

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

Printing date 31.07.2014

Revision: 25.07.2014

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

· **1.1 Product identifier**

· Trade name: **FK-fix S Component A**

· **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** Adhesives

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

FK-Chem GmbH & Co. KG
Günther-Irmscher-Str. 5
D – 73630 Remshalden

phone: +49(0) 7151 209196 5 I fax: +49(0) 7151 209196 9 I mobil: +49(0) 172 7074435
e-mail: m.kirschbaum@fk-chem.de I www.fk-chem.de

· **Informing department:**

Dr. Martin Kirschbaum
m.kirschbaum@fk-chem.de

· **1.4 Emergency telephone number:**

+49(0)7151-209196-0
(8 - 17 Uhr)
National Poisons Information Service (Birmingham Unit)
+44 121 507 4123

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· Classification according to Regulation (EC) No 1272/2008



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.
STOT SE 3 H335 May cause respiratory irritation.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

· Classification according to Directive 67/548/EEC or Directive 1999/45/EC



Xn; Harmful

R22: Harmful if swallowed.



Xi; Irritant

R37/38: Irritating to respiratory system and skin.



Xi; Sensitising

R43: May cause sensitisation by skin contact.



F; Highly flammable

R11: Highly flammable.

R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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· **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

· **Classification system:**

The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

· **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**



GHS02 GHS07

· **Signal word** *Danger*

· **Hazard-determining components of labelling:**

methyl methacrylate

· **Hazard statements**

H225 Highly flammable liquid and vapour.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

H412 Harmful to aquatic life with long lasting effects.

· **Precautionary statements**

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P240 Ground/bond container and receiving equipment.

P233 Keep container tightly closed.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P405 Store locked up.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

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 Chemical characterization: Mixtures**

· **Description:** methyl methacrylate resin formulation

· **Dangerous components:**

CAS: 80-62-6	methyl methacrylate	50-100%
EINECS: 201-297-1	☒ Xi R37/38; ☒ Xi R43; 🔥 F R11	
Index number: 607-035-00-6	🔥 Flam. Liq. 2, H225; ⚠ Skin Irrit. 2, H315; Skin Sens. 1,	
Reg.nr.: 01-2119452498-28-xxxx	H317; STOT SE 3, H335	







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CAS: 3290-92-4 EINECS: 221-950-4	propylidynetrimethyl trimethacrylate  N R51/53  Aquatic Chronic 2, H411	2.5-10%
CAS: 38668-48-3 EINECS: 254-075-1 Reg.nr.: 01-2119980937-17-xxxx	1,1'-(p-tolylimino)dipropan-2-ol  T+ R28;  Xi R36 R52/53  Acute Tox. 2, H300;  Eye Irrit. 2, H319; Aquatic Chronic 3, H412	< 1%

· **Additional information** For the wording of the listed risk 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.

Take affected persons into the open air.

· **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. Then consult doctor.

· **After swallowing** Seek immediate medical advice.

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

· **Information for doctor** No particular measures are known - treat according to symptoms.

· **Danger** Condition may deteriorate with alcohol consumption.

· **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, sand, extinguishing powder. 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.

· **5.3 Advice for firefighters**

· **Protective equipment:**

Put on breathing apparatus.

Do not inhale explosion gases or combustion gases.

· **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**

Wear protective equipment. Keep unprotected persons away.

Keep away from ignition sources

· **6.2 Environmental precautions:**

Prevent material from reaching sewage system, holes and cellars.

Do not allow to enter the ground/soil.

· **6.3 Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose of the material collected according to regulations.

Ensure adequate ventilation.

Do not flush with water or aqueous cleansing agents

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- **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.
Clean the accident area carefully.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Keep containers tightly sealed.
Store in cool, dry place in tightly closed containers.
Ensure good ventilation/exhaustion at the workplace.
Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Fumes can combine with air to form an explosive mixture.
Flammable mixtures may be formed in empty containers.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and containers:**
Store only in the original container.
Store containers closely closed and dry
Store in cool location.
Provide floor trough without outlet.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:**
Store only outside or in explosion proof rooms.
Must be stored in a collecting room.
Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.
- **Storage class 3**
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **8.1 Control parameters**

- **Components with limit values that require monitoring at the workplace:**

80-62-6 methyl methacrylate (50-100%)

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

- **DNELs**

80-62-6 methyl methacrylate

Dermal	DNEL Langzeit / Long-term	74.3 mg/m ³ (-)
Inhalative	DNEL Langzeit / long-term	210 mg/m ³ (-)

- **PNECs**

80-62-6 methyl methacrylate

PNEC Langzeit Wasser / Long-term water	0.94 mg/l (-)
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3290-92-4 propylidynetrimehyl trimethacrylate

PNEC Langzeit Boden / Long-term soil	0.7056 mg/kg (-)
PNEC Langzeit Wasser / Long-term water	0.002 mg/l (-)

· **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**

Keep away from foodstuffs, beverages and food.

