Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 01.04.2022 Version number 12 (replaces version 11) Revision: 01.04.2022

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

- **1.1 Product identifier**
- **Trade name:** **KEMPERTEC R Primer (B)**
- **UFI:** 5N37-X0N8-U00M-UAR9
- **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** Coating
- **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**

Acute Tox. 4	H332 Harmful if inhaled.
Skin Irrit. 2	H315 Causes skin irritation.
Eye Irrit. 2	H319 Causes serious eye irritation.
Resp. Sens. 1	H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin Sens. 1	H317 May cause an allergic skin reaction.
Carc. 2	H351 Suspected of causing cancer.
STOT SE 3	H335 May cause respiratory irritation.
STOT RE 2	H373 May cause damage to organs through prolonged or repeated exposure.

- **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 GHS08

- **Signal word** Danger
- **Hazard-determining components of labelling:**

Isocyanic acid, polymethylenepolyphenylene ester
Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate
4,4'-methylenediphenyl diisocyanate

- **Hazard statements**

H332 Harmful if inhaled.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure.

- **Precautionary statements**

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P284	[In case of inadequate ventilation] wear respiratory 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.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Additional information:**

EUH204 Contains isocyanates. May produce an allergic reaction.
As from 24 August 2023 adequate training is required before industrial or professional use.

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- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.2 Mixtures**
- **Description:** Mixture: consisting of the following components.

- **Dangerous components:**

CAS: 9016-87-9 EC number: 618-498-9	Isocyanic acid, polymethylenepolyphenylene ester Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	50-100%
EC number: 905-806-4	Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	≥12.5-<20%
CAS: 101-68-8 EINECS: 202-966-0	4,4'-methylenediphenyl diisocyanate Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335, EUH204 Specific concentration limits: Eye Irrit. 2; H319: C ≥ 5 % Skin Irrit. 2; H315: C ≥ 5 % Resp. Sens. 1; H334: C ≥ 0.1 % STOT SE 3; H335: C ≥ 5 %	≥5-<10%

- **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.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture** Formation of toxic gases is possible during heating or in case of fire.
Nitrogen oxides (NOx)
Carbon monoxide (CO)
- **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.

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SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Avoid contact with skin and eyes
- **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.
- **Information about fire - and explosion protection:** Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **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:** Recommended storage temperature: 5-30 °C
Protect from frost.
Store in dry conditions.
Keep container tightly sealed.
- **Storage class:** 10
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:**	
9016-87-9 Isocyanic acid, polymethylenepolyphenylene ester	
OEL	Short-term value: 0.07 mg/m³ Long-term value: 0.02 mg/m³ as -NCO; Sens.
101-68-8 4,4'-methylenediphenyl diisocyanate	
OEL	Long-term value: 0.005 ppm as -NCO; Sens

- **Regulatory information** OEL: 2021 CoP for the Safety, Health and Welfare at Work

- **DNELs**		
101-68-8 4,4'-methylenediphenyl diisocyanate		
Inhalative	Long term - systemic effects	0.05 mg/m³ (Worker) (GESTIS DNEL List (June 2018))

- **8.2 Exposure controls**
- **Appropriate engineering controls** No further data; see item 7.
- **Individual protection measures, such as personal protective equipment**
- **General protective and hygienic measures:** The usual precautionary measures 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.

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Use suitable respiratory protective device in case of insufficient ventilation.
Filter A/P2
Respiratory protection - Gas filters and combination filters according to (DIN EN 141)

- **Hand protection**

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 16523-1:2015 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/face protection**

Tightly sealed goggles

Protective goggles and facial protection - Classification according to EN 166

- **Body protection:** protective clothing (EN 13034)

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**	
- **General Information**	
- **Colour:**	Brown
- **Odour:**	slight musty
- **Odour threshold:**	Not determined.
- **Melting point/freezing point:**	Undetermined.
- **Boiling point or initial boiling point and boiling range**	Undetermined.
- **Flammability**	Not applicable.
- **Lower and upper explosion limit**	
- **Lower:**	Not determined.
- **Upper:**	Not determined.
- **Flash point:**	220 °C
- **Decomposition temperature:**	Not determined.
- **pH**	Not determined.
- **Viscosity:**	
- **Kinematic viscosity at 20 °C**	200 mm²/s
- **Dynamic:**	Not determined.
- **Solubility**	
- **water:**	Not miscible or difficult to mix.
- **Partition coefficient n-octanol/water (log value)**	Not determined.
- **Density and/or relative density**	
- **Density at 20 °C:**	1.23 g/cm³
- **Relative density**	Not determined.
- **Vapour density**	Not determined.
- **9.2 Other information**	
- **Appearance:**	
- **Form:**	Fluid

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- **Important information on protection of health and environment, and on safety.**	
- **Auto-ignition temperature:**	Product is not selfigniting.
- **Explosive properties:**	Product does not present an explosion hazard.
- **Solvent separation test:**	
- **VOC (EC)**	3.50 %
- **Change in condition**	
- **Evaporation rate**	Not determined.

- **Information with regard to physical hazard classes**
- **Explosives**

Void

- **Flammable gases**

Void

- **Aerosols**

Void

- **Oxidising gases**

Void

- **Gases under pressure**

Void

- **Flammable liquids**

Void

- **Flammable solids**

Void

- **Self-reactive substances and mixtures**

Void

- **Pyrophoric liquids**

Void

- **Pyrophoric solids**

Void

- **Self-heating substances and mixtures**

Void

- **Substances and mixtures, which emit flammable gases in contact with water**

Void

- **Oxidising liquids**

Void

- **Oxidising solids**

Void

- **Organic peroxides**

Void

- **Corrosive to metals**

Void

- **Desensitised explosives**

Void

SECTION 10: Stability and reactivity

- **10.1 Reactivity**	No further relevant information available.
- **10.2 Chemical stability**	
- **Thermal decomposition / conditions to be avoided:**	No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions**	Reacts with alcohols, amines, aqueous acids and alkalis. Reacts with water. Reacts with humid air. Exothermic reaction.
- **10.4 Conditions to avoid**	No further relevant information available.
- **10.5 Incompatible materials:**	No further relevant information available.

