

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



Commercial Product Name: ALEXIT BR90H0-BladeRep Hardener 9
Quality No.: 4459900000000

Revision Date 30.01.2020
Print Date 30.01.2020
Version 2

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

1.1 Product identifier

Trade name : ALEXIT BR90H0-BladeRep Hardener 9 farblos / transparent

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the Sub- : Industrial serial painting
stance/Mixture

1.3 Details of the supplier of the safety data sheet

Producer : Mankiewicz Gebr. & Co. (GmbH & Co. KG)
Georg-Wilhelm-Strasse 189
21107 Hamburg
Germany

Telephone : +49 (0) 40 75103 0
Telefax : +49 (0) 40 75103 375
E-mail address of person : sdb_info@umco.de
responsible for the SDS

1.4 Emergency telephone number

Emergency telephone num- : +49 (0) 551 / 19240 (Toxic agent information centre North /
ber NORD)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Skin sensitisation, Category 1 H317: May cause an allergic skin reaction.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Warning

Hazard statements : H317 May cause an allergic skin reaction.



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



Commercial Product Name: ALEXIT BR90H0-BladeRep Hardener 9
Quality No.: 4459900000000

Revision Date 30.01.2020
Print Date 30.01.2020
Version 2

Precautionary statements :

Prevention:

- P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
- P272 Contaminated work clothing should not be allowed out of the workplace.
- P280 Wear protective gloves.

Response:

- P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
- P362 + P364 Take off contaminated clothing and wash it before reuse.

Disposal:

- P501 Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:

- 2-Oxepanone, polymer with 1,6-diisocyanatohexane and 1,6-hexanediol
- Hexamethylene diisocyanate, oligomers
- hexamethylene-di-isocyanate
- hexamethylene-di-isocyanate

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Hardener based on polyisocyanates

Components

| Chemical name | CAS-No. EC-No. Index-No. Registration number | Classification | Concentration (% w/w) |
|---|---|---|--------------------------|
| 2-Oxepanone, polymer with 1,6-diisocyanatohexane and 1,6-hexanediol | 164250-92-4 | Skin Sens. 1; H317 | >= 40 - <= 100 |
| Hexamethylene diisocyanate, oligomers | 28182-81-2 500-060-2500-060-2 | Skin Sens. 1; H317 | >= 40 - <= 100 |
| hexamethylene-di-isocyanate | 822-06-0 212-485-8 615-011-00-1 01-2119457571-37 | Acute Tox. 3; H331 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Resp. Sens. 1; H334 Skin Sens. 1; H317 STOT SE 3; H335 | >= 0,1 - < 0,25 |
| hexamethylene-di-isocyanate | 822-06-0 212-485-8 615-011-00-1 01-2119457571-37 | Acute Tox. 4; H302 Acute Tox. 1; H330 Skin Irrit. 2; H315 Eye Irrit. 2; H319 | >= 0,1 - < 0,25 |



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



Commercial Product Name: ALEXIT BR90H0-BladeRep Hardener 9
Quality No.: 4459900000000

Revision Date 30.01.2020

Print Date 30.01.2020

Version 2

| | | | |
|--|--|--|--|
| | | Resp. Sens. 1; H334 Skin Sens. 1; H317 STOT SE 3; H335 | |
|--|--|--|--|

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice : In all cases of doubt, or when sickness symptoms persist, seek medical attention.
Never give anything by mouth to an unconscious person.
- If inhaled : Remove to fresh air, keep patient warm and at rest.
Irregular breathing/no breathing: artificial respiration.
If unconscious place in recovery position and seek medical advice.
- In case of skin contact : Take off all contaminated clothing immediately.
Wash skin thoroughly with soap and water or use recognised skin cleanser.
Do NOT use solvents or thinners !
- In case of eye contact : Remove contact lenses, irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart and seek medical advice.
- If swallowed : Do NOT induce vomiting.
If accidentally swallowed obtain immediate medical attention.
Never give anything by mouth to an unconscious person.
Keep at rest.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : No information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media : Alcohol resistant foam, CO2, powders
- Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

- Specific hazards during fire-fighting : Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard.



