FK-fix K, Komponente A

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

1.1 Product identifier

Trade name/designation:

FK-fix K, Komponente A

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture:

2-Component adhesive.
Reserved for industrial and professional use.

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

FK-Chem GmbH & Co. KG
Günther-Irmscher-Straße 5
73630 Remshalden
GERMANY

Telephone: +49 (0) 7151 209196-0
Telefax: +49 (0) 7151 209169-9
E-mail: kontakt@fk-chem.de
Website: http://www.fk-chem.de
E-mail (competent person): m.kirschbaum@fk-chem.de, Mr. Dr. Martin Kirschbaum

1.4 Emergency phone number

+49 (0) 7151 209196-0 (Only available during office hours.)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Skin corrosion/irritation *(Skin Irrit. 2)*	H315: Causes skin irritation.	Calculation
Flammable liquids *(Flam. Liq. 2)*	H225: Highly flammable liquid and vapour.	Assessment
Respiratory or skin sensitisation *(Skin Sens. 1)*	H317: May cause an allergic skin reaction.	Calculation
STOT-single exposure *(STOT SE 3)*	H335: May cause respiratory irritation.	Calculation

2.2 Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms:

GHS02
Flame

GHS07
Exclamation mark

Signal word: Danger

Hazard components for labelling:

methyl methacrylate

Hazard statements for physical hazards	
H225	Highly flammable liquid and vapour.

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Hazard statements for health hazards	
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H335	May cause respiratory irritation.

Precautionary statements - Prevention	
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P243	Take action to prevent static discharges.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statements - Response	
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.

2.3 Other hazards

Adverse human health effects and symptoms:

May cause eye irritation.

SECTION 3: Composition / information on ingredients

3.2 Mixtures

Ingredients:

Product identifiers	Substance name Classification according to Regulation (EC) No. 1272/2008 [CLP]	Content
CAS No.: 80-62-6 **EC No.:** 201-297-1 **REACH No.:** 01-2119452498-28	**methyl methacrylate** Flam. Liq. 2, STOT SE 3, Skin Irrit. 2, Skin Sens. 1 **Danger** H225-H315-H317-H335	50 – 100 Wt %
CAS No.: 112945-52-5 **REACH No.:** 01-2119379499-16	**Silicium dioxide (nano)** The substance is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].	1 – 2 Wt %
CAS No.: 2082-81-7 **EC No.:** 218-218-1 **REACH No.:** 01-2119967415-30	**Tetramethylene dimethacrylate** Skin Sens. 1B **Warning** H317	< 1 Wt %
CAS No.: 38668-48-3 **EC No.:** 254-075-1 **REACH No.:** 01-2119980937-17	**1,1'-(p-Tolylimino)dipropan-2-ol** Acute Tox. 2, Aquatic Chronic 3, Eye Irrit. 2 **Danger** H300-H319-H412	< 1 Wt %
CAS No.: 79-10-7 **EC No.:** 201-177-9 **REACH No.:** 01-2119452449-31	**Acrylic acid** Acute Tox. 4, Aquatic Acute 1, Flam. Liq. 3, Skin Corr. 1A **Danger** H226-H302-H312-H314-H332-H400	≤ 1 Wt %

Full text of H- and EUH-phrases: see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information:

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Remove victim out of the danger area. Take off immediately all contaminated clothing. If unconscious place in recovery position and seek medical advice. Do not leave affected person unattended.

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Following inhalation:
Provide fresh air. Call a doctor if you feel unwell.

In case of skin contact:
Wash immediately with: Water and soap. If skin irritation or rash occurs: Get medical advice/attention.

After eye contact:
Rinse immediately carefully and thoroughly with eye-bath or water. In case of eye irritation consult an ophthalmologist.

After ingestion:
Rinse mouth immediately and drink plenty of water. Get medical advice/attention.

4.2 Most important symptoms and effects, both acute and delayed
Causes skin irritation. May cause an allergic skin reaction. May cause respiratory irritation. May cause eye irritation.

4.3 Indication of any immediate medical attention and special treatment needed
Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing media:
Water spray jet, alcohol resistant foam, Extinguishing powder, Carbon dioxide (CO2).

