

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

Printing date 13.04.2022


Version number 5 (replaces version 4)

Revision: 13.04.2022

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

- **1.1 Product identifier**
 - Trade name: **Technovit 5000 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 Acute 1 H400 Very toxic to aquatic life.
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** Warning
 - **Hazard statements**
H400 Very toxic to aquatic life.
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.
 - **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**
 - **Description:** -

- **Dangerous components:**

CAS: 7440-50-8 EINECS: 231-159-6 Reg.nr.: 01-2119480154-42-xxxx	copper Aquatic Acute 1, H400; Aquatic Chronic 2, H411	>90%
---	--	------

(Contd. on page 2)

GB

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

Printing date 13.04.2022

Version number 5 (replaces version 4)

Revision: 13.04.2022

Trade name: Technovit 5000 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

(Contd. of page 1)

≥0.025-<0.1%

· **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 continues, consult a doctor.
 - **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** Special powder for metal fires. Do not use water.
 - **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.
Cool endangered containers with water spray jet.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Do not breathe vapor / mist / gas.
Ensure adequate ventilation
Avoid causing dust.
Keep away from ignition sources

(Contd. on page 3)

GB

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

Printing date 13.04.2022

Version number 5 (replaces version 4)

Revision: 13.04.2022

Trade name: Technovit 5000 powder

(Contd. of page 2)

- **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.
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.
- **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.
Provide suction extractors if dust is formed.
Do not breathe vapor / mist / gas.
Ensure good ventilation/exhaustion at the workplace.
Any deposit of dust which cannot be avoided must be removed regularly.
Prevent formation of dust.
Use appropriate industrial vacuum cleaners or central vacuum systems for dust removal.
- **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.
Use only in explosion-proof area.
Keep ignition sources away - Do not smoke.
- **Handling**
do not mix with
Strong oxidizers
reducing agent
Strong bases
Strong acids
amine
halogens
- **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:**

7440-50-8 copper

WEL (Great Britain)	Short-term value: 2** mg/m ³ Long-term value: 0.2* 1** mg/m ³ *fume **dusts and mists (as Cu)
---------------------	---

(Contd. on page 4)

GB

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

Printing date 13.04.2022

Version number 5 (replaces version 4)

Revision: 13.04.2022

Trade name: Technovit 5000 powder

(Contd. of page 3)

94-36-0 dibenzoyl peroxide

WEL (Great Britain) Long-term value: 5 mg/m³

· **DNELs**

7440-50-8 copper

Oral	general population, long term, systemic	0.041 mg/Kg (not defined)
Dermal	worker industrial, acute, systemic	273 mg/Kg/d (not defined)
	worker industrial, long term, systemic	137 mg/Kg/d (not defined)
	general population, acute, systemic	273 mg/Kg/d (not defined)
	general population, long term, systemic	137 mg/Kg/d (not defined)
Inhalative	worker industrial, acute, local	1 mg/m ³ (not defined)
	worker industrial, long term, local	1 mg/m ³ (not defined)

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)

· **PNECs**

7440-50-8 copper

freshwater	0.0078 mg/l (not defined)
marine water	0.0052 mg/l (not defined)
sewage treatment plant	0.23 mg/l (not defined)
sediment, dry weight, freshwater	87 mg/Kg (not defined)
sediment, dry weight, marine water	676 mg/Kg (not defined)
soil, dry weight	65 mg/Kg (not defined)

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)

· **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**

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

Do not eat or drink while working.

Do not inhale dust / smoke / mist.

Keep away from foodstuffs, beverages and food.

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

· **Breathing equipment:**

Use breathing protection in case of insufficient ventilation.

Filter P1.

· **Hand protection**

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

(Contd. on page 5)

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

Printing date 13.04.2022

Version number 5 (replaces version 4)

Revision: 13.04.2022

Trade name: Technovit 5000 powder

(Contd. of page 4)

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

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.

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**

Solid.

- **Colour:**

Copper coloured

- **Smell:**

Odourless

- **Odour threshold:**

Not determined.