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

MANKIEWICZ
Lackierideen der Zukunft



Commercial Product Name: ALEXIT BR90H0-BladeRep Hardener 9
Quality No.: 4459900000000

Revision Date 30.01.2020

Print Date 30.01.2020

Version 2

5.3 Advice for firefighters

Special protective equipment for firefighters : Appropriate breathing apparatus may be required.

Further information : Cool endangered containers with water in case of fire.
DO NOT ALLOW RUN-OFF FROM FIRE FIGHTING TO ENTER DRAINS OR WATER COURSES!!

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Exclude sources of ignition and ventilate the area.
Do not inhale vapours.
Refer to protective measures listed in sections 7 and 8.
Immediately clean contaminated areas with following substances:

| | |
|---------------------------------|----------|
| Water | 45 Vol.% |
| Ethanol or Isopropyl Alcohol | 50 Vol.% |
| Ammonia solution (density=0,88) | 5 Vol.% |

Alternative applicable to that (not flammable):

| | |
|------------------|----------|
| Sodium Carbonate | 5 Vol.% |
| Water | 95 Vol.% |

6.2 Environmental precautions

Environmental precautions : Do not let product enter drains.
If the product contaminates lakes, rivers or sewage, inform appropriate authorities in accordance with local regulations.
Add the same decontaminant to the remnants and let stand for several days until no further reaction in non-sealed container. Once this stage is reached, close container and dispose according to local regulations.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in container for disposal according to local regulations (see chapter 13).
Clean preferably with a detergent; avoid use of solvents.

6.4 Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Persons with a history of asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this preparation is used !
Comply with the health and safety at work laws.

Mankiewicz Gebr. & Co. (GmbH & Co. KG)
Georg-Wilhelm-Straße 189
21107 Hamburg (Wilhelmsburg)
Tel.: +49 (0) 40 / 75 10 30
Fax: +49 (0) 40 / 75 10 33 75
www.mankiewicz.de

| Bank Name | Ort | Kto.-Nr. | BLZ | BIC | IBAN |
|-----------------|---------|-----------|------------|-------------|-----------------------------|
| Deutsche Bank | Hamburg | 600227300 | 200 700 00 | DEUTDE33HAN | DE58 2007 0000 0600 2273 00 |
| HypoVereinsbank | Hamburg | 59273300 | 200 300 00 | HYVEDE33HAN | DE34 2003 0000 0059 2733 00 |
| Postbank | Hamburg | 373205 | 200 100 20 | PBNKDE33HAN | DE85 2001 0020 0000 3732 05 |

Sitz/Registriergericht Hamburg: HRA 42442
Persönlich haftende Gesellschafterin:
Grau Gebr. Beteiligungs-GmbH
Sitz/Registriergericht Hamburg: HRB 17189
Geschäftsführender Gesellschafter:
Michael O. Grau

Bureau Veritas
Certification:
ISO 9001,
TS 16949,
EN 9100



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



Commercial Product Name: ALEXIT BR90H0-BladeRep Hardener 9
Quality No.: 4459900000000

Revision Date 30.01.2020
Print Date 30.01.2020
Version 2

Smoking, eating and drinking should be prohibited in the application area.

Advice on protection against fire and explosion : Preparation may charge electrostatically: always use earthing leads when transferring from one container to another.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep container tightly closed. Never use pressure to empty: container is not a pressure vessel. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Further information on storage conditions : Always keep in containers of same material as the original one. See also instructions on the label. Avoid heating and direct sunlight. Keep container dry in a cool, well-ventilated place. Precautions should be taken to minimise exposure to atmospheric humidity or water: CO₂ will be formed which in closed containers can result in pressurisation. **DO NOT KEEP THE CONTAINERS SEALED !!**

Advice on common storage : Keep away from oxidizing agents and strongly acid or alkaline materials.