5.2 Special hazards arising from the substance or mixture
Highly flammable liquid and vapour. Vapours can form explosive mixtures with air. The vapour of the product is heavier than air and may accumulate below ground level, in pits, channels and basements in higher concentration.

Hazardous combustion products:
In case of fire may be liberated: carbon oxides (COx), gases/vapours, toxic

5.3 Advice for firefighters
Wear a self-contained breathing apparatus and chemical protective clothing.

5.4 Additional information
Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
6.1.1 For non-emergency personnel
Personal precautions:
Provide adequate ventilation. Do not breathe dust/fume/gas/mist/vapours/spray. Avoid contact with eyes and skin. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Remove persons to safety.

Protective equipment:
Wear protective gloves/protective clothing/eye protection/face protection. See section 8.

6.1.2 For emergency responders
Personal protection equipment:
Personal protection equipment: see section 8.

6.2 Environmental precautions
Do not allow to enter into surface water or drains.
Do not allow to enter into soil/subsoil.

6.3 Methods and material for containment and cleaning up
For containment:
Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).

For cleaning up:
Solvent / Water with tenside additive

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6.4 Reference to other sections
Safe handling: see section 7.
Personal protection equipment: see section 8.
Disposal: see section 13.

6.5 Additional information
Use appropriate container to avoid environmental contamination.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures

Advices on safe handling:
Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Wear personal protection equipment (refer to section 8).

Fire prevent measures:
Highly flammable: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use explosion-proof machinery, apparatus, ventilation facilities, tools etc. Take precautionary measures against static discharges.

Environmental precautions:
Discharge into the environment must be avoided.

Advices on general occupational hygiene
Wash hands before breaks and after work. When using do not eat, drink or smoke. Take off contaminated clothing and wash it before reuse.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions:
Keep container tightly closed in a cool, well-ventilated place. Make sure spills can be contained, e.g. in sump pallets or kerbed areas.

Requirements for storage rooms and vessels:
Material, solvent-resistant. Keep/Store only in original container.

Hints on storage assembly:
Keep away from combustible material. Do not store together with: Substances, Storage class 6.1.
Keep away from food, drink and animal feedingstuffs.

Further information on storage conditions:
Protect from sunlight. Store in a well-ventilated place.

7.3 Specific end use(s)

Recommendation:
2-Component adhesive.
Observe instructions for use.

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SECTION 8: Exposure controls / Personal protection

8.1 Control parameters

8.1.1 Occupational exposure limit values

Limit value type (country)	Substance name	① Long-term occupational exposure limit value ② Short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
IOELV (EU)	methyl methacrylate CAS No.: 80-62-6	① 50 ppm ② 100 ppm
WEL (GB)	methyl methacrylate CAS No.: 80-62-6	① 50 ppm (208 mg/m³) ② 100 ppm (416 mg/m³)
WEL (GB)	Silicium dioxide (nano) CAS No.: 112945-52-5	① 2.4 mg/m³ ⑤ (Silica, amorphous; respirable fraction)
WEL (GB)	Silicium dioxide (nano) CAS No.: 112945-52-5	① 6 mg/m³ ⑤ (Silica, amorphous; inhalable fraction)
IOELV (EU)	Acrylic acid CAS No.: 79-10-7	① 10 ppm (29 mg/m³) ② 20 ppm (59 mg/m³)
WEL (GB)	Acrylic acid CAS No.: 79-10-7	① 10 ppm (29 mg/m³) ② 20 ppm (59 mg/m³) ⑤ (Short-term exposure limit value in relation to a reference period of 1 minute.)

8.1.2 Biological limit values

No data available.

8.1.3 DNEL-/PNEC-values

No data available.

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment. Generation/formation of aerosols: Devices with local exhaust / Technical ventilation of workplace

8.2.2 Personal protection equipment

Eye/face protection:

Eye glasses with side protection (EN 166).

Skin protection:

Tested protective gloves must be worn (EN ISO 374).
Suitable material: IIR (Butyl rubber)
Thickness of the glove material: ≥ 0,5 mm
Breakthrough time (maximum wearing time): ≥ 60 min
The statement is derived from the properties of the main components. The suitability of the glove material for the handling of the product has not been verified. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. Check leak tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. Recommendation: Draw up and observe skin protection programme.

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Respiratory protection:
If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn. Combination filtering device (EN 14387), Filter type A-P2.

