

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

1.1. Product identifier

HEKAPUR Rigid Foam Component B

1.2. Relevant identified uses of the substance or mixture and uses advised against
Di- / poly-isocyanate component for polyurethane manufacture

1.3. Details of the supplier of the safety data sheet

Exact Plastics GmbH Phone: +49 (0) 5144 4955648
Genossenschaftsstr. 12 Fax: +49 (0) 5144 4955649
D-29356 Bröckel E-Mail: info@exact-plastics.de

1.4. Emergency telephone number

Phone: +49 (0) 5144 4955648

2. Hazard identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EU) No. 1272/2008

Serious eye damage / eye irritation: Eye Irrit. 2

Skin corrosion / irritation: Skin Irrit. 2

Respiratory / skin sensitization: Resp. Sens. 1

Respiratory / skin sensitization: Skin Sens. 1

Carcinogenicity: Carc. 2

STOT SE 3

STOT RE 2

2.2. Label elements

Classification according to Regulation (EU) No. 1272/2008

Hazard pictograms:



Signal word:

Danger

Hazard statements:

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.

Precautionary statements:

P260	Do not breathe vapour / aerosol.
P280	Wear protective gloves / protective clothing / eye protection

**Safety Data Sheet according to Regulation (EU) No. 1907/2006
HEKAPUR Rigid Foam Component B**

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P302+352	/ face protection
P304+340	IF ON SKIN: Wash with plenty of water
	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+313	If exposed or concerned: Get medical advice / attention.
P501	Dispose of contents / container in accordance with local / regional / national / international regulations

Supplemental Hazard information (EU):

EUH204 Contains isocyanates. May produce an allergic reaction

Hazard components of labeling:

4,4'-Methylenediphenyl diisocyanate, oligomeric reaction products with 2,4'-diisocyanatodiphenylmethane and (methylethylene) bis (oxy) dipropanol, diphenyl methane diisocyanate , isomers and homologues

2.3. Other hazards

For their own protection, persons who suffer from hypersensitivity of the respiratory tract (e.g. asthmatics and chronic bronchitis sufferers) should avoid handling this product

3. Composition / information on ingredients

3.2. Mixtures

Discription of the mixture: Isocyanate

Hazardous ingredients:

Hazardous ingredients CAS-Nr. EINCES	Classification according to regulation (EC) No. 1272/2008			Content (%)
	Label	Hazard Statement	Classification	
4,4'-Methylenediphenyl diisocyanate, oligomeric reaction products with 2,4'-diisocyanatodiphenylmethane and (methylethylene) bis (oxy) dipropanol 75880-28-3	 Danger	H315 H317 H319 H332 H334 H335 H351 H373	Skin Irrit. 2 Skin Sen. 2 Eye Irrit. 2 Acute Tox. 4 Resp. Sen. 1 STOT SE 3 Carc. 2 STOT RE 2	45.0 - < 50.0
P-MDI 9016-87-9 618-498-9	 Danger	H315 H317 H319 H332 H334 H335 H351	Skin Irrit. 2 Skin Sen. 2 Eye Irrit. 2 Acute Tox. 4 Resp. Sen. 1 STOT SE 3 Carc. 2	45.0 - < 50.0

		H373	STOT RE 2	
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For the full text of the H-Statements mentioned in this Section, see Section 16.

4. **First aid measures**

4.1. **Description of first aid measures**

General information:

Remove contaminated soaked clothing immediately.
In the event of persistent symptoms receive medical treatment.
Take away from danger area and lay down affected person.

Following inhalation:

Move to fresh air in case of accidental inhalation of vapours.
In case of inhalation of aerosol/mist consult a physician if necessary.

Following skin contact:

Wash off immediately with soap and plenty of water.
Treat subsequently with skin cream.
Consult a doctor if skin irritation persists.

Following eye contact:

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Seek medical treatment by eye specialist.

Following ingestion:

Do not induce vomiting.
Summon a doctor immediately.

4.2. **Most important symptoms and effects, both acute and delayed**

Symptoms: tightness in the chest, coughing, difficulty breathing
Symptoms may be delayed.

4.3. **Indication of any immediate medical attention and special treatment needed**

No information available.

5. **Firefighting measures**

5.1. **Extinguishing media**

Suitable extinguishing media:

Foam, carbon dioxide (CO₂), dry chemical, water-spray.

Unsuitable extinguishing media:

Full water jet

5.2. **Special hazards arising from the substance or mixture**

Hazardous combustion products:

In case of fire formation of carbon monoxide, nitrogen oxide, isocyanat vapour and traces of hydrogen cyanide is possible. In the event of fire and/or explosion do not breathe fumes.

5.3. Advice for fire-fighters

Protective suit

Use breathing apparatus with independent air supply.

Do not let enter contaminated extinguishing water into the soil, groundwater or surface waters.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal protective equipment:

In case of vapour formation use respirator.

Ensure adequate ventilation.

Use personal protective clothing.

6.2. Environmental precautions

Environmental precautions:

Clean contaminated surface thoroughly.

