

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

Printing date 25.05.2022

Version number 5 (replaces version 4)

Revision: 25.05.2022

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

- **1.1 Product identifier**
 - Trade name: **Technovit powder 6091**
- **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 the treatment of claws and extracutaneous splinting
- **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 GB 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 dibenzoyl peroxide, n-butyl acrylate. 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 Mixtures

Dangerous components:

| | | |
|--------------------------------|--|-----------|
| CAS: 94-36-0 | dibenzoyl peroxide | ≥0.25-<1% |
| EINECS: 202-327-6 | Self-react. B, H241; Org. Perox. B, H241 | |
| Reg.nr.: 01-2119511472-50-xxxx | Aquatic Acute 1, H400 (M=10); Aquatic Chronic 1, H410 (M=10) | |
| | Eye Irrit. 2, H319; Skin Sens. 1, H317 | |

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Trade name: Technovit powder 6091

CAS: 141-32-2
EINECS: 205-480-7
Reg.nr.: 01-2119453155-43-xxxx

n-butyl acrylate
Flam. Liq. 3, H226
Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2,
H319; Skin Sens. 1, H317; STOT SE 3, H335
Aquatic Chronic 3, H412
ATE: LC50/4 h inhalative: 10.3 mg/l

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≥0.1- <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.
Carbon dioxide (CO₂)
Carbon monoxide (CO)
- **5.3 Advice for firefighters**
 - **Protective equipment:**
Wear self-contained breathing apparatus.
(EN 133)
 - **Additional information** -

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Keep people at a distance and stay on the windward side.
Wear protective clothing.
Avoid causing dust.
Keep away from ignition sources
Avoid contact with eyes and skin.

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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.
Do not allow to enter the ground/soil.
- **6.3 Methods and material for containment and cleaning up:**
Collect mechanically.
Send for recovery or disposal in suitable containers.
Dispose of the material collected according to regulations.
- **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**
Wear protective equipment. Keep unprotected persons away.
Avoid contact with eyes and skin.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of dust.
Any deposit of dust which cannot be avoided must be removed regularly.
Provide suction extractors if dust is formed.
 - **Information about protection against explosions and fires:**
Dust can combine with air to form an explosive mixture.
Use explosion-proof apparatus / fittings and spark-proof tools.
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
 - **Handling**
do not mix with
reducing agent
Strong bases
Strong oxidizers
Strong acids
- **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:** Store cool (not above 25 °C).
- **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: | |
|--|--|
| 94-36-0 dibenzoyl peroxide | |
| WEL (Great Britain) | Long-term value: 5 mg/m ³ |
| 141-32-2 n-butyl acrylate | |
| WEL (Great Britain) | Short-term value: 26 mg/m ³ , 5 ppm Long-term value: 5 mg/m ³ , 1 ppm |
| IOELV (European Union) | Short-term value: 53 mg/m ³ , 10 ppm Long-term value: 11 mg/m ³ , 2 ppm |

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| · DNELs | | |
|------------------------------------|---|------------------------------------|
| 94-36-0 dibenzoyl peroxide | | |
| Oral | general population, long term, systemic | 2 mg/Kg (not defined) |
| Dermal | worker industrial, long term, systemic | 13.3 mg/Kg/d (not defined) |
| Inhalative | worker industrial, long term, systemic | 39 mg/m ³ (not defined) |
| 141-32-2 n-butyl acrylate | | |
| Inhalative | worker industrial, long term, local | 11 mg/m ³ (not defined) |
| · PNECs | | |
| 94-36-0 dibenzoyl peroxide | | |
| freshwater | | 0.00002 mg/l (not defined) |
| marine water | | 0.000002 mg/l (not defined) |
| sewage treatment plant | | 0.35 mg/l (not defined) |
| sediment, dry weight, freshwater | | 0.013 mg/Kg (not defined) |
| sediment, dry weight, marine water | | 0.001 mg/Kg (not defined) |
| soil, dry weight | | 0.003 mg/Kg (not defined) |
| 141-32-2 n-butyl acrylate | | |
| freshwater | | 0.003 mg/l (not defined) |
| marine water | | 0 mg/l (not defined) |
| sewage treatment plant | | 3.5 mg/l (not defined) |
| sediment, dry weight, freshwater | | 0.034 mg/Kg (not defined) |
| sediment, dry weight, marine water | | 0.003 mg/Kg (not defined) |
| soil, dry weight | | 1 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**

Do not inhale dust / smoke / mist.

Do not eat or drink while working.

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

Avoid contact with the eyes and skin.

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

· **Breathing equipment:**

Filter P3.

Use a mask with particle filter in case of dust generation.

· **Hand protection**

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

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

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.

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

- **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.
>30 min
- **Eye/face protection** eye protection (EN 166)
- **Body protection:** Light weight protective clothing
- **Environmental exposure controls**
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** Solid.
- **Colour:** According to product specification
- **Smell:** Odourless
 - **Odour threshold:** Not determined.
- **Melting point/freezing point:** Not determined
- **Boiling point or initial boiling point and boiling range** 147 °C (141-32-2 n-butyl acrylate)
- **Flammability** Not determined.
- **Lower and upper explosion limit**
 - **Lower:** Not determined.
 - **Upper:** Not determined.
- **Flash point:** Not applicable
- **Decomposition temperature:** Not determined.