Other protection measures:
Wear anti-static footwear and clothing

8.2.3 Environmental exposure controls
No data available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state: liquid
Colour: different, depending on coloration
Odour: like Methyl methacrylate

Safety relevant basic data

Parameter		at	Method	Remark
pH	*not applicable*			
Melting point	*not determined*			
Freezing point	*not determined*			
Initial boiling point and boiling range	100 °C			Methyl methacrylate
Decomposition temperature	*not determined*			
Flash point	9 °C		c.c.	Methyl methacrylate
Evaporation rate	*not determined*			
Auto-ignition temperature	≥ 430 °C			Methyl methacrylate
Upper/lower flammability or explosive limits	2.1 – 12.5 Vol-%			Methyl methacrylate
Vapour pressure	38.7 hPa	20 °C		Methyl methacrylate
Vapour density	*not determined*			
Density	≈ 1 g/ml	20 °C		
Bulk density	*not applicable*			
Water solubility	slightly soluble	20 °C		
Partition coefficient: n-octanol/ water	1.38			Methyl methacrylate
Dynamic viscosity	8,000 – 10,000 mPa*s	20 °C		
Kinematic viscosity	*not determined*			

9.2 Other information
No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity
Highly flammable liquid and vapour.

10.2 Chemical stability
The product is chemically stable under recommended conditions of storage, use and temperature.

10.3 Possibility of hazardous reactions
No hazardous reaction when handled and stored according to provisions. Vapours can form explosive mixtures with air. Can polymerise exothermically if heated, exposed to air, sunlight or by addition or free radical initiators.

10.4 Conditions to avoid
Protect from sunlight. Store in a well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

10.5 Incompatible materials
Oxidising agent

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10.6 Hazardous decomposition products

No known hazardous decomposition products.
In case of fire may be liberated: carbon oxides (COx), gases/vapours, toxic

Further information

No data available.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

CAS No.	Substance name	Toxicological information
38668-48-3	1,1'-(p-Tolylimino)dipropan-2-ol	**LD_{50} oral:** 25 – 200 mg/kg (Rat) OECD 401

Acute oral toxicity:
Based on available data, the classification criteria are not met.

Acute dermal toxicity:
Based on available data, the classification criteria are not met.

Acute inhalation toxicity:
Based on available data, the classification criteria are not met.

Skin corrosion/irritation:
Causes skin irritation.

Serious eye damage/irritation:
Based on available data, the classification criteria are not met.
May cause eye irritation.

Respiratory or skin sensitisation:
May cause an allergic skin reaction.

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:
May cause respiratory irritation.

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.

Additional information:
No data available.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:
Harmful to aquatic life with long lasting effects.

12.2 Persistence and degradability

Biodegradation:
Not readily biodegradable (according to OECD criteria)

12.3 Bioaccumulative potential

Bioconcentration factor (BCF):
There are no data available on the preparation/mixture itself.

Partition coefficient: n-octanol/water:
1.38; Remark: Methyl methacrylate

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Accumulation / Evaluation:
No indication of bioaccumulation potential.

12.4 Mobility in soil
No data available.

12.5 Results of PBT and vPvB assessment
The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6 Other adverse effects
No data available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste treatment options
Appropriate disposal / Product:
Dispose of waste according to applicable legislation. Consult the appropriate local waste disposal expert about waste disposal.

Appropriate disposal / Package:
Completely emptied packages can be recycled.

Other disposal recommendations:
The allocation of waste code numbers / waste names must be carried out in accordance with the European Waste Catalogue (EWC). Collect in closed and suitable containers for disposal. Do not allow to enter into surface water or drains.

13.2 Additional information
Waste for disposal is to be classified and labelled.

SECTION 14: Transport information

Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI-/IATA-DGR)
14.1 UN-No.			
1133	1133	1133	1133
14.2 UN proper shipping name			
Adhesives	Adhesives	Adhesives	Adhesives
14.3 Transport hazard class(es)			
 3	 3	 3	 3
14.4 Packing group			
II	II	II	II
14.5 Environmental hazards			
No	No	No	No

