

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

- **Product identifier**
- **Trade name:** STAUF Repamed
- **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- *Product category* 1-component polyurethane liquid repair kit
- *Application of the substance / the preparation* repair kit
- **Details of the supplier of the safety data sheet**
- **Manufacturer:**  
STAUF Klebstoffwerk GmbH  
Oberhausener Strasse 1  
57234 Wilnsdorf, Germany  
+49-(0)2739-301-0  
+49-(0)2739-301-200
- **Emergency telephone number:** STAUF, Wilnsdorf, +49-2739-301-0

## 2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



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.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

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.

- **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:*  
diphenylmethanediisocyanate, isomeres and homologues  
Aromatisches Polyisocyanat-Prepolymer  
diphenylmethane-4,4'-di-isocyanate  
diphenylmethane-2,4'-diisocyanate
- *Hazard statements*  
H302+H332 Harmful if swallowed or if inhaled.  
H315 Causes skin irritation.

(Contd. on page 2)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 25.11.2013

Version number 74

Revision: 25.11.2013

**Trade name:** STAUF Repamed

(Contd. of page 1)

- 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**
- 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.  
 P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
 P280 Wear protective gloves/protective clothing/eye protection/face protection.  
 P285 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.  
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.  
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Additional information:**

Contains isocyanates. May produce an allergic reaction.

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

### 3 Composition/information on ingredients

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

CAS: 9016-87-9	diphenylmethanediisocyanate, isomeres and homologues Resp. Sens. 1, H334 Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	10-25%
CAS: 101-68-8 EINECS: 202-966-0	diphenylmethane-4,4'-di-isocyanate Resp. Sens. 1, H334 Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	10-25%
CAS: 5873-54-1 EINECS: 227-534-9	diphenylmethane-2,4'-diisocyanate Resp. Sens. 1, H334 Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	10-25%
CAS: 67815-87-6	Aromatisches Polyisocyanat-Prepolymer Resp. Sens. 1, H334 Skin Sens. 1, H317	2.5-10%
CAS: 2536-05-2 EINECS: 219-799-4	diphenylmethane-2,2'-diisocyanate Resp. Sens. 1, H334 Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	≤ 2.5%

GB

(Contd. on page 3)

**Trade name:** STAUF Repamed

(Contd. of page 2)

#### 4 First aid measures

- **Description of first aid measures**
- **General information:**  
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:**  
If skin irritation continues, consult a doctor.  
Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Do not induce vomiting; call for medical help immediately.
- **Information for doctor:**
  - *Most important symptoms and effects, both acute and delayed* Breathing difficulty
  - *Hazards* Danger of impaired breathing.
  - *Indication of any immediate medical attention and special treatment needed*  
No further relevant information available.

#### 5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture**  
Burning releases carbon monoxide, carbon dioxide, oxides of nitrogen, isocyanate vapors and traces of hydrogen cyanide. In the event of fire and/or explosion do not breathe fumes.
- **Advice for firefighters**
- **Protective equipment:**  
Wear fully protective suit.  
Wear self-contained respiratory protective device.

#### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.  
Ensure adequate ventilation  
Wear protective clothing.
- **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.
- **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.  
Ensure adequate ventilation.
- **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.

GB

(Contd. on page 4)

**Trade name:** STAUF Repamed

(Contd. of page 3)

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.  
Use only in well ventilated areas.  
Avoid contact with the eyes.
- **Information about fire - and explosion protection:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
  - *Requirements to be met by storerooms and receptacles:* No special requirements.
  - *Information about storage in one common storage facility:* Not required.
  - *Further information about storage conditions:*  
Store in dry conditions.  
Keep container tightly sealed.
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

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

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

**9016-87-9 diphenylmethanediisocyanate, isomeres and homologues**

WEL	Short-term value: 0.07 mg/m <sup>3</sup> Long-term value: 0.02 mg/m <sup>3</sup> Sen; as -NCO
-----	---

**101-68-8 diphenylmethane-4,4'-di-isocyanate**

WEL	Short-term value: 0.07 mg/m <sup>3</sup> Long-term value: 0.02 mg/m <sup>3</sup> Sen; as -NCO
-----	---

**5873-54-1 diphenylmethane-2,4'-diisocyanate**

WEL	Short-term value: 0.07 mg/m <sup>3</sup> Long-term value: 0.02 mg/m <sup>3</sup> Sen; as -NCO
-----	---

**2536-05-2 diphenylmethane-2,2'-diisocyanate**

WEL	Short-term value: 0.07 mg/m <sup>3</sup> Long-term value: 0.02 mg/m <sup>3</sup> Sen; as -NCO
-----	---

- *Additional information:* The lists valid during the making were used as basis.

- **Exposure controls**
- **Personal protective equipment:**
  - *General protective and hygienic measures:*  
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:*  
Not necessary if room is well-ventilated.  
Use suitable respiratory protective device in case of insufficient ventilation.
  - *Protection of hands:*
  - *Material of gloves* Butyl rubber, BR

(Contd. on page 5)

Printing date 25.11.2013

Version number 74

Revision: 25.11.2013

**Trade name:** STAUF Repamed

(Contd. of page 4)

- *Eye protection:*  
Face protection



Tightly sealed goggles

- *Body protection:* Protective work clothing

## 9 Physical and chemical properties

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

#### · **General Information**

##### · *Appearance:*

<i>Form:</i>	Fluid
<i>Colour:</i>	Amber coloured
<i>Odour:</i>	Characteristic
<i>Odour threshold:</i>	Not determined.