Recommended storage temperature : 5 - 35 °C

7.3 Specific end use(s)

Specific use(s) : This information is not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

| Components | CAS-No. | Value type (Form of exposure) | Control parameters | Basis |
|---------------------------------------|--|-------------------------------|------------------------------|---------|
| Hexamethylene diisocyanate, oligomers | 28182-81-2 | TWA | 0,02 mg/m ³ (NCO) | GB EH40 |
| Further information | Substances that can cause occupational asthma (also known as asthmagens and respiratory sensitizers) can induce a state of specific airway hyper-responsiveness via an immunological irritant or other mechanism. Once the airways have become hyper-responsive, further exposure to the substance, sometimes even in tiny quantities, may cause respiratory symptoms. These symptoms can range in severity from a runny nose to asthma. Not all workers who are exposed to a sensitizer will become hyper-responsive and it is impossible to identify in advance those who are likely to become hyper-responsive. Substances that can cause occupational asthma should be distinguished from substances which may trigger the symptoms of asthma in people with pre-existing airway hyper-responsiveness, but which do not include the disease themselves. The latter substances are not classified as asthmagens or respiratory sensitizers. Further information can be found in the | | | |



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

MANKIEWICZ
Lackierideen der Zukunft



Commercial Product Name: ALEXIT BR90H0-BladeRep Hardener 9
Quality No.: 4459900000000

Revision Date 30.01.2020
Print Date 30.01.2020
Version 2

| | | | | |
|--|--|------|---|---------|
| | | | HSE publication Asthmagen? Critical assessments of the evidence for agents implicated in occupational asthma., Wherever it is reasonably practicable, exposure to substances that can cause occupational asthma should be prevented. Where this is not possible, the primary aim is to apply adequate standards of control to prevent workers from becoming hyper-responsive. For substances that can cause occupational asthma, COSHH requires that exposure be reduced to as low as is reasonably practicable. Activities giving rise to short-term peak concentrations should receive particular attention when risk management is being considered. Health surveillance is appropriate for all employees exposed or liable to be exposed to a substance which may cause occupational asthma and there should be appropriate consultation with an occupational health professional over the degree of risk and level of surveillance., Capable of causing occupational asthma., The 'Sen' notation in the list of WELs has been assigned only to those substances which may cause occupational asthma in the categories shown in Table 1. It should be remembered that other substances not in these tables may cause occupational asthma. HSE's asthma web pages (www.hse.gov.uk/asthma) provide further information. | |
| | | STEL | 0,07 mg/m3 (NCO) | GB EH40 |

| | | | | |
|----------------------------|--|------|------------------|---------|
| hexamethylene-diisocyanate | 822-06-0 | TWA | 0,02 mg/m3 (NCO) | GB EH40 |
| Further information | Substances that can cause occupational asthma (also known as asthmagens and respiratory sensitisers) can induce a state of specific airway hyper-responsiveness via an immunological irritant or other mechanism. Once the airways have become hyper-responsive, further exposure to the substance, sometimes even in tiny quantities, may cause respiratory symptoms. These symptoms can range in severity from a runny nose to asthma. Not all workers who are exposed to a sensitiser will become hyper-responsive and it is impossible to identify in advance those who are likely to become hyper-responsive. Substances that can cause occupational asthma should be distinguished from substances which may trigger the symptoms of asthma in people with pre-existing airway hyper-responsiveness, but which do not include the disease themselves. The latter substances are not classified as asthmagens or respiratory sensitisers. Further information can be found in the HSE publication Asthmagen? Critical assessments of the evidence for agents implicated in occupational asthma., Wherever it is reasonably practicable, exposure to substances that can cause occupational asthma should be prevented. Where this is not possible, the primary aim is to apply adequate standards of control to prevent workers from becoming hyper-responsive. For substances that can cause occupational asthma, COSHH requires that exposure be reduced to as low as is reasonably practicable. Activities giving rise to short-term peak concentrations should receive particular attention when risk management is being considered. Health surveillance is appropriate for all employees exposed or liable to be exposed to a substance which may cause occupational asthma and there should be appropriate consultation with an occupational health professional over the degree of risk and level of surveillance., Capable of causing occupational asthma., The 'Sen' notation in the list of WELs has been assigned only to those substances which may cause occupational asthma in the categories shown in Table 1. It should be remembered that other substances not in these tables may cause occupational asthma. HSE's asthma web pages (www.hse.gov.uk/asthma) provide further information. | | | |
| | | STEL | 0,07 mg/m3 | GB EH40 |