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Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI-/IATA-DGR)
14.6 Special precautions for user			
Special provisions: not determined **Limited Quantity (LQ):** 5 L **Excepted Quantities (EQ):** not determined **Hazard identification number (KemlerNo.):** 33 **Classification code:** F1 **Tunnel restriction code:** (D/E) **Remark:** -	**Special provisions:** not determined **Limited Quantity (LQ):** not determined **Excepted Quantities (EQ):** not determined **Classification code:** F1 **Remark:** -	**Special provisions:** not determined **Limited Quantity (LQ):** not determined **Excepted Quantities (EQ):** not determined **EmS-No.:** F-E, S-D **Remark:** -	**Special provisions:** not determined **Limited Quantity (LQ):** not determined **Excepted Quantities (EQ):** **Remark:** -

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

not determined

Additional information:

Transport as "Excepted Quantity" according to chapter 3.5 ADR/RID
Transport as "limited quantity" according to chapter 3.4 ADR/RID

SECTION 15: Regulatory information

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

15.1.1 EU legislation

Other EU regulations:

Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

15.1.2 National regulations

No data available.

15.2 Chemical Safety Assessment

No data available.

SECTION 16: Other information

16.1 Indication of changes

No data available.

16.2 Abbreviations and acronyms

See overview table at www.euphrac.eu

16.3 Key literature references and sources for data

European Chemicals Agency (ECHA): http://www.echa.europa.eu
ECHA, C&L Inventory: http://echa.europa.eu/information-on-chemicals/cl-inventory-database
ECHA, Registered substances: http://echa.europa.eu/information-on-chemicals/registered-substances
GESTIS (Gefahrstoffinformationssystem der DGUV): http://www.dguv.de/ifa/GESTIS/index.jsp
Hörath Gefährliche Stoffe und Gemische, 8. Auflage, Dr. Angela Schulz
Safety data sheets of the manufacturers

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16.4 Classification for mixtures and used evaluation method according to regulation (EC) No. 1272/2008 [CLP]

Classification according to Regulation (EC) No. 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Skin corrosion/irritation *(Skin Irrit. 2)*	H315: Causes skin irritation.	Calculation
Flammable liquids *(Flam. Liq. 2)*	H225: Highly flammable liquid and vapour.	Assessment
Respiratory or skin sensitisation *(Skin Sens. 1)*	H317: May cause an allergic skin reaction.	Calculation
STOT-single exposure *(STOT SE 3)*	H335: May cause respiratory irritation.	Calculation

16.5 Relevant H- and EUH-phrases

Hazard statements	
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H300	Fatal if swallowed.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
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.
H412	Harmful to aquatic life with long lasting effects.

16.6 Training advice

No data available.

16.7 Additional information

The information in this safety data sheet has been established to our best knowledge and was up-to-date at time of revision. The information is intended to give you advice about the safe handling of the product for storage, processing, transport and disposal. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.

FK-fix K, Komponente B

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

1.1 Product identifier

Trade name/designation:

FK-fix K, Komponente B

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture:

2-Component adhesive.
Reserved for industrial and professional use.

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

FK-Chem GmbH & Co. KG
Günther-Irmscher-Straße 5
73630 Remshalden
GERMANY

Telephone: +49 (0) 7151 209196-0
Telefax: +49 (0) 7151 209169-9
E-mail: kontakt@fk-chem.de
Website: http://www.fk-chem.de
E-mail (competent person): m.kirschbaum@fk-chem.de, Mr. Dr. Martin Kirschbaum

1.4 Emergency phone number

+49 (0) 7151 209196-0 (Only available during office hours.)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Respiratory or skin sensitisation *(Skin Sens. 1B)*	H317: May cause an allergic skin reaction.	Calculation
Hazardous to the aquatic environment *(Aquatic Acute 1)*	Very toxic to aquatic life.	Calculation
Hazardous to the aquatic environment *(Aquatic Chronic 1)*	H410: Very toxic to aquatic life with long lasting effects.	Calculation

2.2 Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms:

GHS07
Exclamation mark

GHS09
Environment

Signal word: Warning

Hazard components for labelling:

dibenzoyl peroxide

Hazard statements for health hazards	
H317	May cause an allergic skin reaction.

Hazard statements for environmental hazards	
H410	Very toxic to aquatic life with long lasting effects.

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Supplemental hazard information (EU): -

Precautionary statements - Prevention	
P235+P410	Keep cool. Protect from sunlight.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statements - Response	
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P361+P364	Take off immediately all contaminated clothing and wash it before reuse.