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

Avoid contact with the eyes and skin.

· **Breathing equipment:**

In case of brief exposure or low pollution use breathing filter apparatus. In case of intensive or longer exposure use breathing apparatus that is independent of circulating air.

· **Recommended filter device for short term use:**

Combination filter A-P2

· **Protection of hands:**

Only use chemical-protective gloves with CE-labelling of category III.

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

· **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.

· **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.

· **As protection from splashes gloves made of the following materials are suitable: PVC or PE gloves**· **Not suitable are gloves made of the following materials:**

Leather gloves

Strong gloves

· **Eye protection:**

Safety glasses recommended during refilling.

· **Body protection:** Protective work clothing.

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SECTION 9: Physical and chemical properties· **9.1 Information on basic physical and chemical properties**· **General Information**· **Appearance:**

Form: Highly viscous
Colour: Different according to colour

· **Odour:** Ester-like· **Odour threshold:** Not determined.· **pH-value:** Not determined.· **Change in condition****Melting point/Melting range:** Not determined**Boiling point/Boiling range:** Not determined· **Flash point:** 10 °C· **Inflammability (solid, gaseous)** Not applicable.· **Ignition temperature:** 430 °C· **Decomposition temperature:** Not determined.· **Self-inflammability:** Product is not selfigniting.· **Danger of explosion:** Product is not explosive. However, formation of explosive air/steam mixtures is possible.· **Critical values for explosion:****Lower:** 2.1 Vol %**Upper:** 12.5 Vol %· **Vapour pressure at 20 °C:** 38.7 hPa· **Density at 20 °C** 1 g/cm³· **Relative density** Not determined.· **Vapour density** Not determined.· **Evaporation rate** Not determined.· **Solubility in / Miscibility with****Water:** Insoluble· **Partition coefficient (n-octanol/water):** Not determined.· **Viscosity:****dynamic at 20 °C:** 15000 - 20000 mPas**kinematic:** Not determined.· **9.2 Other information** Spindel 64 / 6 U/min**SECTION 10: Stability and reactivity**· **10.1 Reactivity**· **10.2 Chemical stability**· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.· **10.3 Possibility of hazardous reactions**

Exothermic reaction with strong oxidizers, bases, acids and amines may occur.

Reacts with peroxides and other radical forming substances

Forms explosive gas mixture with air

· **10.4 Conditions to avoid**

Keep away from ignition sources

Protect from heat and/or direct insolation

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- **10.5 Incompatible materials:**
strong acids
strong oxidizing agents
- **10.6 Hazardous decomposition products:** Inflammable gases/vapours

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**

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

80-62-6 methyl methacrylate

Oral	LD50	> 5000 mg/kg (rat)
Dermal	LD50	> 5000 mg/kg (rab)
Inhalative	LC50/4 h	29.8 mg/l (rat)

3290-92-4 propylidynetrimethyl trimethacrylate

Oral	LD50	5700 mg/kg (rat)
Dermal	LD50	16000 mg/kg (rab)

38668-48-3 1,1'-(p-tolylimino)dipropan-2-ol

Oral	LD50	25 - 200 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** No irritant effect.
- **Sensitization:** Sensitization possible by skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:
Harmful
Irritant

SECTION 12: Ecological information

- **12.1 Toxicity**

- **Aquatic toxicity:**

80-62-6 methyl methacrylate

Algentoxizität / Algae toxicity	> 110 mg/l (<i>Selenastrum capricornutum</i>) (EC50/72h), OECD 201)
BSB5-Wert	0.14 g/g (-)
Bakterientoxizität / Bacteria toxicity	100 mg/l (<i>Pseudomonas putida</i>) (EC3(16h))
Daphnientoxizität / Daphnia toxicity	69 mg/l (<i>Daphnia magna</i>) (EC50(48h), OECD 202)
Fischttoxizität / Fish toxicity	191 mg/l (<i>Onchorhynchus mykiss</i>) (LC50 (96h) OECD 203)
NOEC	9.4 mg/l (<i>Danio rerio</i> (Zebraabärbling)) (OECD 210 fish early life stage test)
	37 mg/l (<i>Daphnia magna</i>) (OECD 202 Part 2 , 21d)

