

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 15.03.2023

Version number 2 (replaces version 1)


Revision: 15.03.2023

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

- 1.1 Product identifier
- Trade name: **KEMPERTEC Rapid SF Primer (B)**
- UFI: GEHA-H00C-6009-TWNS
- 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: Primer
- 1.3 Details of the supplier of the safety data sheet
- Manufacturer/Supplier:
 - KEMPER SYSTEM LTD
 - Kemper House
 - 30 Kingsland Grange
 - Warrington
 - WA1 4RW
 - www.kempersystem.co.uk
 - enquiries@kempersystem.co.uk
 - phone: +44 (0)1925 445532
 - fax: +44 (0)1925 575096
- Further information obtainable from: research & development
- 1.4 Emergency telephone number:
 - Medical Emergency information in case of poisoning:
 - Poison Information Center Mainz - 24 h - Phone: +49 (0) 6131 19240
 - (advisory service in German or English language)

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 Sens. 1 H317 May cause an allergic skin reaction.
 - STOT SE 3 H335 May cause respiratory irritation.
- 2.2 Label elements
- Labelling according to Regulation (EC) No 1272/2008
 - The product is classified and labelled according to the GB CLP regulation.
- Hazard pictograms



GHS07
- Signal word: Warning
- Hazard-determining components of labelling:
 - Hexamethylene diisocyanate, oligomers
 - hexamethylene-di-isocyanate
- Hazard statements
 - H332 Harmful if inhaled.
 - H317 May cause an allergic skin reaction.
 - H335 May cause respiratory irritation.
- Precautionary statements
 - P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
 - P280 Wear protective gloves.
 - P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 - P312 Call a POISON CENTER/doctor if you feel unwell.
 - 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.
- 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: 28182-81-2	Hexamethylene diisocyanate, oligomers	50-100%
NLP: 500-060-2	Acute Tox. 4, H332; Skin Sens. 1, H317; STOT SE 3, H335	
Reg.nr.: 01-2119488934-20		

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CAS: 822-06-0 EINECS: 212-485-8 Index number: 615-011-00-1 Reg.nr.: 01-2119457571-37	hexamethylene-di-isocyanate Acute Tox. 3, H331; Resp. Sens. 1, H334; Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335, EUH204 Specific concentration limits: Resp. Sens. 1; H334: C ≥ 0.5 % Skin Sens. 1; H317: C ≥ 0.5 %	<0.1%
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- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:** 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.
If symptoms persist consult doctor.
- **After swallowing:**
- **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 (NO_x)
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.

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.
Dilute with plenty of water.
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.
- **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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- **Information about fire - and explosion protection:** Keep ignition sources away - Do not smoke.
- **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.
Keep container tightly sealed.
Store in dry conditions.
Recommended storage temperature: 5-30 °C
- **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:**

822-06-0 hexamethylene-di-isocyanate

WEL	Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO
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- **Regulatory information** WEL: EH40/2020

- **Ingredients with biological limit values:**

822-06-0 hexamethylene-di-isocyanate

BMGV	1 µmol creatinine/mol Medium: urine Sampling time: At the end of the period of exposure Parameter: isocyanate-derived diamine
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- **Additional information:** The lists valid during the making were used as basis.

- 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:** In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Not necessary if room is well-ventilated.
Use suitable respiratory protective device in case of insufficient ventilation.
Wear suitable respirators during spray applications.
Filter A/P2

Respiratory protection - Gas filters and combination filters according to (DIN EN 141)

- **Hand protection**



Protective gloves

Only use chemical-protective gloves with CE-labelling of category III.
Check protective gloves prior to each use for their proper condition.
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.

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- **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

- **Body protection:**

Protective goggles and facial protection - Classification according to EN 166 protective clothing (EN 13034)

SECTION 9: Physical and chemical properties

- 9.1 Information on basic physical and chemical properties

- General Information	
- Physical state	Fluid
- Colour:	Colourless
- Odour:	Light
- 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:	203 °C
- Decomposition temperature:	Not determined.
- pH	Mixture reacts violently with water. Not determined.
- Viscosity:	
- Kinematic viscosity at 20 °C	833 mm ² /s
- Dynamic:	Not determined.
- Solubility	
- water:	Hydrolised.
- Partition coefficient n-octanol/water (log value)	Not determined.
- Density and/or relative density	
- Density at 20 °C:	1.15 g/cm ³
- Relative density	Not determined.
- Vapour density	Not determined.

