Safety data sheet

1. Substance/preparation and company identification

Trade name:
Abformer B-Komp.
Application of the substance/ the preparation:
Polyurethane-System Component

BEIL
Kunststoffproduktions- und Handelsgesellschaft mbH
Lehmkuhlenweg 25
D- 31224 Peine
Telefon: +49 (0)5171/70 99-0
Telefax: +49 (0)5171/7099-29
E-Mail: service@beil-peine.de

Information in case of emergency:
Giftzentrale Göttingen
Tel.: +49 (0)551/19240
Telefax: +49 (0)551/3831881

2. Hazards identification

2.1. Classification of the substance or mixture

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

Acute toxicity, inhal., Gases, Cat. 4, H332
Skin corrosion/irritation, Cat. 2, H315
Serious eye damage/eye irritation, Cat. 2, H319
Carcinogenicity, Cat. 2, H351
Specific target organ toxicity (single exposure, inhalation), Cat.3, H335
Specific target organ toxicity (repeated exposure, inhalation), Cat. 2, H373
Respiratory Sensitisation, Cat. 1, H334
Skin Sensitisation, Cat. 1, H317

Contains isocyanates. See information supplied by the manufacturer.

Additional information For the full text of the phrases mentioned in this Section, see Section 16.

2.2. Label elements

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 if inhaled.

Precautionary statements

P260: Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P280: Wear protective gloves/ protective clothing/ eye protection/face protection.
P284a: [In case of inadequate ventilation] wear respiratory protection.
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P302+P352: IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P311: IF exposed: Call a POISON CENTER or doctor/ physician.

Supplemental information None.

Product identifier Isocyanic acid, polymethylenepolyphenylene ester, CAS-No. 9016-87-9
4,4'-Methylenediphenyl diisocyanate, CAS-No. 101-68-8, REACH No. 01-2119457014-47

2.3. Other hazards No hazards to be specially mentioned.

3. Composition/information on ingredients

3.2. Mixtures

Isocyanates.

Components		CLP Classification	Product identifier
Isocyanic acid, polymethylenepolyphenylene ester	60-100	Acute Tox. 4 H332, Skin Irrit. 2 H315, Eye Irrit. 2 H319, Resp. Sens.1 H334, Skin Sens. 1 H317, Carc. 2 H351, STOT SE 3 H335, STOT RE 2 H373i	CAS-No.: 9016-87-9 Index-No: Polymer
4,4'-Methylenediphenyl diisocyanate	30-60	Acute Tox. 4 H332, Skin Irrit. 2 H315, Eye Irrit. 2 H319, Resp. Sens.1 H334, Skin Sens. 1 H317, Carc. 2 H351, STOT SE 3 H335, STOT RE 2 H373i	CAS-No.: 101-68-8 Index-No: 202-966-0 REACH No.: 01-2119457014-47

For the full text of the phrases mentioned in this Section, see Section 16.

Hazardous impurities None known.

4. First aid measures

4.1. Description of first aid measures

Inhalation If breathing is difficult, give oxygen. Move to fresh air in case of accidental inhalation of dust or fumes from overheating or combustion. Call a physician or poison control center immediately.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Call a physician immediately.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Protect unharmed eye. Consult an ophthalmologist.

Ingestion Clean mouth with water and drink afterwards plenty of water. Prevent vomiting if possible. Call a physician immediately.

4.2. Most important symptoms

and effects, both acute and delayed	First aider needs to protect himself. Irritating to eyes, respiratory system and skin. May cause sensitization by inhalation and skin contact. Persons allergic to isocyanates, and particularly those suffering from asthma or other respiratory conditions, should not work with isocyanates. Consult a physician. Allergic appearance. Asthmatic appearance.
4.3. Indication of any immediate medical attention and special treatment needed	Symptoms of poisoning may not appear for several hours. Keep under medical supervision for at least 48 hours.