3290-92-4 propylidynetrimethyl trimethacrylate

Algentoxizität / Algae toxicity	3.88 mg/l (Alge) (EC50 (72h))
	> 1000 mg/l (<i>Scenedesmus subspicatus</i>) ((72h) OECD 201)
Bakterientoxizität / Bacteria toxicity	>1000 mg/l (<i>Belebtschlamm</i> bakterien) (EC50 (3h))
Daphnientoxizität / Daphnia toxicity	> 1000 mg/l (<i>daphnia</i>) ((48h) OECD 202)
	9.22 mg/l (<i>Daphnia magna</i>) (EC50 (96h))

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Fischtoxizität / Fish toxicity	2 mg/l (<i>Onchorhynchus mykiss</i>) (LC50 (96h)) > 10 mg/l (<i>Danio rerio</i> (Zebrafisch)) ((96h) OECD 203)
38668-48-3 1,1'-(p-tolylimino)dipropyl-2-ol	
Algentoxizität / Algae toxicity	245 mg/l (<i>Desmodesmus subspicatus</i>) (EC50 (72h))
BSB-5	11 mg O ₂ /g (-)
CSB	2360 mg O ₂ /g (-)
Daphnientoxizität / Daphnia toxicity	28.8 mg/l (<i>Daphnia magna</i>) (EC50 (48h))
Fischtoxizität / Fish toxicity	17 mg/l (<i>Danio rerio</i> (Zebrafisch)) (LC50 (96h))

· **12.2 Persistence and degradability** No further relevant information available.

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

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

· **Ecotoxicological effects:**

· **Remark:** Harmful to fish

· **Additional ecological information:**

· **General notes:**

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water.

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

Harmful to aquatic organisms

· **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** Must be specially treated under adherence to official regulations.

· **European waste catalogue**

08 00 00	WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS
08 04 00	wastes from MFSU of adhesives and sealants (including waterproofing products)
08 04 09*	waste adhesives and sealants containing organic solvents or other dangerous substances

· **Uncleaned packagings:**

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

SECTION 14: Transport information

· **14.1 UN-Number**

· **ADR, IMDG, IATA**

UN1133

· **14.2 UN proper shipping name**

· **ADR**

1133 ADHESIVES

· **IMDG, IATA**

ADHESIVES

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Trade name: **FK-fix S Component A**

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· 14.3 Transport hazard class(es)

· ADR



· Class 3 (F1) Flammable liquids.
· Label 3

· IMDG, IATA



· Class 3 Flammable liquids.
· Label 3

· 14.4 Packing group

· ADR, IMDG, IATA II

· 14.5 Environmental hazards:

· Marine pollutant: No

· 14.6 Special precautions for user

Warning: Flammable liquids.
· Kemler Number: 33
· EMS Number: F-E,S-D

· 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

· Transport/Additional information:

· ADR

· Limited quantities (LQ) 5L
· Excepted quantities (EQ) Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml

· Transport category

2

· Tunnel restriction code

D/E

· IMDG

· Limited quantities (LQ) 5L
· Excepted quantities (EQ) Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml

· UN "Model Regulation":

UN1133, ADHESIVES, 3, II

SECTION 15: Regulatory information

· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

· National regulations

· Technical instructions (air):

Class	Share in %
I	< 2,5

· Water hazard class: Water hazard class 2 (Self-assessment): hazardous for water.

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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.

*Changes made since last issue dated 11.10.2009 at the following points: **

· **Relevant phrases**

H225 Highly flammable liquid and vapour.

H300 Fatal if swallowed.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H411 Toxic to aquatic life with long lasting effects.

H412 Harmful to aquatic life with long lasting effects.

R11 Highly flammable.

R28 Very toxic if swallowed.

R36 Irritating to eyes.

R37/38 Irritating to respiratory system and skin.

R43 May cause sensitisation by skin contact.

