid release to the environment.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Additional information:**
 Contains methyl methacrylate, dibenzoyl peroxide. May produce an allergic reaction.
- **2.3 Other hazards**
 - **Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**
 - Description: -

· **Dangerous components:**

CAS: 80-62-6 EINECS: 201-297-1 Reg.nr.: 01-2119452498-28-XXXX	methyl methacrylate Flam. Liq. 2, H225 Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335 Acute Tox. 5, H333	≥0.1-<1%
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Trade name: Technovit 4006 SE powder

CAS: 94-36-0

EINECS: 202-327-6

Reg.nr.: 01-2119511472-50-xxxx

dibenzoyl peroxide

Self-react. B, H241; Org. Perox. B, H241

Aquatic Acute 1, H400 (M=10); Aquatic Chronic 1, H410 (M=10)

Eye Irrit. 2, H319; Skin Sens. 1, H317

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≥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** No special measures required.

· **After inhalation** Supply fresh air; consult doctor in case of symptoms.

· **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. If symptoms persist, 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

No further relevant information available.

· 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.

Combustible solids. Fine dust clouds can form explosive mixtures with air.

Can be released in case of fire

Carbon dioxide (CO₂)

Carbon monoxide (CO)

· 5.3 Advice for firefighters

· **Protective equipment:**

Wear self-contained breathing apparatus.

(EN 133)

· **Additional information**

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

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.

Avoid causing dust.

Keep away from ignition sources

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- **6.2 Environmental precautions:**
 Do not allow to enter drainage system, surface or ground water.
 Damp down dust with water spray jet.
 Keep dirty washing water for appropriate disposal.
- **6.3 Methods and material for containment and cleaning up:**
 Collect mechanically.
 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**
 Provide suction extractors if dust is formed.
 Avoid contact with eyes and skin.
 Ensure good ventilation/exhaustion at the workplace.
 Any deposit of dust which cannot be avoided must be removed regularly.
 Prevent formation of dust.
 - **Handling**
 do not mix with
 Strong oxidizers
 Strong acids
 reducing agent
 - **Information about protection against explosions and fires:**
 Use explosion-proof apparatus / fittings and spark-proof tools.
 Protect against electrostatic charges.
 Do not spray on flames or red-hot objects.
 Dust can combine with air to form an explosive mixture.
 Keep ignition sources away - Do not smoke.
- **7.2 Conditions for safe storage, including any incompatibilities**
 - **Storage**
 - **Requirements to be met by storerooms and containers:**
 Store in cool, dry place in tightly closed containers.
 - **Information about storage in one common storage facility:** Not required.
 - **Further information about storage conditions:** None.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
 - **Additional information about design of technical systems:** No further data; see item 7.
 - **Components with critical values that require monitoring at the workplace:**

80-62-6 methyl methacrylate	
WEL (Great Britain)	Short-term value: 416 mg/m ³ , 100 ppm Long-term value: 208 mg/m ³ , 50 ppm
IOELV (European Union)	Short-term value: 100 ppm Long-term value: 50 ppm
94-36-0 dibenzoyl peroxide	
WEL (Great Britain)	Long-term value: 5 mg/m ³

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· **DNELs****80-62-6 methyl methacrylate**

Oral	ge.pop., l.te, syst.	8.2 mg/Kg (nd)
Dermal	worker industr., l.te., syst.	13.67 mg/Kg/d (nd)
	ge.pop., l.te, syst.	8.2 mg/Kg/d (nd)
Inhalative	worker industr., acute, local	416 mg/m3 (nd)
	worker industr., l.te., syst.	348.4 mg/m3 (nd)
	worker industr., l.te., local	208 mg/m3 (nd)
	ge.pop., acu., local	208 mg/m3 (nd)
	ge.pop., l.te, syst.	74.3 mg/m3 (nd)

94-36-0 dibenzoyl peroxide

Oral	ge.pop., l.te, syst.	2 mg/Kg (nd)
Dermal	worker industr., l.te., syst.	13.3 mg/Kg/d (nd)
Inhalative	worker industr., l.te., syst.	39 mg/m3 (nd)

