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LUX ELEMENTS®-COL-PU

Safety Data Sheet according to EC-Regulation 91/155/EEC

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

Identification of the substance or preparation

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Use of the substance/preparation

Adhesive

Company/undertaking identification

LUX ELEMENTS GmbH & Co. KG, An der Schusterinsel 7, D-51379 Leverkusen
Telephone +49 (0)2171/72 12-0, Fax +49 (0)2171/72 12-40
info@luxelements.de, www.luxelements.de

Emergency telephone / Office for advice

Advisory office in case of poisoning:

Tel.: ---

Telephone number of the company in case of emergencies:

Tel. +49 5262 / 99 39 657 (LEC)

2. Composition/information on ingredients

| 2.1 Chemical name | content % | symbol | R-phrases | EINECS, ELINCS |
|--------------------------------|-----------|--------|-----------------------|-------------------|
| Methylenediphenyl diisocyanate | 30 - 60 | Xn/Xi | 20-36/37/38- 42/43 | 247-714-0 |

For complete wording of the R-phrases, refer to point 16.

3. Hazards identification

3.1 To people

See point 11 and 15.

Preparation is classified as hazardous in the sense of directive 1999/45/EC.

Irritation of the eyes

Skin contact:

Irritation of the skin.

May cause sensitization by skin contact.

Inhalation:

Product is dangerous to health.

Irritation of the respiratory tract

May cause sensitization by inhalation.

3.2 To the environment

See point 12.

4. First aid measures

Delayed effects from exposure can be expected.

4.1 Inhalation

Remove person from danger area.

Supply person with fresh air. Call doctor immediately.

If the person is unconscious, place in a stable side position and consult a doctor.

4.2 Eye contact

Wash thoroughly for several minutes using copious water - call doctor immediately, have Data Sheet available.

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4.3 Skin contact

Wash thoroughly with soap and copious water - remove contaminated clothing immediately. If skin irritation occurs (redness etc.), consult doctor.

4.4 Ingestion

Rinse the mouth thoroughly with water.

Do not induce vomiting - give copious water to drink. Consult doctor immediately.

4.5 Special resources necessary for first aid

n.c.

Symptoms:

Nausea

Respiratory distress

Dizziness

Headaches

Coughing

5. Fire-fighting measures

5.1 Suitable extinguishing media

CO2

Extinction powder

Water jet spray

Large fire:

Water jet spray / alcohol resistant foam

Cool container at risk with water.

5.2 Extinguishing media which must not be used for safety reasons

High volume water jet

5.3 Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases

In case of fire the following can develop:

Oxides of carbon

Oxides of nitrogen

Toxic pyrolysis products.

Traces possible:

Isocyanates

Hydrocyanic acid (hydrogen cyanide)

5.4 Special protective equipment for fire-fighters

Protective respirator with independent air supply

5.5 Further information

Dispose of contaminated extinction water according to official regulations.

6. Accidental release measures

Refer to point 13. and for personal protection refer to point 8.

6.1 Personal precautions

Ensure sufficient supply of air.

Avoid inhalation, and contact with eyes or skin.

If applicable, caution - risk of slipping.

6.2 Environmental measures

If leakage occurs, dam up.

Prevent from entering drainage system.

Prevent surface and ground-water infiltration, as well as ground penetration.

6.3 Methods for cleaning up

Collect using absorbant material (e.g. Universal binding medium, sand, kieselguhr, sawdust), and dispose of according to point 13.

Keep moist.

Do not close packing drum.

Allow to stand for a few days in an unclosed container until reaction no longer occurs.

CO2 formation in closed tanks causes pressure to rise.

Hardened product:

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Collect mechanically and dispose of according to point 13.

7. Handling and storage

7.1 Handling

Tips for safe handling:

See point 6.1

Avoid aerosol formation.

Avoid inhalation of the vapours.

Ensure good ventilation.

If applicable, suction measures at the workstation or on the processing machine necessary.

Avoid contact with eyes or skin.

Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.

Wash hands before breaks and at end of work.

Observe directions on label and instructions for use.

Use working methods according to operating instructions.

No contact with products of this type in case of allergies, asthma und chronic respiratory tract disorders.

7.2. Storage

Requirements for storage rooms and

containers:

Not to be stored in gangways or stair wells.