R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

· **Department issuing data specification sheet:**

IGG-AD Ingenieurbüro für Gefahrstoff- und Gefahrgutberatung

Bismarckstraße 10

D-68623 Lampertheim

Fax: 0049-(0)6206-58422 <http://www.igg-ad.de> info@igg-ad.de

· **Contact:**

Dr. U. Prinz (u.prinz@igg-ad.de)

Dipl.-Chem. H. Hinse (heidrun.hinse@igg-ad.de)

· **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

ADR: Accord européen sur le transport 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 Harmonized 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

Flam. Liq. 2: Flammable liquids, Hazard Category 2

Acute Tox. 2: Acute toxicity, Hazard Category 2

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

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

· **1.1 Product identifier**

· Trade name: **FK-fix S Component B**

· **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** Hardening agent/ Curing agent

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

FK-Chem GmbH & Co. KG
Günther-Irmscher-Str. 5
D – 73630 Remshalden

phone: +49(0) 7151 209196 5 I fax: +49(0) 7151 209196 9 I mobil: +49(0) 172 7074435
e-mail: m.kirschbaum@fk-chem.de I www.fk-chem.de

· **Informing department:**

Dr. Martin Kirschbaum
m.kirschbaum@fk-chem.de

· **1.4 Emergency telephone number:**

+49(0)7151-209196-0
(8 - 17 Uhr)
National Poisons Information Service (Birmingham Unit)
+44 121 507 4123

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.



GHS07

Skin Sens. 1 H317 May cause an allergic skin reaction.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

· **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



Xi; Sensitising

R43: May cause sensitisation by skin contact.



O; Oxidising

R7: May cause fire.



N; Dangerous for the environment

R50: Very toxic to aquatic organisms.

· **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

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· Hazard pictograms



GHS07 GHS09

· Signal word Warning

· Hazard-determining components of labelling:

dibenzoyl peroxide

· Hazard statements

H317 May cause an allergic skin reaction.

H400 Very toxic to aquatic life.

H412 Harmful to aquatic life with long lasting effects.

· Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P273 Avoid release to the environment.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P302+P352 IF ON SKIN: Wash with plenty of water.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

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 Chemical characterization: Mixtures

· Description: MMA-hardener, based on dibenzoyl peroxide

· Dangerous components:

CAS: 94-36-0 EINECS: 202-327-6 Index number: 617-008-00-0 Reg.nr.: 01-2119511472-50-xxxx	dibenzoyl peroxide ⊗ Xi R36; ⊗ Xi R43; ⚠ E R3; ⚠ O R7; ⚠ N R50 ⚠ Org. Perox. B, H241; ⚠ Aquatic Acute 1, H400; ⚠ Eye Irrit. 2, H319; Skin Sens. 1, H317	5 - 10%
CAS: 670241-72-2 ELINCS: 447-010-5 Reg.nr.: 01-0000018876-55	Isononylbenzoat ⚠ N R51/53 ⚠ Aquatic Chronic 2, H411	5 - 10%

· Additional information For the wording of the listed risk 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.

· 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. Then consult doctor.

· After swallowing Seek immediate medical advice.

· 4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.

· Information for doctor No particular measures are known - treat according to symptoms.

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- **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.
- **5.3 Advice for firefighters**
- **Protective equipment:**
Do not inhale explosion gases or combustion gases.
Put on breathing apparatus.
- **Additional information**
Cool endangered containers with water spray jet.
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**
Ensure adequate ventilation
Wear protective clothing.
- **6.2 Environmental precautions:**
Do not allow product to reach sewage system or water bodies.
Do not allow to enter the ground/soil.
- **6.3 Methods and material for containment and cleaning up:**
Collect mechanically.
Dispose of the material collected according to regulations.
- **6.4 Reference to other sections**
Clean the accident area carefully.
See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Keep containers tightly sealed.
The usual precautionary measures for handling chemicals must be observed.
- **Information about protection against explosions and fires:**
Protect from heat.
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 only in the original container.
Keep containers securely closed and dry, store at 5 - 30 °C.
Provide floor trough without outlet.
- **Information about storage in one common storage facility:**
Do not store together with reducing agents, heavy-metal compounds, acids and alkalis.
Do not store together with amines.
Store away from foodstuffs.
- **Further information about storage conditions:**
Protect from heat and direct sunlight.

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- Keep container tightly sealed.
- **Storage class 11**
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

· 8.1 Control parameters

- **Components with limit values that require monitoring at the workplace:**

94-36-0 dibenzoyl peroxide (2.5-10%)

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

· DNELs

94-36-0 dibenzoyl peroxide

Oral	DNEL Langzeit Verbraucher / Long-term consumer	1.65 mg/kg/bw/d (Human)
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Dermal	DNEL - Arbeiter / worker	6.6 mg/kg/bw/d (Human)
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	DNEL Langzeit Verbraucher / Long-term consumer	3.3 mg/kg/bw/d (Human)
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· PNECs

94-36-0 dibenzoyl peroxide

PNEC Langzeit Wasser / Long-term water | 0.000602 mg/l (-)

- **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

Keep away from foodstuffs, beverages and food.

