

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 25.09.2018

Version number 6

Revision: 25.09.2018

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

- **1.1 Product identifier**
- **Trade name:** **KEMPEROL Roof patch**
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
 - Identified use: intended for professional use only!
- **Application of the substance / the mixture** Waterproofing
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:** KEMPER SYSTEM GmbH & Co. KG
Holländische Strasse 32-36
34246 Vellmar
Deutschland / Germany
Telefon: +49 (0)561 / 8295-0
Telefax: +49 (0)561 / 8295-5110
E-Mail: MSDS@KEMPER-SYSTEM.COM
- **Further information obtainable from:** research & development
- **1.4 Emergency telephone number:** Giftinformationszentrum der Länder Rheinland-Pfalz und Hessen
Langenbeckstraße 1; Gebäude 601; 55131 Mainz
Tel. Nr.: +49 (0)6131 / 19 24 0
Universitätsmedizin der Johannes Gutenberg-Universität Mainz

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
Eye Irrit. 2 H319 Causes serious eye irritation.
Aquatic Chronic 3 H412 Harmful 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 CLP regulation.
- **Hazard pictograms**



GHS07
- **Signal word** Warning
- **Hazard statements**
 - H319 Causes serious eye irritation.
 - H412 Harmful to aquatic life with long lasting effects.
- **Precautionary statements**
 - P264 Wash thoroughly after handling.
 - P273 Avoid release to the environment.
 - P280 Wear eye protection / face protection.
 - P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 - P337+P313 If eye irritation persists: Get medical advice/attention.
 - P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Additional information:** EUH208 Contains Dioctyltinbis(acetylacetonate), benzotriazole derivatives, bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate. 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 Chemical characterisation: Mixtures**
- **Description:** Mixture: consisting of the following components.

- Dangerous components:

CAS: 2530-83-8 EINECS: 219-784-2 Reg.nr.: 01-2119513212-58	[3-(2,3-epoxypropoxy)propyl]trimethoxysilane Eye Dam. 1, H318	0.5-2.5%
CAS: 2768-02-7 EINECS: 220-449-8 Reg.nr.: 01-2119513215-52	trimethoxyvinylsilane Flam. Liq. 3, H226; Acute Tox. 4, H332	0.5-2.5%
CAS: 54068-28-9 ELINCS: 483-270-6 Reg.nr.: 01-0000020199-67	Dioctyltinbis(acetylacetonate) STOT SE 2, H371; Skin Sens. 1, H317	0.5-2.5%

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ELINCS: 400-830-7 Index number: 607-176-00-3 Reg.nr.: 01-0000015075-76	benzotriazole derivatives Aquatic Chronic 2, H411; Skin Sens. 1, H317	<0.5%
EC number: 915-687-0 Reg.nr.: 01-2119491304-40	bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Skin Sens. 1, H317	<0.5%

- **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:

Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Do not leave affected persons unattended.

Personal protection for the First Aider.

Take affected persons out of danger area and lay down.

- After inhalation:

In case of unconsciousness place patient stably in side position for transportation.

Supply fresh air; consult doctor in case of complaints.

- After skin contact:

Immediately wash with water and soap and rinse thoroughly.

Seek medical treatment in case of complaints.

- After eye contact:

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

Protect unharmed eye.

- After swallowing:

If symptoms persist 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, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Use fire extinguishing methods suitable to surrounding conditions.

- 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.

- 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.

Avoid contact with skin and eyes

Ensure adequate ventilation

- 6.2 Environmental precautions:

Inform respective authorities in case of seepage into water course or sewage system.

Prevent from spreading (e.g. by damming-in or oil barriers).

Do not allow to enter sewers/ surface or ground water.

- 6.3 Methods and material for containment and cleaning up:

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

Dispose contaminated material as waste according to item 13.

Do not flush with water or aqueous cleansing agents

- 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 disposal information.

SECTION 7: Handling and storage

- 7.1 Precautions for safe handling

Store in cool, dry place in tightly closed receptacles.

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

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- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:** Protect from frost.
Store in dry conditions.
Keep container tightly sealed.
Recommended storage temperature: 5-30 °C
- **Storage class:** 12
- **7.3 Specific end use(s):** No further relevant information available.

SECTION 8: Exposure controls/personal protection

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

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

67-56-1 methanol

WEL	Short-term value: 333 mg/m ³ , 250 ppm
	Long-term value: 266 mg/m ³ , 200 ppm
Sk	

- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:** The usual precautionary measures are to be adhered to when handling chemicals.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
- **Respiratory protection:** When used properly and under normal conditions, breathing protection is not required.
Use suitable respiratory protective device in case of insufficient ventilation.
Filter A/P2
Respiratory protection - Gas filters and combination filters according to EN 141
Provide thorough ventilation during and after processing / curing as methanol is split off during curing.