Mankiewicz Gebr. & Co. (GmbH & Co. KG)
Georg-Wilhelm-Straße 189
21107 Hamburg (Wilhelmsburg)
Tel.: +49 (0) 40 / 75 10 30
Fax: +49 (0) 40 / 75 10 33 75
www.mankiewicz.de

| | | | | | |
|------------------|------------|-----------------|------------|-------------|-----------------------------|
| Bank Name | Ort | Kto.-Nr. | BLZ | BIC | IBAN |
| Deutsche Bank | Hamburg | 600227300 | 200 700 00 | DEUTDE33HAN | DE58 2007 0000 0600 2273 00 |
| HypoVereinsbank | Hamburg | 59273300 | 200 300 00 | HYVEDE33HAN | DE34 2003 0000 0059 2733 00 |
| Postbank | Hamburg | 373205 | 200 100 20 | PNBKDE33HAN | DE85 2001 0020 0000 3732 05 |

Sitz/Registriergericht Hamburg: HRA 42442
Bureau Veritas Certification: ISO 9001, TS 16949, EN 9100
Sitz/Registriergericht Hamburg: HRB 17189
Geschäftsführender Gesellschafter:
Michael O. Grau



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



Commercial Product Name: ALEXIT BR90H0-BladeRep Hardener 9
Quality No.: 4459900000000

Revision Date 30.01.2020
Print Date 30.01.2020
Version 2

| | | | | |
|----------------------------|--|------|------------------|---------|
| | | | (NCO) | |
| hexamethylene-diisocyanate | 822-06-0 | TWA | 0,02 mg/m3 (NCO) | GB EH40 |
| Further information | <p>Substances that can cause occupational asthma (also known as asthmagens and respiratory sensitisers) can induce a state of specific airway hyper-responsiveness via an immunological irritant or other mechanism. Once the airways have become hyper-responsive, further exposure to the substance, sometimes even in tiny quantities, may cause respiratory symptoms. These symptoms can range in severity from a runny nose to asthma. Not all workers who are exposed to a sensitiser will become hyper-responsive and it is impossible to identify in advance those who are likely to become hyper-responsive. Substances that can cause occupational asthma should be distinguished from substances which may trigger the symptoms of asthma in people with pre-existing airway hyper-responsiveness, but which do not include the disease themselves. The latter substances are not classified as asthmagens or respiratory sensitisers. Further information can be found in the HSE publication Asthmagen? Critical assessments of the evidence for agents implicated in occupational asthma., Wherever it is reasonably practicable, exposure to substances that can cause occupational asthma should be prevented. Where this is not possible, the primary aim is to apply adequate standards of control to prevent workers from becoming hyper-responsive. For substances that can cause occupational asthma, COSHH requires that exposure be reduced to as low as is reasonably practicable. Activities giving rise to short-term peak concentrations should receive particular attention when risk management is being considered. Health surveillance is appropriate for all employees exposed or liable to be exposed to a substance which may cause occupational asthma and there should be appropriate consultation with an occupational health professional over the degree of risk and level of surveillance., Capable of causing occupational asthma., The 'Sen' notation in the list of WELs has been assigned only to those substances which may cause occupational asthma in the categories shown in Table 1. It should be remembered that other substances not in these tables may cause occupational asthma. HSE's asthma web pages (www.hse.gov.uk/asthma) provide further information.</p> | | | |
| | | STEL | 0,07 mg/m3 (NCO) | GB EH40 |