- 9.2 Other information

- Appearance:	
- Form:	Fluid
- 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)	0.00 %
- 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

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- 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.
- 10.4 Conditions to avoid	No further relevant information available.
- 10.5 Incompatible materials:	Amines, acids, alkalis, strong oxidants, alcohols
- 10.6 Hazardous decomposition products:	No dangerous decomposition products known.

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:

28182-81-2 Hexamethylene diisocyanate, oligomers

Oral	LD50	>2,500 mg/kg (rat) (OECD 423; female)
Dermal	LD50	>2,000 mg/kg (rat) (OECD 402) >2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	0.39 mg/l (rat) ((dust & fork) OCED 403; Pauluhn, J. (2008).)
	ATEmix	1.5 mg/l (rat) (*2)

822-06-0 hexamethylene-di-isocyanate

Oral	LD50	959 mg/kg (rat) (OECD 401)
Dermal	LD50	>7,000 mg/kg (rat) (OECD 402)
Inhalative	LC50/4 h	1.5 mg/l (rat) (OECD 403)
	ATEmix	1.5 mg/l (rat) (*2)

- 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	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.
- 11.2 Information on other hazards	

- Endocrine disrupting properties

None of the ingredients is listed.

SECTION 12: Ecological information

- 12.1 Toxicity

- Aquatic toxicity:

28182-81-2 Hexamethylene diisocyanate, oligomers

ErC50	>1,000 mg/l (DESMODESMUS SUBSPICATUS) (0-72h static / EU C.3)
	>199 mg/l (Scenedesmus subspicatus) (72h; guideline 67/548/EWG annex V; C3)
EC50	>100 mg/l (DESMODESMUS SUBSPICATUS) (72; OECD 201)

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EC50	>100 mg/l (Daphnia magna) (48h)
EC50	>10,000 mg/l (Belebtschlamm) (3h, EG/RL 88-302-EEC)
EC50	>1,000 mg/l (Scenedesmus subspicatus) (72h / DIN 38412)
LC 50	127 mg/l (daphnia) (48h static / EU C.2)
LC50	8.9 mg/l (Brachydanio rerio (Ricefish))
LC50	>100 mg/l (Danio rerio (Zebraabrling)) (96h)

822-06-0 hexamethylene-di-isocyanate

ErC50	>77.4 mg/l (DESMODESMUS SUBSPICATUS)
LC50/96 h	22 mg/l (Brachydanio rerio (Ricefish))
NOEC	11.7 mg/l (DESMODESMUS SUBSPICATUS) (72 h - EU method C.3)
EC0	>89.1 mg/l (daphnia) (48 hour - EU C.2)
EC50	842 mg/l (Bacteria) (3h-static - OECD 209)
LOEC	12.6 mg/l (DESMODESMUS SUBSPICATUS) (72 h - EU method C.3)

- **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:** 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.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

- 14.1 UN number or ID number	Void
- ADR, IMDG, IATA	Void
- 14.2 UN proper shipping name	Void
- ADR, IMDG, IATA	Void
- 14.3 Transport hazard class(es)	Void
- ADR, ADN, IMDG, IATA	Void
- Class	Void
- 14.4 Packing group	Void
- ADR, IMDG, IATA	Void
- 14.5 Environmental hazards:	Not applicable.
- 14.6 Special precautions for user	Not applicable.
- 14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
- UN "Model Regulation":	Void

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SECTION 15: Regulatory information

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

- Directive 2012/18/EU

- Named dangerous substances - ANNEX I None of the ingredients is listed.

- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 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.

- 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

H302 Harmful if swallowed.
 H315 Causes skin irritation.
 H317 May cause an allergic skin reaction.
 H319 Causes serious eye irritation.
 H331 Toxic if inhaled.
 H332 Harmful if inhaled.
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 H335 May cause respiratory irritation.
 EUH204 Contains isocyanates. May produce an allergic reaction.

- Department issuing SDS:

research & development

- Contact:

research & development

- Date of previous version:

02.12.2022

- Version number of previous version:

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- 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)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative
 Acute Tox. 3: Acute toxicity – Category 3
 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
 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

- 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.