

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 17.10.2016

Revision: 17.10.2016

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

### · 1.1 Product identifier

· Trade name: **KEMATERM PU**

· 1.2 Relevant identified uses of the substance or mixture and uses advised against  
No further relevant information available.

· Application of the substance / the mixture Raw material food supplement ingredient

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

· Manufacturer/Supplier:

KEMA d.o.o.

Puconci 393

9201 Puconci

Slovenija

· Further information obtainable from: R&D DEPARTMENT

· 1.4 Emergency telephone number: +386 (0)2 545 95 00

## SECTION 2: Hazards identification

### · 2.1 Classification of the substance or mixture

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



GHS02 flame

Aerosol 1                      H222-H229    Extremely flammable aerosol. Pressurised container: May burst if heated.



GHS08 health hazard

Resp. Sens. 1                H334            May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Carc. 2                        H351            Suspected of causing cancer.

STOT RE 2                  H373            May cause damage to organs through prolonged or repeated exposure.



GHS09 environment

Aquatic Chronic 2 H411            Toxic to aquatic life with long lasting effects.



GHS07

Acute Tox. 4                H332            Harmful if inhaled.

Skin Irrit. 2                H315            Causes skin irritation.

Eye Irrit. 2                H319            Causes serious eye irritation.

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

STOT SE 3                  H335            May cause respiratory irritation.

Lact.                         H362            May cause harm to breast-fed children.

· Storage: Keep closed original containers in a cool and dry place best below 30 °C.

### · 2.2 Label elements

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

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

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

diphenylmethanediisocyanate, isomeres and homologues

**· Hazard statements**

H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.

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.

H362 May cause harm to breast-fed children.

H335 May cause respiratory irritation.

H373 May cause damage to organs through prolonged or repeated exposure.

H411 Toxic to aquatic life with long lasting effects.

**· Precautionary statements**

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read label before use.

P263 Avoid contact during pregnancy/while nursing.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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.

P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

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 Chemical characterisation: Mixtures****· Description:** Mixture of substances listed below with nonhazardous additions.**· Dangerous components:**

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CAS: 9016-87-9	diphenylmethanediisocyanate, isomeres and homologues  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	25-50%
CAS: 115-10-6 EINECS: 204-065-8 Index number: 603-019-00-8	dimethyl ether  Flam. Gas 1, H220 Press. Gas C, H280	2,5-10%
CAS: 13674-84-5	tris(2-chlorisopropyl)-phosphate Aquatic Chronic 3, H412	2,5-10%
CAS: 85535-85-9 EINECS: 287-477-0 Index number: 602-095-00-X	alkanes, C14-17, chloro  Aquatic Acute 1, H400; Aquatic Chronic 1, H410 Lact., H362	2,5-10%
CAS: 75-28-5 EINECS: 200-857-2 Index number: 601-004-01-8	isobutane  Flam. Gas 1, H220 Press. Gas C, H280	2,5-10%
CAS: 74-98-6 EINECS: 200-827-9 Index number: 601-003-00-5	propane  Flam. Gas 1, H220 Press. Gas C, H280	≤ 2,5%

· **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.

#### · **After inhalation:**

Supply fresh air and to be sure call for a doctor.

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

#### · **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

#### · **After eye contact:**

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

#### · **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:**

CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

### · 5.2 Special hazards arising from the substance or mixture

During heating or in case of fire poisonous gases are produced.

### · 5.3 Advice for firefighters

#### · **Protective equipment:** Mouth respiratory protective device.

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### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Mount respiratory protective device.  
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**  
Do not allow product to reach sewage system or any water course.  
Inform respective authorities in case of seepage into water course or sewage system.  
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **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**  
Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.
- **Information about fire - and explosion protection:**  
Keep ignition sources away - Do not smoke.  
Keep respiratory protective device available.  
Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50 °C, i.e. electric lights. Do not pierce or burn, even after use.  
Do not spray onto a naked flame or any incandescent material.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Observe official regulations on storing packagings with pressurised containers.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **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:**

<b>115-10-6 dimethyl ether</b>
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<b>IOELV</b> Long-term value: 1920 mg/m <sup>3</sup> , 1000 ppm
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- **Additional information:** The lists valid during the making were used as basis.

- **8.2 Exposure controls**

- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing

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Wash hands before breaks and at the end of work.

Store protective clothing separately.

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.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

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

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

## SECTION 9: Physical and chemical properties

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

· **General Information**

· **Appearance:**

· <b>Form:</b>	Aerosol
· <b>Colour:</b>	According to product specification
· <b>Odour:</b>	Characteristic
· <b>Odour threshold:</b>	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

· <b>Melting point/Melting range:</b>	Undetermined.
· <b>Boiling point/Boiling range:</b>	Not applicable, as aerosol.

· **Flash point:** -21 °C

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:** 235 °C

· **Decomposition temperature:** Not determined.