Do not discharge into the drains/surface waters/groundwater.

6.3. Methods and material for containment and cleaning up

For cleaning up:

"Cover with humid, absorbent material (e.g. sand, sawdust, chemical binder). After approx. 1 hour, collect in disposal drum; do not close (CO₂ development)."

Keep damp in the open air in a safe place for 7 to 14 days.

6.4. Reference to other sections

No informationen available.

7. Handling and storage

7.1. Precautions for safe handling

Protective measures

Advice on safe handling:

Keep container tightly closed.

Provide sufficient air exchange and/or exhaust in work rooms.

Avoid contact with skin, eyes and clothing.

7.2. Conditions for safe storage, including any incompatibilities

Requirement for storage rooms and vessels:

Keep containers tightly closed in a cool, well-ventilated place. Protect from moisture.

Prevent cooling below 10°C and heating above 40°C.

Please read section "Handling and storage" in our data sheet and our product notice for additional information.

Hints on storage assembly:

Material to avoid:

Keep away from food, drink and animal feeding stuffs.

Storage class:

Storage class 10

Storage temperatur:

>10°C - < 40°C

7.3. Specific end uses

No information available.

8. Exposures controls / personal protection

8.1. Control parameters

8.2. Exposure controls

Appropriate engineering controls

Ensure adequate ventilation, especially in confined areas.

Provide appropriate exhaust ventilation at machinery.

Personal protective equipment

Do not inhale vapours.

Avoid contact with eyes and skin. Remove contaminated soaked clothing immediately.

Wash hands before breaks and immediately after handling the product.

When using, do not eat, drink or smoke.

Eye / Face protection

Tightly fitting goggles / Face shield EN 166

Skin protection

Hand protection

Chemical-resistant gloves (EN 374)

Suitable materials also for extended, direct contact (recommended: protection index 6, corresponding to a permeation rate > 480 minutes according to EN 374):

butyl rubber (Butyl) - = 0.7 mm thickness

Nitrile rubber (Nitrile) - 0.4 mm thickness

Because of the great variety of glove types, the manufacturer's instructions for use must be adhered to.

The data given refer to information from glove manufacturers or have been assessed by analogy to similar materials. It should be taken into consideration, that due to the great number of influential factors such as the temperature, the daily durability of chemicals resistant protective gloves may be considerably reduced in practice, compared to the permeation rate assessed according to EN 374.

Body protection

Long sleeved clothing.

Respiratory protection

Use suitable breathing apparatus if there is inadequate ventilation.

If product is sprayed, use fresh-air breathing apparatus or (only short-term use) a combination filter A2-P2.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Colour	Light brown
Odour	Characteristic
Flash point	>200°C
Ignition	>500°C
Water solubility (20°C)	Insoluble, reacts with water
Vapour pressure (20°C)	21 hPa
Density (20°C)	1.22- 1.24 g/cm ³
Viscosity (20°C)	570 - 700 mPas

10. Stability and reactivity

10.1. Reactivity

No informationen available.

10.2. Chemical stability

Stable, if stored and applied as directed.

10.3. Possibility of hazardous reaction

Container can be pressurized by carbon dioxide due to reaction with humid air and/or water. (Risk of bursting)

10.4. Conditions of avoid

To avoid thermal decomposition, do not overheat. (> 200°C)
Avoid moisture.

10.5. Incompatible materials

Amines, Strong oxidizing agents, Strong acids and strong bases

10.6. Hazardous decomposition products

No decomposition if stored and applied as directed.

In case of fire formation of carbon monoxide, nitrogen oxide, isocyanat vapour and traces of hydrogen cyanide is possible.

11. Toxicological information

11.1. Information on toxicological effects

Acute toxicity:

4,4'-Methylenediphenyl diisocyanate, oligomeric reaction products with 2,4'-diisocyanatodiphenylmethane and [(methylethylene) bis (oxy)dipropanol
In a long-term inhalation study, rats were exposed over a period of 2 years to mechanically generated respirable aerosols /aerodynamic diameter 95% less than 5 µm) of polymeric MDI (PMDI) in concentrations of 0,2; 1,0 and 6,0 mg PMDI/m³. The group of animals exposed to the highest concentration suffered an increased incidence of lung tumors , persistent inflammatory changes to the nose, respiratory tract and lungs and

yellowish deposits in the respiratory tract and lungs. 8 benign (statistically increased) and 1 malignant (statistically insignificant) lung tumours were found. The animals in the 1,0 mg/m³ group exhibited slight irritation and inflammatory changes to the nose, respiratory tract and lungs, but did not develop lung tumours and/or deposits. Animals in the 0,2 mg/m³ group suffered no irritation; this concentration was therefore deemed to constitute the "no-effect level".