Biological occupational exposure limits

| Substance name | CAS-No. | Control parameters | Sampling time | Basis |
|---------------------------------------|------------|---|--------------------------------------|----------------|
| Hexamethylene diisocyanate, oligomers | 28182-81-2 | isocyanate-derived diamine (Isocyanates): 1 µmol/mol creatinine (Urine) | At the end of the period of exposure | GB EH40 BAT |
| hexamethylene-diisocyanate | 822-06-0 | isocyanate-derived diamine (Isocyanates): 1 µmol/mol creatinine (Urine) | At the end of the period of exposure | GB EH40 BAT |
| hexamethylene-diisocyanate | 822-06-0 | isocyanate-derived diamine (Isocyanates): 1 µmol/mol creatinine | At the end of the period of exposure | GB EH40 BAT |

Mankiewicz Gebr. & Co. (GmbH & Co. KG)
Georg-Wilhelm-Straße 189
21107 Hamburg (Wilhelmsburg)
Tel.: +49 (0) 40 / 75 10 30
Fax: +49 (0) 40 / 75 10 33 75
www.mankiewicz.de

Bank Name Deutsche Bank
Ort Hamburg
Kto.-Nr. 600227300
BLZ 200 700 00
BIC DEUTDE33
IBAN DE58 2007 0000 0600 2273 00
HYPVDE33
Postbank Hamburg 373205
200 300 00
200 100 20
HYVEDE33
PNBKDE33

Sitz/Registergericht Hamburg: HRA 42442
Persönlich haftende Gesellschafterin:
Grau Gebr. Beteiligungs-GmbH
Sitz/Registergericht Hamburg: HRB 17189
Geschäftsführender Gesellschafter:
Michael O. Grau
Bureau Veritas
Certification:
ISO 9001,
TS 16949,
EN 9100



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



Commercial Product Name: ALEXIT BR90H0-BladeRep Hardener 9
Quality No.: 4459900000000

Revision Date 30.01.2020
Print Date 30.01.2020
Version 2

| | | | | |
|--|--|---------|--|--|
| | | (Urine) | | |
|--|--|---------|--|--|

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

| Substance name | End Use | Exposure routes | Potential health effects | Value |
|-----------------------------|---------|-----------------|--------------------------|-------------|
| hexamethylene-di-isocyanate | Workers | Inhalation | Long-term local effects | 0,035 mg/m3 |
| hexamethylene-di-isocyanate | Workers | Inhalation | Long-term local effects | 0,035 mg/m3 |

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

| Substance name | Environmental Compartment | Value |
|-----------------------------|---------------------------|-----------|
| hexamethylene-di-isocyanate | Sewage treatment plant | 8,42 mg/l |
| hexamethylene-di-isocyanate | Sewage treatment plant | 8,42 mg/l |

8.2 Exposure controls

Engineering measures

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and below the OEL (= Occupational Exposure Limit), suitable respiratory protection must be worn.

Personal protective equipment

Eye protection : Wear safety goggles to protect against splashes.

Hand protection

Remarks : Adhere to the professional organisation rule "Use of protective gloves". Appropriate chemicals resistant glove tested in compliance with EN 374.
Recommendation for protection against components generally found in the products:

For short-term contact (i.e. splash protection):

Appropriate material:

nitrile rubber, Neoprene

Material thickness: > 0,4 mm

Breakthrough time: > 480 min

Before use, the protective glove should be tested in any case for its specific work-station suitability (i.e. mechanical resistance, product compatibility and antistatic properties). Adhere to the manufacturer's instructions and information relating to the use, storage, care and replacement of protective gloves. Protective gloves shall be replaced immediately when physically damaged or worn. Preventive hand protection (skin protection cream) recommended. Wash immediately contaminated skin. Design operations thus to avoid permanent use of protective gloves.

Skin and body protection : Clothing as usual in the chemical industry.
Skin should be washed after contact.