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

Avoid contact with the eyes and skin.

Take off immediately all contaminated clothing

The usual precautionary measures should be adhered to general rules for handling chemicals.

- **Breathing equipment:** Not necessary if room is well-ventilated.

- **Recommended filter device for short term use:**



Filter A2

- **Protection of hands:**



Only use chemical-protective gloves with CE-labelling of category III.

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

- **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.

Butyl rubber, BR

Fluorocarbon rubber (Viton)

Nitrile rubber, NBR

Neoprene gloves

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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.

· **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.

· **Not suitable are gloves made of the following materials:**

Strong gloves

Leather gloves

· **Eye protection:**



Tightly sealed safety glasses.

· **Body protection:** Protective work clothing.

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Pasty

Colour: White

· **Odour:** Characteristic

· **Odour threshold:** Not determined.

· **pH-value:** Not applicable

· **Change in condition**

Melting point/Melting range: Not applicable

Boiling point/Boiling range: Not determined

· **Flash point:** Not determined

· **Ignition temperature:**

Decomposition temperature: 50 °C ((SADT))

· **Self-inflammability:** Product is not selfigniting.

· **Critical values for explosion:**

Lower: Not determined

Upper: Not determined

· **Density at 20 °C** 1.1 g/cm³

· **Solubility in / Miscibility with**

Water: Insoluble

· **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

· **10.1 Reactivity**

· **10.2 Chemical stability**

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

· **10.3 Possibility of hazardous reactions** none, if used as directed

· **10.4 Conditions to avoid** Protect from heat and/or direct insolation

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- **10.5 Incompatible materials:**
acids and caustic solutions
Amines
Alkali
- **10.6 Hazardous decomposition products:**
Hydrocarbons
Carbon monoxide and carbon dioxide
none, if stored and handled correctly.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**

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

94-36-0 dibenzoyl peroxide

Oral	LD50	>5000 mg/kg (rat)
Inhalative	LC50	> 24.3 mg/m ³ (rat)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritant effect.
- **Sensitization:** Sensitization possible by skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:
Irritant

SECTION 12: Ecological information

- **12.1 Toxicity**

- **Aquatic toxicity:**

94-36-0 dibenzoyl peroxide

Algentoxizität / Algae toxicity	0.0711 mg/l (<i>Pseudokirchneriella subcapitata</i>) (EC50 (72h))
Daphnientoxizität / Daphnia toxicity	0.110 mg/l (<i>Daphnia magna</i>) (EC50 (48h))
Fischttoxizität / Fish toxicity	0.0602 mg/l (<i>Onchorhynchus mykiss</i>) (LC50 (96h))

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:** Not determined
- **Remark:** Very toxic for fish
- **Additional ecological information:**
- **General notes:**
Also poisonous for fish and plankton in water bodies.
Very toxic for aquatic organisms
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water.
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.

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SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation** Must be specially treated under adherence to official regulations.

· **European waste catalogue**

08 00 00	WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS
08 04 00	wastes from MFSU of adhesives and sealants (including waterproofing products)
08 04 09*	waste adhesives and sealants containing organic solvents or other dangerous substances

- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- **14.1 UN-Number**
- **ADR, IMDG, IATA** UN3077

- **14.2 UN proper shipping name**
- **ADR** 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (dibenzoyl peroxide)
- **IMDG** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (dibenzoyl peroxide), MARINE POLLUTANT
- **IATA** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (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** III

· **14.5 Environmental hazards:**

- **Marine pollutant:** No
Symbol (fish and tree)
- **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.

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· Kemler Number:	90
· EMS Number:	F-A,S-F
· 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	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	E
· UN "Model Regulation":	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (dibenzoyl peroxide), 9, III

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **National regulations**
- **Water hazard class:** Water hazard class 2 (Self-assessment): hazardous for water.
- **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.
- H411 Toxic to aquatic life with long lasting effects.
- R3 Extreme risk of explosion by shock, friction, fire or other sources of ignition.
- R36 Irritating to eyes.
- R43 May cause sensitisation by skin contact.
- R50 Very toxic to aquatic organisms.
- R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R7 May cause fire.

· **Department issuing data specification sheet:**
IGG-AD Ingenieurbüro für Gefahrstoff- und Gefahrgutberatung
Bismarckstraße 10
D-68623 Lampertheim
Fax: 0049-(0)6206-58422 <http://www.igg-ad.de> info@igg-ad.de

· **Contact:**
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· **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organization
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

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IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized 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

Org. Perox. B: Organic Peroxides, Type B

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

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