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- **10.6 Hazardous decomposition products:** Hydrocarbons
  Carbon monoxide and carbon dioxide
  Nitrogen oxides (NOx)

SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Harmful if inhaled.

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

9016-87-9 Isocyanic acid, polymethylenepolyphenylene ester		
Oral	LD50	>10,000 mg/kg (rat) (OECD 401)
Dermal	LD50	>9,400 mg/kg (rabbit) (OECD 402)
Inhalative	LC50/4 h	11 mg/l (ATE)
Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate		
Oral	LD50	>2,000 mg/kg (rat)
Dermal	LD50	>9,400 mg/kg (rat) (OECD 402)
Inhalative	LC50/4 h	11 mg/l (ATE)
101-68-8 4,4'-methylenediphenyl diisocyanate		
Oral	LD50	>2,000 mg/kg (rat) (84/449/EWG, B.1)
Dermal	LD50	>9,400 mg/kg (rab) (OECD 402)
Inhalative	LC50/4 h	1.5 mg/l (ATE)

- **Skin corrosion/irritation** Causes skin irritation.
- **Serious eye damage/irritation** Causes serious eye irritation.
- **Respiratory or skin sensitisation** May cause allergy or asthma symptoms or breathing difficulties if inhaled.
  May cause an allergic skin reaction.
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Suspected of causing cancer.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** May cause respiratory irritation.
- **STOT-repeated exposure** May cause damage to organs through prolonged or repeated exposure.
- **Aspiration hazard** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**
- **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)** Carc. 2
- **11.2 Information on other hazards**

- **Endocrine disrupting properties**

None of the ingredients is listed.

SECTION 12: Ecological information

- **12.1 Toxicity**

- **Aquatic toxicity:**

9016-87-9 Isocyanic acid, polymethylenepolyphenylene ester	
LC50/96 h	>1,000 mg/l (Brachydanio rerio (Zebrabärbling)) (OECD 203)
EC50	>1,640 mg/l (DESMODESMUS SUBSPICATUS) (72h; OECD 201)
EC50	>100 mg/l (Belebtschlamm) (3h; OECD 209)
EC50	>1,000 mg/l (Daphnia magna) (24h; OECD 202)
EC50	>1,000 mg/l (Eisenia fetida/foetida) (336h; OECD 207)
NOEC	≥10 mg/l (Daphnia magna) (21d, OECD 211)
Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate	
NOEC	≥10 mg/kg (Daphnia magna) (21d; OECD 211)
LC50/96 h	>1,000 mg/l (Brachydanio rerio (Zebrabärbling)) (OECD 203)
EC50	>1,000 mg/l (Eisenia fetida/foetida) (OECD 207)
EC50	>1,640 mg/l (Scenedesmus subspicatus) (72h; OECD 201)
EC50	>100 mg/l (Belebtschlamm) (3h; OECD 209)
EC50	>1,000 mg/l (Daphnia magna) (24h; OECD 202)
101-68-8 4,4'-methylenediphenyl diisocyanate	
NOEC	≥1,000 mg/kg (Eisenia fetida/foetida) (336h; OECD 207)

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EC50	>1,000 mg/l (Daphnia magna) (24h; OECD 202)
NOEC	≥10 mg/l (Daphnia magna) (21d; OECD 211)

- **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.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects**
- **Additional ecological information:**
- **General notes:** Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

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 05 01*	waste isocyanates
15 01 10*	packaging containing residues of or contaminated by hazardous substances
17 02 03	plastic

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

SECTION 14: Transport information

- **14.1 UN number or ID number**	
- **ADR, ADN, IMDG, IATA**	Void
- **14.2 UN proper shipping name**	
- **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:**	
- **Marine pollutant:**	No
- **14.6 Special precautions for user**	Not applicable.
- **14.7 Maritime transport in bulk according to IMO instruments**	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, 56a, 74

- **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**
None of the ingredients is listed.

- **REGULATION (EU) 2019/1148**

- **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**
None of the ingredients is listed.

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- **Annex II - REPORTABLE EXPLOSIVES PRECURSORS**

None of the ingredients is listed.

- **Regulation (EC) No 273/2004 on drug precursors**

None of the ingredients is listed.

- **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**

None of the ingredients is listed.

- **15.2 Chemical safety assessment:** 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.
The safety data sheet issued is also compliant with the regulation Annex I of Regulation (EU) no. 453/2010 and Annex II of Regulation (EU) no. 2020/878.

- **Relevant phrases**
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure.
EUH204 Contains isocyanates. May produce an allergic reaction.
- **Department issuing SDS:** research & development
- **Contact:** research & development
- **Date of previous version:** 16.02.2022
- **Version number of previous version:** 11
- **Abbreviations and acronyms:**
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
DNEL: Derived No-Effect Level (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Resp. Sens. 1: Respiratory sensitisation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
Carc. 2: Carcinogenicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
- **Sources**
- www.echa.europa.eu
- www.baua.de
IFA: Institute für Occupational Safety and Health of the German Social Accident Insurance:
- www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index.jsp
- www.dguv.de/ifa/gestis/gestis-dnel-liste
- *** Data compared to the previous version altered.**