Respiratory protection : By spraying: air-fed respirator.
By other operations than spraying: in well ventilated

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



Commercial Product Name: ALEXIT BR90H0-BladeRep Hardener 9
Quality No.: 4459900000000

Revision Date 30.01.2020
Print Date 30.01.2020
Version 2

areas, air-fed respirators could be replaced by a combination of charcoal filter and particulate filter mask

Protective measures : Persons with a history of asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this preparation is used.
Do not eat or drink during work - no smoking.
Avoid product contact with skin, eyes and clothing.
Avoid the inhalation of dust from sanding, particulates and spray mist arising from the application of this preparation.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : liquid

Colour : according product name

Odour : characteristic

Flash point : Not applicable

Vapour pressure : ca. 100 hPa (50 °C)

Density : ca. 1,1 g/cm³ (20 °C)

Solubility(ies)
Water solubility : insoluble

Viscosity
Flow time : > 150 s
Cross section: 4 mm
Method: DIN 53211

> 100 s
Cross section: 6 mm
Method: ISO 2431

9.2 Other information

Solvent separation : < 3 %(V)

SECTION 10: Stability and reactivity

10.1 Reactivity

No decomposition if stored and applied as directed.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : No dangerous reaction known under conditions of normal use.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



Commercial Product Name: ALEXIT BR90H0-BladeRep Hardener 9
Quality No.: 4459900000000

Revision Date 30.01.2020
Print Date 30.01.2020
Version 2

10.4 Conditions to avoid

Conditions to avoid : Stable under recommended storage and handling conditions (See section 7).

10.5 Incompatible materials

Materials to avoid : Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions. The product reacts slowly with water resulting in evolution of carbon dioxide. In closed containers, pressure build up could result distortion blowing and in extreme cases bursting of the container.

10.6 Hazardous decomposition products

In a fire, hazardous decomposition products, such as smoke, carbon monoxide, carbon dioxide, oxides of nitrogen, hydrogen cyanide, monomers of isocyanates, amines and alcohols may be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product:

Acute inhalation toxicity : Acute toxicity estimate: > 20 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: Calculation method

Components:

hexamethylene-di-isocyanate:

Acute oral toxicity : LD50 (Rat): 746 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): 0,124 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: OECD Test Guideline 403

Further information

Product:

Remarks : Exposure of vapour concentration in excess of the stated OEL's may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue muscular weakness, drowsiness and in extrem cases, loss of consciousness.



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

MANKIEWICZ
Lackierideen der Zukunft



Commercial Product Name: ALEXIT BR90H0-BladeRep Hardener 9
Quality No.: 4459900000000

Revision Date 30.01.2020

Print Date 30.01.2020

Version 2

Based on the properties of the isocyanate components and considering toxicological data on similar preparations: This preparation may cause acute irritation and/or sensitization of the respiratory system leading to an asthmatic condition, wheeziness and a tightness of the chest. Sensitized persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the OEL. Repeated exposure may lead to permanent respiratory disability. The liquid splashed in the eyes may cause irritation and reversible damage.

SECTION 12: Ecological information

12.1 Toxicity

Product:

Ecotoxicology Assessment

Acute aquatic toxicity : There are no data available on the preparation itself.

12.2 Persistence and degradability

Product:

Biodegradability : Remarks: There are no data available on the preparation itself.

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: There are no data available on the preparation itself.

12.4 Mobility in soil

Product:

Mobility : Remarks: There are no data available on the preparation itself.

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher..

12.6 Other adverse effects

Product:

Additional ecological information : There are no data available on the preparation itself.
The product should not be allowed to enter drains or water

Mankiewicz Gebr. & Co. (GmbH & Co. KG)
Georg-Wilhelm-Straße 189
21107 Hamburg (Wilhelmsburg)
Tel.: +49 (0) 40 / 75 10 30
Fax: +49 (0) 40 / 75 10 33 75
www.mankiewicz.de

| Bank Name | Ort | Kto.-Nr. | BLZ | BIC | IBAN |
|-----------------|---------|-----------|------------|-------------|-----------------------------|
| Deutsche Bank | Hamburg | 600227300 | 200 700 00 | DEUTDE33HAN | DE58 2007 0000 0600 2273 00 |
| HypoVereinsbank | Hamburg | 59273300 | 200 300 00 | HYVEDE33HAN | DE34 2003 0000 0059 2733 00 |
| Postbank | Hamburg | 373205 | 200 100 20 | PBNKDE33HAN | DE85 2001 0020 0000 3732 05 |