2.3 Other hazards

Adverse human health effects and symptoms:

May cause eye irritation.

SECTION 3: Composition / information on ingredients

3.2 Mixtures

Ingredients:

Product identifiers	Substance name Classification according to Regulation (EC) No. 1272/2008 [CLP]	Content
CAS No.: 670241-72-2 **EC No.:** 447-010-5	**Nonylbenzoate, branched and linear** Aquatic Chronic 2 H411	10 – 20 Wt %
CAS No.: 94-36-0 **EC No.:** 202-327-6	**dibenzoyl peroxide** Aquatic Acute 1, Aquatic Chronic 1, Eye Irrit. 2, Org. Perox. B, Skin Sens. 1 **Danger** H241-H317-H319-H410 M-factor (acute): 10 M-factor (chronic): 10	5 – 10 Wt %

Full text of H- and EUH-phrases: see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information:

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Remove victim out of the danger area. Take off immediately all contaminated clothing. If unconscious place in recovery position and seek medical advice. Do not leave affected person unattended.

Following inhalation:

Provide fresh air. In case of respiratory tract irritation, consult a physician.

In case of skin contact:

Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention.

After eye contact:

Do not subject to friction. In case of contact with eyes, rinse thoroughly with water. In case of eye irritation consult an ophthalmologist.

After ingestion:

Rinse mouth immediately and drink plenty of water. Get medical advice/attention.

4.2 Most important symptoms and effects, both acute and delayed

May cause an allergic skin reaction. May cause eye irritation.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

FK-fix K, Komponente B

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media:

Water spray jet, alcohol resistant foam, Extinguishing powder, Carbon dioxide (CO2).

5.2 Special hazards arising from the substance or mixture

Oxidizing! May intensify fire; oxidiser. Decompostion takes place from temperatures above: +50 °C. Formation of: Oxygen (O_2); carbon oxides (COx); gases/vapours, toxic. Due to gaseous decomposition products, overpressure can occur in tightly sealed containers. When heated above decomposition temperature, harmful fumes can be generated.

5.3 Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

5.4 Additional information

Move undamaged containers from immediate hazard area if it can be done safely. Use water spray to keep fire-exposed containers cool. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel

Personal precautions:

Avoid contact with skin, eyes and clothes. Keep cool. Protect from sunlight. Remove persons to safety.

Protective equipment:

Wear protective gloves/protective clothing/eye protection/face protection. See section 8.

6.1.2 For emergency responders

Personal protection equipment:

Personal protection equipment: see section 8.

6.2 Environmental precautions

Do not allow to enter into surface water or drains.
Do not allow to enter into soil/subsoil.

6.3 Methods and material for containment and cleaning up

For containment:

Take up mechanically. Alternative: Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).

For cleaning up:

Water (with cleaning agent)

6.4 Reference to other sections

Safe handling: see section 7.
Personal protection equipment: see section 8.
Disposal: see section 13.

6.5 Additional information

Use appropriate container to avoid environmental contamination.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures

Advices on safe handling:

Provide adequate ventilation. Avoid contact with skin, eyes and clothes. Impurities may cause catalytic decomposition. Always close containers tightly after the removal of product. Handle with care - avoid bumps, friction and impact. Do not expose to temperatures exceeding 45 °C. Wear personal protection equipment (refer to section 8).

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Fire prevent measures:
Avoid: impurities. Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Protect from sunlight.

Measures to prevent aerosol and dust generation:
Dust should be exhausted directly at the point of origin.

Environmental precautions:
Discharge into the environment must be avoided.

Advices on general occupational hygiene
When using do not eat, drink or smoke. Wash hands before breaks and after work. Apply skin care products after work.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions:
Keep container tightly closed in a cool, well-ventilated place. Make sure spills can be contained, e.g. in sump pallets or kerbed areas. Peroxides: Observe in addition any national regulations. storage temperature: 5 - 30 °C

Requirements for storage rooms and vessels:
Keep/Store only in original container.

Hints on storage assembly:
Keep away from food, drink and animal feedingstuffs.

7.3 Specific end use(s)

Recommendation:
2-Component adhesive.
Observe instructions for use.