Store products only unopened, in original packing.

Keep away from food, drink and animal feedingstuffs.

Special storage conditions:

See point 10.2

Avoid exposure to moist air and water.

Store cool

Protect from direct sunlight and warming.

Keep out of access to unauthorised individuals.

8. Exposure controls/personal protection

Ensure good ventilation. This can be achieved by local suction or general air extraction.

If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn.

Applies only if maximum permissible exposure values are listed here.

| Chemical Name | Methylenediphenyl diisocyanate | |
|------------------------------------------------------------------------------|------------------------------------------------------|-----|
| WEL-TWA: 0,02 mg/m3 (Isocyanates, all (as - NCO)) | WEL-STEL: 0,07 mg/m3 (Isocyanates, all (as - NCO)) | --- |
| BMGV: 1 µmol urinary diamine/mol creatinine in urine (Isocyanate, post task) | Other information: Sen (Isocyanates, all (as - NCO)) | |

| Chemical Name | Calcium carbonate | |
|---------------------------------------------------------------------|------------------------|-----|
| WEL-TWA: 4 mg/m3 (respirable dust), 10 mg/m3 (total inhalable dust) | WEL-STEL: --- | --- |
| BMGV: --- | Other information: --- | |

| Chemical Name | Silica, amorphous | |
|------------------------------------------------------------|------------------------|-----|
| WEL-TWA: 6 mg/m3 (total inh. dust), 2,4 mg/m3 (resp. dust) | WEL-STEL: --- | --- |
| BMGV: --- | Other information: --- | |

WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period). | BMGV = Biological monitoring guidance value EH40. BGW = "Biologischer Grenzwert" (biological limit value, Germany) | Other information: Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.
** = The exposure limit for this substance is repealed through the TRGS 900 (Germany) of January 2006 with the goal of revision.

8.1 Respiratory protection:

With short-term contact:

Filter A B (EN 141)

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At high concentrations:

Respiratory protection appliance (insulation device) (e.g. EN 137 or EN 138)

8.2 Hand protection:

Chemical resistant protective gloves (EN 374).

Recommended

Protective gloves in butyl rubber (EN 374).

Protective hand cream recommended.

8.3 Eye protection:

Tight fitting protective goggles with side protection (EN 166).

8.4 Skin protection:

Protective working garments (e.g. safety shoes EN 344, long-sleeved protective working garments)

Additional information on hand protection - No tests have been performed.

Selection made for preparations according to the best available knowledge and information on the ingredients.

Selection of materials derived from glove manufacturer's indications.

Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.

Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.

In the case of preparations the resistance of glove materials cannot be calculated in advance so it has to be tested before use. The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

9. Physical and chemical properties

| | |
|-----------------------------|----------------------------|
| Physical state: | Pastelike |
| Colour: | According to specification |
| Odour: | Characteristic |
| pH-value undiluted: | n.a. |
| Boiling point/range (°C): | Not specified |
| Melting point/range (°C): | Not detected |
| Flash point (°C): | n.a. |
| Autoflammability: | No |
| Oxidising properties: | No |
| Minimum limit of explosion: | n.a. |
| Maximum limit of explosion: | n.a. |
| Product is not explosive. | |
| Vapour pressure: | Not detected |
| Density (g/ml): | 1,48 g/cm ³ |
| Solubility in water: | reacts with water |

10. Stability and reactivity

10.1 Conditions to avoid

See point 7

Stable when handled and stored correctly.

Protect from humidity.

Strong heat

10.2 Materials to avoid

See point 7

Oxidizing agents

Acids

Bases

Amines

Alcohols

Water

Development of:

CO₂

CO₂ formation in closed tanks causes pressure to rise.

10.3 Hazardous decomposition products

See point 5.3

No decomposition when used as directed.

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11. Toxicological information

11.1 Acute toxicity and immediate effects

| | |
|----------------------------------------|---------------|
| Ingestion, LD50 rat oral (mg/kg): | > 2000 * |
| Inhalation, LC50 rat inhal.(mg/l/4h): | See point 15. |
| Skin contact, LD50 rat dermal (mg/kg): | See point 15. |
| Eye contact: | See point 15. |

11.2 Delayed and chronic effects

| | |
|------------------------|------------------------------------|
| Sensitization: | Yes (inhalation and skin contact) |
| Carcinogenicity: | K3 (MDI, pMDI) (TRGS 905), Aerosol |
| Mutagenicity: | n.c. |
| Reproductive toxicity: | n.c. |
| Narcosis: | n.c. |

11.3. Further information

The product was not tested.