5. Firefighting measures

5.1. Extinguishing media	
Suitable extinguishing media	Water spray. Water spray mist or foam. Use water spray, alcohol- resistant foam, dry chemical or carbon dioxide.
Extinguishing media which must not be used for safety reasons	High volume water jet.
5.2. Special hazards arising from the substance or mixture	During a fire, smoke may contain the original material in addition to unidentified toxic and/or irritating compounds. Liberates poisonous gas. Pay attention to the spreading of gases especially at ground level (heavier than air) and to the direction of the wind.
5.3. Advice for firefighters	
Special protective equipment for firefighter's	Standard procedure for chemical fires. In the event of fire and/or explosion do not breathe fumes. In the event of fire, wear self-contained breathing apparatus. Complete suit protecting against chemicals.
Specific methods	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water mist may be used to cool closed containers. Collect contaminated fire extinguishing water separately. This must not be discharged into drain.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Advice for non-emergency Personnel	Any action only if without personal risk. Use personal protective equipment. Ventilate the area. Avoid contact with skin and eyes. Do not breathe vapours/dust. Immediately evacuate personnel to safe areas.
Advice for emergency responders	Any action only if without personal risk. Use personal protective equipment. Ventilate the area. Do not breathe vapours/dust. Immediately evacuate personnel to safe areas. Pay attention to the spreading of gases especially at ground level (heavier than air) and to the direction of the wind.
6.2. Environmental precautions	Do not flush into surface water or sanitary sewer system.
6.3. Methods and material for containment and cleaning up	Soak up with inert absorbent material. Clean up promptly by sweeping or vacuum. If liquid has been spilt in large quantities clean up promptly by scoop or vacuum. Keep in suitable and closed containers for disposal.
6.4. Reference to other sections	See chapter 8 and 13

7. Handling and storage

7.1. Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice. Ingestion, exposure to skin and eyes and inhalation of any generated vapours should be avoided. Ensure adequate ventilation, especially in confined areas. Use only in area provided with appropriate exhaust ventilation. Container may be opened only under exhaust ventilation hood. Wear self-contained breathing apparatus and protective suit. Plan first aid action before beginning work with this product.

7.2. Conditions for safe storage, including any incompatibilities

Keep at temperatures between 5 and 45 °C. Store in original container. Keep containers tightly closed in a dry, cool and well ventilated place.

7.3. Specific end use(s)

No information available.

8. Exposure controls/personal protection

8.1. Control parameters

Exposure limit(s)

DNEL human health, dermal, short term (acute): 50 mg/kg.
DNEL human health, inhalation, short term (acute): 0,1 mg/m³.
DNEL human health, inhalation, long term (repeated exposure): 0,05 mg/m³.
PNEC Environment, Fresh water: 1 mg/l.
PNEC Environment, Soil: 1mg/kg. PNEC Environment, Marine water: 0,1 mg/l.

4,4'-Methylenediphenyl diisocyanate (CAS 101-68-8)

Ireland - Occupational Exposure Limits – TWAs	0.02 mg/m³ TWA (as NCO)
Ireland - Occupational Exposure Limits – STELs	0.07 mg/m³ STEL

8.2. Exposure controls

Occupational exposure controls

Ensure adequate ventilation, especially in confined areas. Handle in accordance with good industrial hygiene and safety practice.

Personal protection equipment

Respiratory protection	In case of insufficient ventilation wear suitable respiratory equipment.
Hand protection	The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. PVC or other plastic material gloves.
Eye protection	Safety glasses with side-shields conforming to EN166.
Skin and body protection	Long sleeved clothing. Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Thermal hazards	No special measures required.
Environmental exposure controls	Prevent product from entering surface water or sewage. Use of closed filling equipment.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form	Liquid.
Colour	Brown.
Odour	Characteristic.

Odour Threshold	not determined
pH:	not applicable
Melting point/range:	not determined
Boiling point/range:	245°C
Flash point:	230°C
Evaporation Rate:	not determined
Flammability:	not applicable
Explosion limits:	Not explosive
Vapour pressure:	not determined
Vapor density:	8,5
Relative density:	1,23
Water solubility:	Reacts with water.
Partition coefficient (n-octanol/ water):	not determined
Autoignition temperature:	not determined
Decomposition temperature:	not determined
Viscosity:	200 mPas
Combustion/explosion hazards:	not determined
Oxidizing properties:	None
9.2. Other information	
General Product Characteristics	No information available.