- **Protection of hands:**  Protective gloves

Check protective gloves prior to each use for their proper condition.
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.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
After use of gloves apply skin-cleaning agents and skin cosmetics.

- **Material of gloves** Recommended materials:
Butyl rubber, BR
Recommended thickness of the material: ≥ 0.5 mm
Penetration time (min.): < 480
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.
- **Penetration time of glove material** The determined penetration times according to EN 374 part III are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.

- **As protection from splashes gloves made of the following materials are suitable:** Nitrile rubber, NBR
Recommended thickness of the material: ≥ 0.1 mm
Penetration time (min.): < 10

- **Eye protection:**  Tightly sealed goggles

Protective goggles and facial protection - Classification according to EN 166

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Trade name: **KEMPEROL Roof patch**- **Body protection:** protective clothing (EN 13034)

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SECTION 9: Physical and chemical properties

- 9.1 Information on basic physical and chemical properties

- General Information

- Appearance:

Form: Fluid
 Colour: According to product specification
 - Odour: Characteristic
 - Odour threshold: Not determined.

- pH-value: Not determined.

- Change in condition

Melting point/freezing point: Undetermined.
 Initial boiling point and boiling range: Undetermined.

- Flash point: 88 °C

- Flammability (solid, gas): Not applicable.

- Decomposition temperature: Not determined.

- Auto-ignition temperature: Product is not selfigniting.

- Explosive properties: Product does not present an explosion hazard.

- Explosion limits:

Lower: Not determined.
 Upper: Not determined.

- Density at 20 °C: 1.3 g/cm³

- Relative density: Not determined.

- Vapour density: Not determined.

- Evaporation rate: Not determined.

- Solubility in / Miscibility with water:

Not miscible or difficult to mix.

- Partition coefficient: n-octanol/water: Not determined.

- Viscosity:

Dynamic at 20 °C: 5,500 mPas
 Kinematic: Not determined.

- Solvent content:

VOC (EC) 0.30 %

- 9.2 Other information: No further relevant information available.

SECTION 10: Stability and reactivity

- 10.1 Reactivity: No further relevant information available.

- 10.2 Chemical stability

- Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

- 10.3 Possibility of hazardous reactions

No dangerous reactions known.

- 10.4 Conditions to avoid

No further relevant information available.

- 10.5 Incompatible materials:

No further relevant information available.

- 10.6 Hazardous decomposition products:

Hydrolysed to methanol

SECTION 11: Toxicological information

- 11.1 Information on toxicological effects

- Acute toxicity

Based on available data, the classification criteria are not met.

- LD/LC50 values relevant for classification:

2530-83-8 [3-(2,3-epoxypropoxy)propyl]trimethoxysilane

Oral LD50 8,025 mg/kg (rat)

Dermal LD50 4,250 mg/kg (rat)

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2768-02-7 trimethoxyvinylsilane

Oral	LD50	7,340-7,460 mg/kg (rat) (OECD 401)
Dermal	LD50	3,460-4,000 mg/kg (rabbit) (OECD 402)
Inhalative	LC50/4 h	16.79 mg/l (rat)

54068-28-9 Dioctyltinbis(acetylacetonate)

Oral	LD50	2,500 mg/kg (rat) (Acute Toxic Class Method)
Dermal	LD50	>2,000 mg/kg (rat) (Akute dermale Toxizität)

benzotriazole derivatives

Oral	LD50	>5,000 mg/kg (rat) (OECD 401)
Dermal	LD50	>2,000 mg/kg (rat) (OECD 402)

bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate

Oral	LD50	>2,300 mg/kg (rat) (IUCLID)
Inhalative	NOAEC	6.3 mg/l (daphnia) ((21 day))

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **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.

SECTION 12: Ecological information**- 12.1 Toxicity****- Aquatic toxicity:****2530-83-8 [3-(2,3-epoxypropoxy)propyl]trimethoxysilane**

LC50	55 mg/l (Cyprinus Carpio) (96h)
EC50	119 mg/l (anabaena flos-aquae) (7d)
EC10	40 mg/l (anabaena flos-aquae) (7d)
LC 50	~324 mg/l (simocephalus vetulus) (48h)
LOEC	>100 mg/l (Daphnia magna) (21d; OECD 211)
NOEC	<50 mg/l (anabaena flos-aquae) (7d)
	≥100 mg/l (Daphnia magna) (21d; OECD 211)