Classification according to calculation procedure.

The following may occur:

Dermatitis (skin inflammation)

Drying of the skin.

Allergic contact eczema

Asthmatic symptoms

In case of sensitivity, concentrations below the limit value may already result in asthmatic symptoms.

* Methylenediphenyl diisocyanate

12. Ecological information

| | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| Water hazard class (Germany): | 1 |
| Self classification: | Yes (VwVwS) |
| Persistence and degradability: | |
| With water at the interface, transforms slowly with formation of CO ₂ into a firm, insoluble reaction product with a high melting point (polycarbamide). | |
| According to experience available to date, polycarbamide is inert and non-degradable. | |
| Behaviour in sewage plants: | According to the recipe, contains no AOX. |
| Aquatic toxicity: | n.av. |
| Ecological toxicity: | n.av. |

13. Disposal considerations

13.1. for the material / preparation / residue

EC disposal code no.:

The waste codes are recommendations based on the scheduled use of this product.

Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (2001/118/EC, 2001/119/EC, 2001/573/EC)

08 04 09 waste adhesives and sealants containing organic solvents or other dangerous substances

08 05 01 waste isocyanates

Recommendation:

Pay attention to local and national official regulations

E.g. suitable incineration plant.

E.g. dispose at suitable refuse site.

Hardened product:

Can be disposed of with household rubbish.

13.2 for contaminated packing material

See point 13.1

Pay attention to local and national official regulations

Empty container completely.

Untamminated packaging can be recycled.

Dispose of packaging that cannot be cleaned in the same manner as the substance.

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14. Transport information

General statements

UN-Number: n.a.

Road/Rail-transport (ADR/RID)

Class/packing-group: n.a.

Classification code: n.a.

LQ: n.a.

Transport by sea

IMDG-code: n.a. (class/packing-group)

Marine Pollutant: n.a.

Transport by air

IATA: n.a. (class/secondary danger/packing-group)

Additional information:

Non-dangerous material according to Transport Regulations.

15. Regulatory information

Classification according to Dangerous Product Regulations incl. EC Directives (67/548/EEC and 1999/45/EC)



Symbols: Xn

Indications of danger:

Harmful

R-phrases:

20 Harmful by inhalation.

36/37/38 Irritating to eyes, respiratory system and skin.

42/43 May cause sensitization by inhalation and skin contact.

S-phrases:

(2) Keep out of the reach of children.

23.b Do not breathe vapour.

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

35 This material and its container must be disposed of in a safe way.

36/37 Wear suitable protective clothing and gloves.

45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Additions:

Contains isocyanates. See information supplied by the manufacturer.

Methylenediphenyl diisocyanate

Observe restrictions: Yes

Observe youth employment law (German regulation).

Observe law on protection of expectant mothers (German regulation).

Observe restrictive guidelines 76/769/EEC, 1999/51/EC, 1999/77/EC

VOC 1999/13/EC 0%

16. Other information

These details refer to the product as it is delivered.

Storage class VCI (Germany): 10 - 13

Revised points: 1

The following phrases represent the prescribed R-phrases for the ingredients (designated in point 2).

20 Harmful by inhalation.

36/37/38 Irritating to eyes, respiratory system and skin.

42/43 May cause sensitization by inhalation and skin contact.

Legend:

n.a. = not applicable / n.v., k.D.v. = n.av. = not available / n.g. = n.c. = not checked

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AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany) / BGW = "Biologischer Grenzwert" (biological limit value, Germany)
VbF = Regulations for flammable liquids (Austria)
WGK = water hazard class (Germany) - WGK 3 = very hazardous, WGK 2 = hazardous, WGK 1 = slightly hazardous to water
VOC = Volatile organic compounds / AOX = Adsorbable organic halogen compounds
VwVwS = Administrative Order relating to substances hazardous to water (Germany)

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge.
No responsibility.

These statements were made by:

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