· **PNECs****80-62-6 methyl methacrylate**

freshwater	0.94 mg/l (aqua)
	0.94 mg/l (nd)
marine water	0.094 mg/l (nd)
STP	10 mg/l (nd)
sedim., dw, fre.wat.	10.2 mg/Kg (nd)
sedim., dw, mar.wat.	0.102 mg/Kg (nd)
soil,dw	1.48 mg/Kg (nd)

94-36-0 dibenzoyl peroxide

freshwater	0.00002 mg/l (nd)
marine water	0.000002 mg/l (nd)
STP	0.35 mg/l (nd)
sedim., dw, fre.wat.	0.013 mg/Kg (nd)
sedim., dw, mar.wat.	0.001 mg/Kg (nd)
soil,dw	0.003 mg/Kg (nd)

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

· **8.2 Exposure controls**· **Personal protective equipment**· **General protective and hygienic measures**

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

Do not eat or drink while working.

Avoid contact with the eyes and skin.

Keep away from foodstuffs, beverages and food.

· **Breathing equipment:**

Use breathing protection in case of insufficient ventilation.

particulate filter device (EN 143)

· **Protection of hands:**

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

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The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

chemical protection gloves are suitable, which are tested according to EN 374

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 protection:** eye protection (EN 166)

· **Body protection:** Light weight protective clothing

· **Limitation and supervision of exposure into the environment**

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**

· **Appearance:**

· **Form:**

Powder

· **Colour:**

White

· **Smell:**

Odourless

· **Odour threshold:**

Not determined.

· **pH-value:**

Not applicable.

· **Change in condition**

· **Melting point/freezing point:**

Not determined

· **Initial boiling point and boiling range:** Not determined

· **Flash point:**

Not applicable

· **Inflammability (solid, gaseous)**

Not determined.

· **Decomposition temperature:**

Not determined.

· **Self-inflammability:**

Product is not selfigniting.

· **Explosive properties:**

Product is not explosive.

· **Critical values for explosion:**

· **Lower:**

Not determined.

· **Upper:**

Not determined.

· **Steam pressure:**

Not applicable.

· **Density**

Not determined

· **Relative density**

Not determined.

· **Vapour density**

Not applicable.

· **Evaporation rate**

Not applicable.

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- | | |
|---|---|
| · Solubility in / Miscibility with
· Water: | <i>Insoluble</i> |
| · Partition coefficient: n-octanol/water: | <i>Not determined.</i> |
| · Viscosity:
· dynamic:
· kinematic: | <i>Not applicable.</i>
<i>Not applicable.</i> |
| · 9.2 Other information | <i>No further relevant information available.</i> |

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*
- **10.4 Conditions to avoid**
Heat, flames and sparks.
Avoid dust formation.
- **10.5 Incompatible materials:**
Strong oxidizers
Strong acids
reducing agent
- **10.6 Hazardous decomposition products:** *None*

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
 - **Acute toxicity** *Based on available data, the classification criteria are not met.*

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

80-62-6 methyl methacrylate

Oral	LD50	~7,900 mg/kg (rat)
Dermal	LD50	>5,000 mg/kg (rab) (OECD 402)
Inhalative	LC50/4 h	29.8 mg/l (rat)

94-36-0 dibenzoyl peroxide

Oral	LD0	>2,000 mg/kg (mouse) (OECD 401)
Inhalative	LC0/4h	24.3 ppm (rat) (OECD 403)

- **Primary irritant effect:**
 - **Skin corrosion/irritation** *Based on available data, the classification criteria are not met.*
 - **Serious eye damage/irritation**
Based on available data, the classification criteria are not met.
 - **Respiratory or skin sensitisation**
Based on available data, the classification criteria are not met.
- **Additional toxicological information:**
 - **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
 - **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.*

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· **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**

80-62-6 methyl methacrylate

EC50/21d	49 mg/L (daphnia) (OECD 211)
EC50/48h	69 mg/l (daphnia) (EPA OTS 797.1300)
NOEC / 21d	37 mg/l (daphnia) (OECD 211)
ErC50 / 72 h	>110 mg/l (algae) (OECD 201)
NOEC / 72h	110 mg/l (algae) (OECD 201)
NOEC / 48h	48 mg/l (daphnia) (EPA OTS 797.1300)
EbC50 / 72h	>110 mg/l (algae) (OECD 201)
NOEC/ 35d	9.4 mg/L (fish) (OECD 210)
LC50/ 35d	33.7 mg/L (fish) (OECD 210)