· **pH-value:** Not determined.

#### · **Change in condition**

<i>Melting point/Melting range:</i>	Undetermined.
<i>Boiling point/Boiling range:</i>	208 °C

· **Flash point:** 201 °C

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

· **Ignition temperature:** 330 °C

· *Decomposition temperature:* Not determined.

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

· **Danger of explosion:** Product does not present an explosion hazard.

#### · **Explosion limits:**

<i>Lower:</i>	0.4 Vol %
<i>Upper:</i>	Not determined.

· **Vapour pressure at 20 °C:** 11 hPa

· **Density at 20 °C:** 1.14 g/cm<sup>3</sup>

· *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:**

<i>Dynamic at 20 °C:</i>	1300 mPas
<i>Kinematic:</i>	Not determined.

#### · **Solvent content:**

<i>Organic solvents:</i>	0.0 %
<i>VOC EU</i>	0.00 %

*Solids content:* 22.9 %

· **Other information** No further relevant information available.

GB

(Contd. on page 6)

**Trade name:** STAUF Repamed

(Contd. of page 5)

## 10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- *Thermal decomposition / conditions to be avoided:*  
No decomposition if used according to specifications.
- **Possibility of hazardous reactions**  
Exothermic reaction with amines and alcohols; reacts with water forming CO<sub>2</sub>; in closed containers, risk of bursting owing to increase of pressure.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· *LD/LC50 values relevant for classification:*

### 9016-87-9 diphenylmethanediisocyanate, isomeres and homologues

Oral	LD50	> 2000 mg/kg (Ratte)
Dermal	LD50	> 9400 mg/kg (rab) (OECD- Prüfrichtlinie 402)
Inhalative	LC50/48 h	490 mg/l (Ratte) (als Aerosol, Exposition)

### 101-68-8 diphenylmethane-4,4'-di-isocyanate

Oral	LD50	> 2000 mg/kg (Ratte) (Richtlinie 84/449/EWG, B.1)
Dermal	LD50	>9400 mg/kg (rab) (OECD- Prüfrichtlinie 402)

### 5873-54-1 diphenylmethane-2,4'-diisocyanate

Oral	LD50	> 2000 mg/kg (Ratte) (Richtlinie 84/449/EWG, B.1)
Dermal	LD50	> 9400 mg/kg (rab) (OECD- Prüfrichtlinie 402)

### 67815-87-6 Aromatisches Polyisocyanat-Prepolymer

Oral	LD50	≥ 5000 mg/kg (Ratte) (OECD- Prüfrichtlinie 423)
------	------	---

### 2536-05-2 diphenylmethane-2,2'-diisocyanate

Oral	LD50	> 2000 mg/kg (Ratte) (Richtlinie 84/449/EWG, B.1)
Dermal	LD50	> 9400 mg/kg (rab) (OECD- Prüfrichtlinie 402)

- *Primary irritant effect:*
- *on the skin:* Irritant to skin and mucous membranes.
- *on the eye:* Irritating effect.
- *Sensitization:*  
Sensitization possible through inhalation.  
Sensitization possible through skin contact.
- *CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)*  
Carc. 2

## 12 Ecological information

- **Toxicity**

- **Aquatic toxicity:**

### 9016-87-9 diphenylmethanediisocyanate, isomeres and homologues

EC50	>1000 mg/l (Daphnia magna Wasserfloh) (OECD-Prüfrichtlinie 202)
LC0	>1000 mg/l (Fisch) (96h)

(Contd. on page 7)

**Trade name:** STAUF Repamed

(Contd. of page 6)

### 101-68-8 diphenylmethane-4,4'-di-isocyanate

EC50	>1000 mg/l (Daphnia magna Wasserfloh) (OECD- Prüfrichtlinie 202)
LC50/ 96h	>1000 mg/l (Danio rerio (Zebraabärbling)) (OECD- Prüfrichtlinie 203)
NOEC	>10 mg/l (Daphnia magna Wasserfloh) (OECD- Prüfrichtlinie 202 (Fortpflanzung))

- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**  
The product reacts with water at the interface forming CO<sub>2</sub> and a solid insoluble product with high melting point (polyurea). This reaction is accelerated by surfactants (e.g. detergents) or by watersoluble solvents. Previous experience shows that polyurea is inert and non-degradable.
- **General notes:**  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **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.

## 14 Transport information

- **UN-Number**
- **ADR, ADN, IMDG, IATA** Void
- **UN proper shipping name**
- **ADR, ADN, IMDG, IATA** Void
- **Transport hazard class(es)**
- **ADR, ADN, IMDG, IATA**
- **Class** Void
- **Packing group**
- **ADR, IMDG, IATA** Void
- **Environmental hazards:**
- **Marine pollutant:** No
- **Special precautions for user** Not applicable.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
- **UN "Model Regulation":** -

GB

(Contd. on page 8)

**Trade name:** STAUF Repamed

(Contd. of page 7)

## 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **National regulations:**
- *Technical instructions (air):*

Class	Share in %
I	25-50
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 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*
  - 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.
- **Department issuing MSDS:** Technical Department
- **Contact:** Dr. Frank Gahlmann +49-(0)2739-301165 gahlmann@stauf.de
- **Abbreviations and acronyms:**
  - RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
  - ICAO: International Civil Aviation Organization