· **SADT**

- **pH** Not applicable.
- **Viscosity:**
 - **Kinematic viscosity** Not applicable.
 - **dynamic:** Not applicable.
- **Solubility**
 - **Water:** Insoluble
- **Partition coefficient n-octanol/water (log value)** Not determined.
- **Steam pressure:** Not applicable.
- **Density and/or relative density**
 - **Density** Not determined
 - **Relative density** Not determined.
 - **Vapour density** Not applicable.

· **9.2 Other information**

- **Appearance:** No further relevant information available.
 - **Form:** Powder
- **Important information on protection of health and environment, and on safety.**
 - **Self-inflammability:** Product is not selfigniting.
 - **Explosive properties:** Product is not explosive. However, formation of explosive powder/air mixtures is possible.
- **Change in condition**
 - **Evaporation rate** Not applicable.

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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 | 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**
Risk of dust explosion if enriched with fine dust in presence of air
- **10.4 Conditions to avoid** Heat, flames and sparks.
- **10.5 Incompatible materials:**
Strong oxidizers
reducing agent
Strong bases
Strong acids
- **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:

94-36-0 dibenzoyl peroxide

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

141-32-2 n-butyl acrylate

| | | |
|------------|----------|------------------------------|
| Oral | LD50 | 3,150 mg/kg (rat) (OECD 401) |
| Inhalative | LC50/4 h | 10.3 mg/l (ATE) |

- **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.

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- **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:**

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) |

141-32-2 n-butyl acrylate

| | |
|------------|------------------------------------|
| EC50/72h | 2.65 mg/l (algae) (OECD 201) |
| EC50/48h | 8.2 mg/l (daphnia) (OECD 202) |
| LC50/96h | 5.2 mg/l (fish) (OECD 203) |
| NOEC / 21d | 0.136 mg/l (daphnia) (OECD 211) |
| NOEC / 96h | 3.8 mg/l (fish) (EPA OTS 797.1400) |

· **12.2 Persistence and degradability**

94-36-0 dibenzoyl peroxide

| | |
|----------------|-------------------------------------|
| Biodegradation | 71 % /28d (not defined) (OECD 301D) |
|----------------|-------------------------------------|

141-32-2 n-butyl acrylate

| | |
|----------------|---------------------------------------|
| Biodegradation | 80-90 % /28d (not defined) (OECD 310) |
|----------------|---------------------------------------|

- **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:**

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.

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

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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.

· **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

UN3077

· **14.2 UN proper shipping name**

· ADR

3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Ethylene dibenzoate, dibenzoyl peroxide)

· IMDG

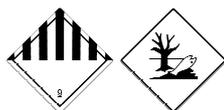
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Ethylene dibenzoate, dibenzoyl peroxide), MARINE POLLUTANT

· IATA

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Ethylene dibenzoate, dibenzoyl peroxide)

· **14.3 Transport hazard class(es)**

· ADR



· Class

9 (M7) Miscellaneous dangerous substances and articles.

· Label

9

· IMDG, IATA



· Class

9 Miscellaneous dangerous substances and articles.

· Label

9

· **14.4 Packing group**

· ADR, IMDG, IATA

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| | |
|---|--|
| · 14.5 Environmental hazards: | |
| · Marine pollutant: | Yes |
| · Special marking (ADR): | Symbol (fish and tree) |
| · Special marking (IATA): | Symbol (fish and tree) |
| · 14.6 Special precautions for user | |
| | Warning: Miscellaneous dangerous substances and articles. |
| · Kemler Number: | 90 |
| · EMS Number: | F-A, S-F |
| · Stowage Category | A |
| · Stowage Code | SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9. |
| · 14.7 Maritime transport in bulk according to IMO instruments | |
| | Not applicable. |
| · Transport/Additional information: | |
| - | |
| · ADR | |
| · Limited quantities (LQ) | 5 kg |
| · Excepted quantities (EQ) | Code: E1 |
| | Maximum net quantity per inner packaging: 30 g |
| | Maximum net quantity per outer packaging: 1000 g |
| · Transport category | 3 |
| · Tunnel restriction code | (-) |
| · IMDG | |
| · Limited quantities (LQ) | 5 kg |
| · Excepted quantities (EQ) | Code: E1 |
| | Maximum net quantity per inner packaging: 30 g |
| | Maximum net quantity per outer packaging: 1000 g |
| · UN "Model Regulation": | UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (ETHYLENE DIBENZOATE, DIBENZOYL PEROXIDE), 9, III |

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
 - **Information about limitation of use:**
 - Employment restrictions concerning young persons must be observed.
 - Employment restrictions concerning women of child-bearing age must be observed.

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· **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**

- H226 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.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.
- H412 Harmful to aquatic life with long lasting effects.

· **Abbreviations and acronyms:**

- SADT: Self Accelerating Decomposition 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 (UK REACH)
- PNEC: Predicted No-Effect Concentration (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. 3: Flammable liquids – Category 3
- Self-react. B: Self-reactive substances and mixtures – Type B
- Org. Perox. B: Organic peroxides – Type B
- Acute Tox. 4: Acute toxicity – Category 4
- 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
- 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: UK 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.**