2768-02-7 trimethoxyvinylsilane

NOEC	28 mg/kg (Daphnia magna) (21d)
EC50	>100 mg/l (Daphnia magna) (OECD 202)
EC10	1.1 mg/l (Pseudomonas putida) (3h; acute)
	32 mg/l (Selenastrum capricornutum) (7d; acute)
EC50	>100 mg/l (DESMODESMUS SUBSPICATUS) (72h; Growth Inhibition Test; acute)
	>100 mg/l (daphnia) (48h; Watery twigs acute)
EC50	210 mg/l (Selenastrum capricornutum) (7d; static acute)
LC 50	191 mg/l (Oncorhynchus mykiss (Regenbogenforelle)) (96h acute)
LC50	>100 mg/l (Brachydanio rerio (Ricefish)) (96h; static acute)
NOEC	25 mg/l (Selenastrum capricornutum) (7d; acute)

54068-28-9 Dioctyltinbis(acetylacetonate)

EC50	58.6 mg/l (Daphnia magna) (48h; static)
EC50	300 mg/l (Scenedesmus subspicatus) (24h; static)
LC 50	86 mg/l (Oncorhynchus mykiss (Regenbogenforelle)) (96h, static)

benzotriazole derivatives

NOEC	100 mg/kg (Eisenia fetida/foetida) (56d; OECD 222)
LC50/96 h	2.8 mg/l (Oncorhynchus mykiss (Regenbogenforelle)) (OECD 203; ISO 7346; 84/449/EWG,C1 stat.)
EC50	>1,000 mg/l (Belebschlamm) (3h; OECD 209)
EC50	4 mg/l (Daphnia magna) (48h;)

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EC10	10 mg/l (Pseudokirchneriella subcapitata) (72h; OECD 201)
EC50	>100 mg/l (Pseudokirchneriella subcapitata) (72h; OECD 201)
NOEC	0.78 mg/l (Daphnia magna) (21d; OECD 202, Part 2)
bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	
LC50/96 h (static)	0.97 mg/l (LEPOMUS MACROCHIRUS) (OECD 203; IUCLID)
EC50	0.22 mg/l (ALGAE) ((72 hr))
EC50	20 mg/l (Daphnia magna) (OECD 202/1; IUCLID)
- 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.
- Additional ecological information:	
- General notes:	Must not reach sewage water or drainage ditch undiluted or unneutralised. Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water Do not allow product to reach ground water, water course or sewage system. Danger to drinking water if even small quantities leak into the ground.
- 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 not be disposed together with household garbage. Do not allow product to reach sewage system. Disposal according to official regulations
- | | |
|----------------------------|--|
| - European waste catalogue | |
| 08 04 09* | waste adhesives and sealants containing organic solvents or other hazardous substances |
| 08 04 10 | waste adhesives and sealants other than those mentioned in 08 04 09 |
- Uncleaned packaging:
 - Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

- | | |
|---|-----------------|
| - 14.1 UN-Number | Void |
| - ADR, ADN, IMDG, IATA | Void |
| - 14.2 UN proper shipping name | Void |
| - ADR, ADN, IMDG, IATA | Void |
| - 14.3 Transport hazard class(es) | |
| - ADR, ADN, IMDG, IATA | |
| - Class | Void |
| - 14.4 Packing group | |
| - ADR, IMDG, IATA | Void |
| - 14.5 Environmental hazards: | Not applicable. |
| - 14.6 Special precautions for user | Not applicable. |
| - 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code | Not applicable. |
| - UN "Model Regulation": | Void |

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.
- REGULATION (EC) No 1907/2006 ANNEX XVII: Conditions of restriction: 3, 40
- National regulations:
- Information about limitation of use: Employment restrictions concerning juveniles must be observed.

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- 15.2 Chemical safety assessment: Employment restrictions concerning women of child-bearing age must be observed.
 Employment restrictions concerning pregnant and lactating women must be observed.
 A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Relevant phrases

- H226 Flammable liquid and vapour.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H332 Harmful if inhaled.
- H371 May cause damage to organs.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.
- H411 Toxic to aquatic life with long lasting effects.

- Department issuing SDS:

research & development

- Contact:

research & development

- Abbreviations and acronyms:

- 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 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)
- VOC: Volatile Organic Compounds (USA, EU)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Flam. Liq. 3: Flammable liquids – Category 3
- Acute Tox. 4: Acute toxicity – Category 4
- Eye Dam. 1: Serious eye damage/eye irritation – Category 1
- Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
- Skin Sens. 1: Skin sensitisation – Category 1
- STOT SE 2: Specific target organ toxicity (single exposure) – Category 2
- Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
- Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
- Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
- Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

- Sources

- Internet:
- www.echa.com
- www.baua.de
- www.gestis.itrust.de (IFA: Institute für Occupational Safety and Health of the German Social Accident Insurance)

- * Data compared to the previous version altered.