- **Melting point/freezing point:**

1,083 °C

- **Boiling point or initial boiling point and boiling range**

2,595 °C (7440-50-8 copper)

- **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 at 20 °C**

8.96 g/cm³

- **Relative density**

Not determined.

- **Vapour density**

Not applicable.

· 9.2 Other information

No further relevant information available.

(Contd. on page 6)

GB

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

Printing date 13.04.2022

Version number 5 (replaces version 4)

Revision: 13.04.2022

Trade name: Technovit 5000 powder

(Contd. of page 5)

- | | |
|--|------------------------------|
| · Appearance: | |
| · 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. |
| · Change in condition | |
| · Evaporation rate | Not applicable. |

· **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
- **10.4 Conditions to avoid**
Heat, flames and sparks.
Avoid dust formation.
- **10.5 Incompatible materials:**
amine
reducing agent
Strong bases
Strong oxidizers
Strong acids
halogens
- **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.

(Contd. on page 7)

GB

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

Printing date 13.04.2022

Version number 5 (replaces version 4)

Revision: 13.04.2022

Trade name: Technovit 5000 powder

(Contd. of page 6)

· LD/LC50 values that are relevant for classification:

7440-50-8 copper

Dermal	LD0	>2,000 mg/kg (rat) (OECD 402)
Inhalative	LC0/4h	≥5.11 mg/L (rat) (OECD 436)

94-36-0 dibenzoyl peroxide

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

- **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.
- **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**

Taking into account the current state of scientific knowledge, no data on endocrine disrupting properties of the product are available.

None of the ingredients is listed.

SECTION 12: Ecological information

· 12.1 Toxicity

· **Aquatic toxicity:**

7440-50-8 copper

LC50/96h	0.193 mg/l (fish)
----------	-------------------

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

94-36-0 dibenzoyl peroxide

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

- **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**
 For information on endocrine disrupting properties see section 11.

(Contd. on page 8)

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

Printing date 13.04.2022

Version number 5 (replaces version 4)

Revision: 13.04.2022

Trade name: Technovit 5000 powder

(Contd. of page 7)

- **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.
 Danger to drinking water if even 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:** Packaging can be reused or recycled after cleaning.

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. (copper)
- **IMDG** ENVIRONMENTALLY HAZARDOUS
SUBSTANCE, SOLID, N.O.S. (copper), MARINE
POLLUTANT
- **IATA** ENVIRONMENTALLY HAZARDOUS
SUBSTANCE, SOLID, N.O.S. (copper)

- **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

(Contd. on page 9)

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

Printing date 13.04.2022

Version number 5 (replaces version 4)

Revision: 13.04.2022

Trade name: Technovit 5000 powder

(Contd. of page 8)

· 14.4 Packing group · ADR, IMDG, IATA	III
· 14.5 Environmental hazards: · Marine pollutant:	Yes Symbol (fish and tree)
· Special marking (ADR): · Special marking (IATA):	Symbol (fish and tree) Symbol (fish and tree)
· 14.6 Special precautions for user · Kemler Number: · Stowage Category · Stowage Code	Warning: Miscellaneous dangerous substances and articles. 90 A 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) · Excepted quantities (EQ)	5 kg Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
· Transport category · Tunnel restriction code	3 E
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	5 kg 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. (COPPER), 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 E1** Hazardous to the Aquatic Environment
 - **Qualifying quantity (tonnes) for the application of lower-tier requirements** 100 t
 - **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
 - **Information about limitation of use:**
Employment restrictions concerning young persons must be observed.

(Contd. on page 10)

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

Printing date 13.04.2022

Version number 5 (replaces version 4)

Revision: 13.04.2022

Trade name: Technovit 5000 powder

(Contd. of page 9)

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

- H241 Heating may cause a fire or explosion.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.
- H411 Toxic 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 (GB REACH)
- 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
- Self-react. B: Self-reactive substances and mixtures – Type B
- Org. Perox. B: Organic peroxides – Type B
- Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
- Skin Sens. 1: Skin sensitisation – Category 1
- 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: GB 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.**

GB