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

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· <b>Danger of explosion:</b>	<i>Product is not explosive. However, formation of explosive air/vapour mixtures are possible.</i>
· <b>Explosion limits:</b>	
<b>Lower:</b>	3,0 Vol %
<b>Upper:</b>	18,6 Vol %
· <b>Vapour pressure at 20 °C:</b>	5200 hPa
· <b>Density:</b>	<i>Not determined.</i>
· <b>Relative density</b>	<i>Not determined.</i>
· <b>Vapour density</b>	<i>Not determined.</i>
· <b>Evaporation rate</b>	<i>Not applicable.</i>
· <b>Solubility in / Miscibility with water:</b>	<i>Not miscible or difficult to mix.</i>
· <b>Partition coefficient (n-octanol/water):</b>	<i>Not determined.</i>
· <b>Viscosity:</b>	
<b>Dynamic:</b>	<i>Not determined.</i>
<b>Kinematic:</b>	<i>Not determined.</i>
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	12,0 %
<b>VOC (EC)</b>	17,00 %
· <b>9.2 Other information</b>	<i>No further relevant information available.</i>

### 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:** *No dangerous decomposition products known.*

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity**  
*Harmful if inhaled.*

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

**ATE (Acute Toxicity Estimates)**

Inhalative	LC50/4 h	24,4 mg/l
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**9016-87-9 diphenylmethanediisocyanate, isomeres and homologues**

Inhalative	LC50/4 h	11 mg/l (ATE)
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- **Primary irritant effect:**
- **Skin corrosion/irritation**  
*Causes skin irritation.*

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- **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.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity**  
Suspected of causing cancer.
- **Reproductive toxicity**  
May cause harm to breast-fed children.
- **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.

### SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Toxic for fish
- **Additional ecological information:**
- **General notes:**  
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water  
Do not allow product to reach ground water, water course or sewage system.  
Danger to drinking water if even small quantities leak into the ground.  
Also poisonous for fish and plankton in water bodies.  
Toxic for aquatic organisms
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

### SECTION 14: Transport information

- **14.1 UN-Number**
- **ADR,RID,ADN, IMDG, IATA** UN1950

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· **14.2 UN proper shipping name**  
· **IMDG**  
· **IATA**

AEROSOLS (alkanes, C14-17, chloro), MARINE POLLUTANT  
AEROSOLS, flammable

· **14.3 Transport hazard class(es)**· **ADR/RID/ADN**

· **Class**  
· **Label**

2 5F Gases.  
2.1

· **IMDG**

· **Class**  
· **Label**

2.1  
2.1

· **IATA**

· **Class**  
· **Label**

2.1  
2.1

· **14.4 Packing group**· **ADR,RID,ADN, IMDG, IATA**

Void

· **14.5 Environmental hazards:**  
· **Marine pollutant:**  
· **Special marking (ADR/RID/ADN):**

Product contains environmentally hazardous substances:  
alkanes, C14-17, chloro  
Symbol (fish and tree)  
Symbol (fish and tree)

· **14.6 Special precautions for user**· **Danger code (Kemler):**· **EMS Number:**· **Stowage Code**

Warning: Gases.

-

F-D,S-U

SW1 Protected from sources of heat.

SW22 For AEROSOLS with a maximum capacity of 1 litre:  
Category A. For AEROSOLS with a capacity above 1 litre:  
Category B. For WASTE AEROSOLS: Category C, Clear of  
living quarters.

· **Segregation Code**

SG69 For AEROSOLS with a maximum capacity of 1 litre:  
Segregation as for class 9. Stow "separated from" class 1  
except for division 1.4. For AEROSOLS with a capacity above  
1 litre: Segregation as for the appropriate subdivision of class  
2. For WASTE AEROSOLS: Segregation as for the appropriate  
subdivision of class 2.

· **14.7 Transport in bulk according to Annex II of  
Marpol and the IBC Code**

Not applicable.

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**· Transport/Additional information:****· ADR/RID/ADN****· Limited quantities (LQ)**

1L

**· Excepted quantities (EQ)**

Code: E0

Not permitted as Excepted Quantity

**· Transport category**

2

**· Tunnel restriction code**

D

**· IMDG****· Limited quantities (LQ)**

1L

**· Excepted quantities (EQ)**

Code: E0

Not permitted as Excepted Quantity

**· UN "Model Regulation":**UN 1950 AEROSOLS, 2.1, ENVIRONMENTALLY  
HAZARDOUS**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.**· Seveso category**

P3a FLAMMABLE AEROSOLS

E2 Hazardous to the Aquatic Environment

**· Qualifying quantity (tonnes) for the application of lower-tier requirements** 150 t**· Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t**· 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.

**· Relevant phrases**

H220 Extremely flammable gas.

H280 Contains gas under pressure; may explode if heated.

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.

H362 May cause harm to breast-fed children.

H373 May cause damage to organs through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

H412 Harmful to aquatic life with long lasting effects.

**· Department issuing SDS:** R&D DEPARTMENT**· 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)

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*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. Gas 1: Flammable gases – Category 1*  
*Aerosol 1: Aerosols – Category 1*  
*Press. Gas C: Gases under pressure – Compressed gas*  
*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*  
*Lact.: Reproductive toxicity – effects on or via lactation*  
*STOT SE 3: Specific target organ toxicity (single exposure) – Category 3*  
*STOT RE 2: Specific target organ toxicity (repeated 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*

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