CAS-No.: 75880-28-3
4,4'-Methylenediphenyl diisocyanate, oligomeric reaction products with 2,4'-diisocyanatodiphenylmethane and (methylethylene) bis (oxy) dipropanol
LD50 (oral) > 15800 mg/kg (rat)
LD50 (dermal) > 7940 mg/kg (rabbit)
LC50 (inhalative)
6h vapour 0.48 mg/l (rat)
4h aerosole 0.368 mg/l (rat)

CAS-Nr.: 9016-87-9
Diphenyl methane diisocyanate, isomera and homologues
LD50 (oral) > 2000 mg/kg (rat)
LC50 (inhalative)
4h vapour 490 mg/l (rat)
aerosol ATE 1.5 mg/l

Irritation and corrosivity:
diphenylmethane-diisocyanate, isomeres and homologues
May cause irritation by inhalation, skin contact and eyes contact

Sensitising effects:
diphenylmethane-diisocyanate, isomeres and homologues:
May cause sensitization by inhalation and skin contact.

Carcinogenic/mutagenic/toxic effects for reproduction
4,4'-Methylenediphenyl diisocyanate, oligomeric reaction products with 2,4'-diisocyanatodiphenylmethane and [(methylethylene) bis (oxy)dipropanol
Salmonella / microsome test (ames test): No indication of mutagenic effects. *)

Practical experience
Observations relevant to classification:
With hypersensitive people, reactions as cough or difficulty of breathing may appear even with tiny concentrations of isocyanates; therefore keep room aerated and ventilated.
In case of longer contact with skin, tanning and irritating effects are possible

Additional information:
No information available

12. Ecological information

12.1. Toxicity

diphenylmethane-diisocyanate, isomeres and homologues
EC50/Daphnia: => 1.000 mg/l (24h)
EC50/ bacteria: => 100 mg/l (3h)
LC50/fish: => 1.000 mg/l (96h)

4,4'-Methylenediphenyl diisocyanate, oligomeric reaction products with
2,4'-diisocyanatodiphenylmethane and [(methylethylene) bis (oxy)dipropanol
EC50/Daphnia: => 1.000 mg/l (24h)
EC50/ bacteria: => 100 mg/l (3h)
LC50/fish: > 1000 mg/l (96h)
ErC50/ Daphnia: > 1640 mg/l (72h)

12.2. Persistence and degradability

4,4'-Methylenediphenyl diisocyanate, oligomeric reaction products with
2,4'-diisocyanatodiphenylmethane and [(methylethylene) bis (oxy)dipropanol
Biodegradable (OECD): Not degradable. Respirometry-test
diphenylmethane-diisocyanate, isomeres and homologes:
Biodegradable (OECD): Not degradable (Respirometry-test)

12.3. Bioaccumulative potential

No information available

12.4. Mobility in soil

Adsorption to solid soil phase is not expected.

12.5. Results of PBT- and vPvB assessment

Not fulfilling PBT.

12.6. Other adverse effects

The product reacts with water at the interface forming CO₂ 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.

Additional information:

Do not flush into surface water or sanitary sewer system.

Slightly water hazardous.

13. Disposal considerations

13.1. Waste treatment methods

Where possible recycling is preferred to disposal.

Can be incinerated, when in compliance with local regulations.

It is not possible to give this product a waste code number according to the European waste catalogue because only the intended use of the user consents the assignment of a specific code number.

The waste code number must be agreed with the disposer / manufacturer / competent authority.

Contaminated packagings are to be treated like the product itself.

Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.

Empty containers should be taken for local recycling, recovery or waste disposal.

14. Transport information

Land transport ADR: No classified as hazardous under transport regulation.
Maritime transport IMDG: No classified as hazardous under transport regulation.
Air transport ICAO-TI and IATA-DGR: No classified as hazardous under transport regulation

15. Regulatory information

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

National regulations

Water contaminating class (D): 1 - slightly water contaminating

16. Other information

Full text of H-Statements referred to under sections 2 and 3

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 by inhalation.
H351	Suspected of causing cancer.
H373	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.
Eye Irri.:	Eye irritation
Skin Irrit.	Skin irritation
Skin Sen.	Skin sensitization
Acute Tox.	Acute toxicity
Resp. Sen.	Respiratory sensitization
STOT SE	Specific target organ toxicity - single exposure
Carc.	Carcinogenicity
STOT RE	Specific target organ toxicity - repeated exposure

Further information

Protective measures for handling freshly moulded polyurethane parts:
Depending on the production parameters, uncovered surfaces of polyurethane moulds produced using this raw material may contain traces of substances (e. g. starting and reaction products, catalysts, release agents) with hazardous effects (e. g. harmful, irritating, corrosive, sensitising). Avoid skin contact with traces of these substances.
When demoulding or otherwise handling freshly moulded polyurethane parts, protective textile gloves should be worn as a minimum. Their palm and finger areas should preferably be coated on the outside with Nitrile rubber, PVC or polyurethane. Wear suitable protective clothing, if necessary long-sleeved, when handling freshly moulded PUR parts under standard (handling) conditions.

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The foregoing information is based on the current state of our knowledge and experience. The safety data sheet specifies the safety requirements for products. The information does not constitute any assurance of product characteristics.