SECTION 8: Exposure controls / Personal protection

8.1 Control parameters

8.1.1 Occupational exposure limit values

Limit value type (country)	Substance name	① Long-term occupational exposure limit value ② Short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
WEL (GB)	dibenzoyl peroxide CAS No.: 94-36-0	① 5 mg/m³

8.1.2 Biological limit values
No data available.

8.1.3 DNEL-/PNEC-values
No data available.

8.2 Exposure controls

8.2.1 Appropriate engineering controls
Technical measures and the application of suitable work processes have priority over personal protection equipment. Provide adequate ventilation as well as local exhaustion at critical locations.

8.2.2 Personal protection equipment

Eye/face protection:
Recommendation: Eye glasses with side protection (EN 166)

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Skin protection:
Tested protective gloves must be worn (EN ISO 374).
Suitable material: IIR (Butyl rubber)
Thickness of the glove material: ≥ 0,5 mm
Breakthrough time (maximum wearing time): ≥ 480 min
The statement is derived from the properties of the main components. The suitability of the glove material for the handling of the product has not been verified. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. Check leak tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. Recommendation: Draw up and observe skin protection programme.

Respiratory protection:
If workplace limits are exceeded, a respiratory protection approved for this particular job must be worn.
Suitable respiratory protection apparatus: Combination filtering device (EN 14387), Filter type A-P2.

Other protection measures:
Wear suitable protective clothing (EN 340).

8.2.3 Environmental exposure controls
No data available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state: solid, pasty
Colour: white
Odour: not determined

Safety relevant basic data

Parameter		at	Method	Remark
pH	*not applicable*			
Melting point	*not applicable*			
Freezing point	*not applicable*			
Initial boiling point and boiling range	*not applicable*			(decomposition)
Decomposition temperature	50 °C			SADT
Flash point	*not determined*			
Evaporation rate	*not determined*			
Auto-ignition temperature	*not applicable*			
Upper/lower flammability or explosive limits	*not determined*			
Vapour pressure	*not determined*			
Vapour density	*not determined*			
Density	1.1 g/cm³	20 °C		
Bulk density	*not applicable*			
Water solubility	*not determined*	20 °C		
Partition coefficient: n-octanol/ water	*not determined*			
Dynamic viscosity	*not determined*			
Kinematic viscosity	*not determined*			

9.2 Other information
No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity
This material is combustible and can be ignited by heat, sparks, flames, or other sources of ignition (e.g. static electricity, pilot lights, or mechanical/electrical equipment).

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10.2 Chemical stability
The product is chemically stable under recommended conditions of storage, use and temperature.

10.3 Possibility of hazardous reactions
No hazardous reaction when handled and stored according to provisions.
Warning! Autocatalytic decomposition reaction: See section 10.6

10.4 Conditions to avoid
Avoid: impurities, UV-radiation/sunlight, Keep away from sources of heat (e.g. hot surfaces), sparks and open flames.

10.5 Incompatible materials
impurities. Impurities may cause catalytic decomposition. Spontaneous decomposition!

10.6 Hazardous decomposition products
Decompostion takes place from temperatures above: +50 °C (Self-accelerating decomposition temperature (SADT)). Formation of: Oxygen (O_2); carbon oxides (COx); gases/vapours, toxic.

Further information
No data available.

SECTION 11: Toxicological information

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

Acute dermal toxicity:
Based on available data, the classification criteria are not met.

Acute inhalation toxicity:
Based on available data, the classification criteria are not met.

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:
May cause an allergic skin reaction.

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.
May cause eye irritation.

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.

Additional information:
No data available.

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SECTION 12: Ecological information

12.1 Toxicity

CAS No.	Substance name	Toxicological information
94-36-0	dibenzoyl peroxide	**LC_{50}:** 0.06 mg/L 4 d (fish) **EC_{50}:** 0.11 mg/L 2 d (crustaceans, Daphnia magna (Big water flea)) **EC_{50}:** 0.06 mg/L 3 d (Algae/water plant) **EC_{50}:** 35 mg/L (Bakteria)

Aquatic toxicity:
Very toxic to aquatic life with long lasting effects.