10. Stability and reactivity

10.1. Reactivity	No information available.
10.2. Chemical stability	No decomposition if used as directed. Stable at normal conditions.
10.3. Possibility of hazardous reactions	Exothermic reaction with strong acids. Exothermal reaction with amines and alcohols. Container can be pressurized by carbon dioxide due to reaction with humid air and/or water.
10.4. Conditions to avoid	Burning produces obnoxious and toxic fumes. Avoid moisture. Extremes of temperature and direct sunlight.
10.5. Incompatible materials	ferrous metals, alloys and galvanized surfaces Incompatible with acids and bases. Reacts violently with water. Alcohols. Amines.
10.6. Hazardous decomposition products	None under normal use. In case of fire hazardous decomposition products may be produced such as: Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), dense black smoke. Hydrogen cyanide (hydrocyanic acid). Hydrocarbons.

11. Toxicological information

11.1. Information on toxicological effects

Acute toxicity	**Isocyanic acid, polymethylenepolyphenylene ester (CAS 9016-87-9)** Dermal LD50 Rabbit > 9.4 g/kg (WHO) Inhalation LC50 Rat = 490 mg/m3 4 h(NLM_CIP) Oral LD50 Rat = 49 g/kg (NLM_CIP) **4,4'-Methylenediphenyl diisocyanate (CAS 101-68-8)** Inhalation LC50 Rat = 369 mg/m3 4 h(NZ_CCID) Oral LD50 Rat = 31600 mg/kg (JAPAN_GHS)
Skin corrosion/irritation	Causes skin irritation. Animal studies.
Serious eye damage/eye Irritation	None. Severe eye irritation.
Respiratory / Skin Sensitisation	Causes sensitization. May cause allergic respiratory reaction. May cause allergic skin reaction. Isocyanates may cause

	acute irritation and/or sensitisation of the respiratory system leading to tightness of the chest, wheeziness and an asthmatic condition.
Carcinogenicity	Suspected of causing cancer. Based on available data, the classification criteria are not met.
Germ cell mutagenicity	Based on available data, the classification criteria are not met.
Reproductive toxicity	Based on available data, the classification criteria are not met.
Specific target organ toxicity (single exposure)	May cause damage to organs (Lungs) if inhaled.
Specific target organ toxicity (repeated exposure)	May cause damage to organs (Lungs) through prolonged or repeated exposure if inhaled.
Aspiration hazard	No data available.
Human experience	Asthmatic appearance.
Symptoms related to the physical, chemical and toxicological characteristics	Irritating to eyes. Irritating to respiratory system. Irritating to skin.

12. Ecological information

12.1. Toxicity	No data is available on the product itself. May change pH of waters.
12.2. Persistence and degradability	Expected to be biodegradable. Neutralization is normally necessary before waste water is discharged into water treatment plants.
12.3. Bioaccumulative potential	Bioconcentration factor (BCF): 200. Bioaccumulation is unlikely.
12.4. Mobility in soil	No data available.
12.5. Results of PBT and vPvB Assessment	This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).
12.6. Other adverse effects	No information available.

13. Disposal considerations

13.1. Waste treatment methods	
Waste from residues / unused products	Dispose of in accordance with local regulations.
Contaminated packaging	Dispose of as unused product.

14. Transport information

ADR/RID	Not regulated.
IMDG	Not regulated.
IATA	Not regulated.
Further Information	Not classified as dangerous in the meaning of transport regulations.

15. Regulatory information

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

Regulatory Information Storage class 10.

4,4'-Methylenediphenyl diisocyanate (CAS 101-68-8)

EU - REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	Use restricted. See item 56[a]. (Conditions of restrictions 27 December 2010)
EU - REACH (1907/2006) –	

List of Registered Substances	Present
15.2. Chemical safety assessment	not applicable

16. Other information

Revision Note

This data sheet contains changes from the previous version in section(s): 11, 14

Key or legend to abbreviations and acronyms

CLP: Classification according to Regulation (EC) No. 1272/2008 (GHS)
DNEL: Derived No Effect Level .
MAK: Maximale Arbeitsplatzkonzentration.
PNEC: Predicted No Effect Concentration .
STEL: Short Term Exposure Limit

Classification procedure

Classification according to Regulation (EU) 1272/2008 with the correlation table 67/548/EEC or 1999/45/EC (Annex VII of CLP).

Full text of phrases 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.
H373: May cause damage to organs through prolonged or repeated exposure if inhaled.

Further information

Take notice of the directions of use on the label.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.