

Printing date 17.06.2022 Version number 2 Revision: 17.06.2022

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

- · 1.1 Product identifier
 - · Trade name: Technovit 4021 Pulver
- · 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 (M=10) 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. 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
 - Description: -

· Dangerous	components	
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CAS: 94-36-0 ≥0.25-<1% dibenzoyl peroxide 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,

 $H\dot{4}10 (M=10)$

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

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• 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.
 - After eye contact Rinse opened eye for several minutes under running water.
 - After swallowing 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.

- · 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.

In case of fire the following can be released:

Carbon dioxide (CO2)

Carbon monoxide (CO)

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

- · 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

Wear protective equipment. Keep unprotected persons away.

Avoid causing dust.

Keep away from ignition sources

Ensure adequate ventilation

6.2 Environmental precautions:

Prevent material from reaching sewage system, holes and cellars.

Damp down dust with water spray jet.

· 6.3 Methods and material for containment and cleaning up:

Dispose of the material collected according to regulations.

Collect mechanically.

· 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 information on disposal.

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SECTION 7: Handling and storage

7.1 Precautions for safe handling

Store in cool, dry place in tightly closed containers.

Provide suction extractors if dust is formed.

Any deposit of dust which cannot be avoided must be removed regularly.

Prevent formation of dust.

Information about protection against explosions and fires: Use explosion-proof apparatus / fittings and spark-proof tools.

Protect against electrostatic charges.

Dust can combine with air to form an explosive mixture.

Keep ignition sources away - Do not smoke.

· Handling

do not mix with

amine

metals

organic peroxides

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:

No special requirements.

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

· Components with critical values that require monitoring at the workplace:

94-36-0 dibenzoyl peroxide

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

· DNELs

94-36-0 dibenzoyl peroxide

Oral general population, long term, systemic 2 mg/Kg (not defined) worker industrial, long term, systemic 13.3 mg/Kg/d (not defined) Dermal Inhalative worker industrial, long term, systemic 39 mg/m3 (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)

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

· 8.2 Exposure controls

· Individual protection measures, such as personal protective equipment

General protective and hygienic measures

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

Do not eat, drink or smoke while working.

Keep away from foodstuffs, beverages and food.

Breathing equipment:

Use a mask with particle filter in case of dust generation. Filter P2.

· Hand protection

If skin contact cannot be avoided, protective gloves are recommended to avoid possible sensitization.

· 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 trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

>30 min

· Eye/face protection Safety glasses

· 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: Solid.

Smell: Characteristic
 Odour threshold: Not determined.
 Melting point/freezing point: Not determined

· Boiling point or initial boiling point and

boiling range 365 °C (94-36-0 dibenzoyl peroxide)
• Flammability Not determined.

Lower and upper explosion limit

· Lower:
 · Upper:
 · Flash point:
 · Decomposition temperature:

Not determined.

Not determined.

Not applicable

Not determined.

SADT

· **pH** Not applicable.

· Viscosity:

• Kinematic viscosity
• dynamic:

Not applicable.

Not applicable.

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· Solubility

Water:

Insoluble

Partition coefficient n-octanol/water (log

value) · Steam pressure: Not determined. Not applicable.

Density and/or relative density Density

Not determined

Relative density · Vapour density

Not determined. Not applicable.

· 9.2 Other information

No further relevant information available.

Appearance:

Form:

Powder

· Important information on protection of health and environment, and on safety.

· Self-inflammability: · Explosive properties: Product is not selfigniting.

Product is not explosive. Not determined.

· Solvent content:

Solids content:

100.0 %

Change in condition

Evaporation rate

Not applicable.

· Information with regard to physical hazard

185565	
· 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 · Organic peroxides · Corrosive to metals · Desensitised explosives Void Void Void

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.

Avoid dust formation.

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· 10.5 Incompatible materials:

Strong bases Strong acids Strong oxidizers reducing agent amine metals

· 10.6 Hazardous decomposition products: None

Additional information: -

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)

- 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

None of the ingredients is listed.

SECTION 12: Ecological information

· 12.1 Toxicity

 Aqualic	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)

· 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.

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- · 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

- - · Remark: Harmful to fish
 - Additional ecological information:
 - General notes:

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

Harmful to aquatic organisms

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

SECTION 13: Disposal considerations

- · 13.1 Waste treatment methods
 - Recommendation

· Class

Must not be disposed of together with household garbage. Do not allow product to reach sewage

Disposal must be made according to official regulations.

- · Uncleaned packagings:
 - Recommendation:

Disposal must be made according to official regulations.

Non contaminated packagings can be used for recycling.

14.1 UN number or ID number · ADR, IMDG, IATA	UN3077
14.2 UN proper shipping name · ADR	3077 ENVIRONMENTALLY HAZARDO SUBSTANCE, SOLID, N.O.S. (Ethyle dibenzoate, dibenzoyl peroxide)
· IMDG	ENVIRÓNMENTALLY HAZARDOU SUBSTANCE, SOLID, N.O.S. (Ethyle dibenzoate, dibenzoyl peroxide), MARI POLLUTANT
·IATA	ENVIRONMENTALLY HAZARDOU SUBSTANCE, SOLID, N.O.S. (Ethyle dibenzoate, dibenzoyl peroxide)
14.3 Transport hazard class(es)	

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9 (M7) Miscellaneous dangerous substances

and articles.



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· Label	9	
· IMDG, IATA		
· Class	9 Miscellaneous dangerous substances and articles.	
· Label	9	
14.4 Packing group ADR, IMDG, IATA	III	
14.5 Environmental hazards: Marine pollutant: Special marking (ADR): Special marking (IATA):	Symbol (fish and tree) Symbol (fish and tree) Symbol (fish and tree)	
· 14.6 Special precautions for user	Warning: Miscellaneous dangerous substances and articles.	
· Kemler Number: · EMS Number: · Stowage Category · Stowage Code	90 F-A,S-F 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 IMO instruments	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 (-)	
· 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. (ETHYLENE DIBENZOATE, DIBENZOYL PEROXIDE), 9, III	



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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 E2 Hazardous to the Aquatic Environment
 - · Information about limitation of use:

Employment restrictions concerning young persons 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

H241 Heating may cause a fire or explosion.

H317 May cause an allergic skin reaction.

H319 Causes serious eve irritation.

H400 Very toxic to aquatic life.

H410 Very 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 (UK REACH)

PNEC: Predicted No-Effect Concentration (UK REACH)

LC50: Lethal concentration 50 percent

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: UK 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