Sitz/Registriergericht Hamburg: HRA 42442
Bureau Veritas
Certification:
ISO 9001,
TS 16949,
EN 9100
Michael O. Grau



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



Commercial Product Name: ALEXIT BR90H0-BladeRep Hardener 9
Quality No.: 4459900000000

Revision Date 30.01.2020

Print Date 30.01.2020

Version 2

courses.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

- Product : The listed waste code numbers, according to the European Waste Catalogue, are to be understood as a recommendation. A final decision must be made in agreement with the regional waste disposal company.
- Contaminated packaging : Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse. Packaging that cannot be cleaned should be disposed off in agreement with the regional waste disposal company.
- Waste key for the unused product : 08 01 11 waste paint and varnish containing organic solvents or other hazardous substances

SECTION 14: Transport information

14.1 UN number

Not regulated as a dangerous good

14.2 UN proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class(es)

Not regulated as a dangerous good

14.4 Packing group

- ADR : Not regulated as a dangerous good
- Remarks : If transported within the user's premises: To be transported always in closed, upright and safe containers. Make sure that persons handling these containers are aware of the rules of conduct in case of incident or spillage.

IMDG : Not regulated as a dangerous good

IATA (Cargo) : Not regulated as a dangerous good

IATA (Passenger) : Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Not applicable

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

Not applicable for product as supplied.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



Commercial Product Name: ALEXIT BR90H0-BladeRep Hardener 9
Quality No.: 4459900000000

Revision Date 30.01.2020
Print Date 30.01.2020
Version 2

SECTION 15: Regulatory information

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

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59) : Not applicable

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Volatile organic compounds :

Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control)
Volatile organic compounds (VOC) content: 49,76 %, 547,31 g/l
VOC content excluding water

Other regulations:

The information given in this material safety data sheet does not release the user from its duty of risk assessment and control in the work place defined in other health and safety law.
Adhere to the national sanitary and occupational safety regulations when using this product.

15.2 Chemical safety assessment

A chemical safety assessment has not been carried out for the mixture.

SECTION 16: Other information

Full text of H-Statements

H302 : Harmful if swallowed.
H315 : Causes skin irritation.
H317 : May cause an allergic skin reaction.
H319 : Causes serious eye irritation.
H330 : Fatal if inhaled.
H331 : Toxic if inhaled.
H334 : May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 : May cause respiratory irritation.

Full text of other abbreviations

Acute Tox. : Acute toxicity
Eye Irrit. : Eye irritation
Resp. Sens. : Respiratory sensitisation
Skin Irrit. : Skin irritation
Skin Sens. : Skin sensitisation
STOT SE : Specific target organ toxicity - single exposure
GB EH40 : UK. EH40 WEL - Workplace Exposure Limits
GB EH40 BAT : UK. Biological monitoring guidance values
GB EH40 / TWA : Long-term exposure limit (8-hour TWA reference period)
GB EH40 / STEL : Short-term exposure limit (15-minute reference period)

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



Commercial Product Name: ALEXIT BR90H0-BladeRep Hardener 9
Quality No.: 4459900000000

Revision Date 30.01.2020
Print Date 30.01.2020
Version 2

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Other information : This safety datasheet complies with the requirements of regulation (EC) No 1907/2006(2015/830).

Classification of the mixture:

Skin Sens. 1 H317

Classification procedure:

Calculation method

Department issuing safety data sheet

UMCO GmbH
Georg-Wilhelm-Str.187, D-21107 Hamburg
Telefon: +49(0)40/555 546 300 Fax: +49(0)40/555 546 357
e-mail:umco@umco.de

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.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



Commercial Product Name: ALEXIT BR90H0-BladeRep Hardener 9
Quality No.: 4459900000000

Revision Date 30.01.2020
Print Date 30.01.2020
Version 2

GB / EN