94-36-0 dibenzoyl peroxide

EC50/72h	0.042 mg/l (algae) (OECD 201)
EC50/48h	0.11 mg/l (daphnia) (OECD 202)
LC50/96h	0.06 mg/l (fish) (OECD 203)
ErC50 / 72 h	0.071 mg/l (algae) (OECD 201)
NOEC / 72h	0.02 mg/l (algae) (OECD 201)
NOEC / 96h	0.032 mg/l (fish) (OECD 203)
NOEC / 48h	0.076 mg/l (daphnia) (OECD 202)
ErC10	0.001 mg/L /21d (daphnia) (OECD 211)

· **12.2 Persistence and degradability**

80-62-6 methyl methacrylate

Biodegradation 94 % /14d (nd) (OECD 301C)

94-36-0 dibenzoyl peroxide

Biodegradation 71 % /28d (nd) (OECD 301D)

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

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

· **Additional ecological information:**

· **General notes:**

Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.

Do not allow product to reach ground water, water bodies or sewage system.

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

· **12.5 Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

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

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**

· **Recommendation** Smaller quantities can be disposed with household garbage.

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- **Uncleaned packagings:**
- **Recommendation:** Packaging can be reused or recycled after cleaning.

SECTION 14: Transport information

· 14.1 UN-Number · ADR, IMDG, IATA	UN3077
· 14.2 UN proper shipping name · ADR · IMDG, IATA	3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (dibenzoyl peroxide) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (dibenzoyl peroxide)
· 14.3 Transport hazard class(es) · ADR  · Class · Label	9 (M7) Miscellaneous dangerous substances and articles. 9
· IMDG  · Class · Label	9 Miscellaneous dangerous substances and articles. 9
· IATA  · Class · Label	9 Miscellaneous dangerous substances and articles. 9
· 14.4 Packing group · ADR, IMDG, IATA	III
· 14.5 Environmental hazards: · Marine pollutant: · Special marking (ADR): · Special marking (IATA):	No Symbol (fish and tree) Symbol (fish and tree)

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<ul style="list-style-type: none"> · 14.6 Special precautions for user · Kemler Number: 90 · EMS Number: F-A,S-F · Stowage Category: A · Stowage Code: SW23 	<p><i>Warning: Miscellaneous dangerous substances and articles.</i></p> <p>When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.</p>
<ul style="list-style-type: none"> · 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code 	<p>Not applicable.</p>
<ul style="list-style-type: none"> · Transport/Additional information: 	-
<ul style="list-style-type: none"> · ADR · Limited quantities (LQ) · Excepted quantities (EQ) · Transport category · Tunnel restriction code 	<p>5 kg Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g</p> <p>3 -</p>
<ul style="list-style-type: none"> · IMDG · Limited quantities (LQ) · Excepted quantities (EQ) 	<p>5 kg Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g</p>
<ul style="list-style-type: none"> · UN "Model Regulation": 	<p>UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (DIBENZOYL PEROXIDE), 9, III</p>

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 E2** Hazardous to the Aquatic Environment
 - **Qualifying quantity (tonnes) for the application of lower-tier requirements** 200 t
 - **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t
 - **National regulations**
 - **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.

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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

- H225 Highly flammable liquid and vapour.
- H241 Heating may cause a fire or explosion.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H333 May be harmful if inhaled.
- H335 May cause respiratory irritation.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.

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)
- DNEL: Derived No-Effect Level (REACH)
- PNEC: Predicted No-Effect Concentration (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 – Category 2
- Self-react. B: Self-reactive substances and mixtures – Type B
- Org. Perox. B: Organic peroxides – Type B
- Acute Tox. 5: Acute toxicity – Category 5
- Skin Irrit. 2: Skin corrosion/irritation – Category 2
- Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
- Skin Sens. 1: Skin sensitisation – Category 1
- STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
- 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 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

Sources

- (EC) 1272/2008: classification, labelling and packaging of substances and mixtures
- (EC) 1907/2006: REACH
- ADR/RID/ADN - IMDG - 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.**

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