12.2 Persistence and degradability

Biodegradation:
Not readily biodegradable (according to OECD criteria)

12.3 Bioaccumulative potential

Bioconcentration factor (BCF):
There are no data available on the preparation/mixture itself.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

CAS No.	Substance name	Results of PBT and vPvB assessment
94-36-0	dibenzoyl peroxide	—

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6 Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste treatment options

Appropriate disposal / Product:
Dispose of waste according to applicable legislation. Consult the appropriate local waste disposal expert about waste disposal.

Appropriate disposal / Package:
Completely emptied packages can be recycled.

Other disposal recommendations:
The allocation of waste code numbers / waste names must be carried out in accordance with the European Waste Catalogue (EWC). Collect in closed and suitable containers for disposal. Do not allow to enter into surface water or drains.

13.2 Additional information

Waste for disposal is to be classified and labelled.

SECTION 14: Transport information

Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI-/IATA-DGR)
14.1 UN-No.			
3077	3077	3077	3077

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Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI-/IATA-DGR)
14.2 UN proper shipping name			
ENVIRONMENTALLY HAZARDOUS SUB-STANCE, SOLID, N.O.S. (dibenzoyl peroxide)	ENVIRONMENTALLY HAZARDOUS SUB-STANCE, SOLID, N.O.S. (dibenzoyl peroxide)	ENVIRONMENTALLY HAZARDOUS SUB-STANCE, SOLID, N.O.S. (dibenzoyl peroxide)	ENVIRONMENTALLY HAZARDOUS SUB-STANCE, SOLID, N.O.S. (dibenzoyl peroxide)
14.3 Transport hazard class(es)			
 9	 9	 9	 9
14.4 Packing group			
III	III	III	III
14.5 Environmental hazards			
		 MARINE POLLUTANT	
14.6 Special precautions for user			
Special provisions: not determined **Limited Quantity (LQ):** 5 kg **Excepted Quantities (EQ):** not determined **Hazard identification number (KemlerNo.):** 90 **Classification code:** M7 **Tunnel restriction code:** (E) **Remark:** -	**Special provisions:** not determined **Limited Quantity (LQ):** not determined **Excepted Quantities (EQ):** not determined **Classification code:** M7 **Remark:** -	**Special provisions:** not determined **Limited Quantity (LQ):** not determined **Excepted Quantities (EQ):** not determined **EmS-No.:** F-A, S-F **Remark:** -	**Special provisions:** not determined **Limited Quantity (LQ):** not determined **Excepted Quantities (EQ):** not determined **Remark:** -

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

not relevant

Additional information:

Transport as "Limited Quantity" according to chapter 3.4 ADR/RID.
Transport as "Excepted Quantity" according to chapter 3.5 ADR/RID.

SECTION 15: Regulatory information

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

15.1.1 EU legislation

Other EU regulations:

Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

15.1.2 National regulations
No data available.

15.2 Chemical Safety Assessment
Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

16.1 Indication of changes
No data available.

16.2 Abbreviations and acronyms
See overview table at www.euphrac.eu

16.3 Key literature references and sources for data
European Chemicals Agency (ECHA): http://www.echa.europa.eu
ECHA, C&L Inventory: http://echa.europa.eu/information-on-chemicals/cl-inventory-database
ECHA, Registered substances: http://echa.europa.eu/information-on-chemicals/registered-substances
GESTIS (Gefahrstoffinformationssystem der DGUV): http://www.dguv.de/ifa/GESTIS/index.jsp
Hörath Gefährliche Stoffe und Gemische, 8. Auflage, Dr. Angela Schulz
Safety data sheets of the manufacturers

16.4 Classification for mixtures and used evaluation method according to regulation (EC) No. 1272/2008 [CLP]
Classification according to Regulation (EC) No. 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Respiratory or skin sensitisation *(Skin Sens. 1B)*	H317: May cause an allergic skin reaction.	Calculation
Hazardous to the aquatic environment *(Aquatic Acute 1)*	Very toxic to aquatic life.	Calculation
Hazardous to the aquatic environment *(Aquatic Chronic 1)*	H410: Very toxic to aquatic life with long lasting effects.	Calculation

16.5 Relevant H- and EUH-phrases

Hazard statements	
H241	Heating may cause a fire or explosion.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

16.6 Training advice
No data available.

16.7 Additional information
The information in this safety data sheet has been established to our best knowledge and was up-to-date at time of revision. The information is intended to give you advice about the safe handling of the product for storage, processing, transport and disposal. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.