

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

- Product identifier
- Trade name **LasilCast 1, 2, 5, 6, 8, 10, 12 component B**
- Utilization of the substance of the formulation: Hardener for Polyole
- Relevant identified uses of the substance or mixture and uses advised against
- Sector of Use SU12 Manufacture of plastics products, including compounding and conversion
- Details of the supplier of the safety data sheet
- Manufacturer/Supplier:
ALTROPOL KUNSTSTOFF GmbH
Rudolf-Diesel-Str 9 - 13
D-23617 Stockelsdorf
Tel. +49 (0)451-49960-0
Fax. +49 (0)451-49960-20
e-mail: info@altropol.de
- Further information obtainable from: environment protection department
- Emergency telephone number:
During normal opening times (7 am - 5 pm)
phone : +49 (0)451-49960-0 or +49 (0)176-10232577

* 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. |
| Asp. Tox. 1 | H304 May be fatal if swallowed and enters airways. |



GHS07

- | | |
|-------------------|--|
| 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. |
| Aquatic Chronic 4 | H413 May cause long lasting harmful effects to aquatic life. |

- Classification according to Directive 67/548/EEC or Directive 1999/45/EC



Xn; Harmful

- | | |
|---------------|---|
| R20-40-48/20: | Harmful by inhalation. Limited evidence of a carcinogenic effect. Harmful: danger of serious damage to health by prolonged exposure through inhalation. |
|---------------|---|



Xn; Sensitising

- | | |
|---------|---|
| R42/43: | May cause sensitisation by inhalation and skin contact. |
|---------|---|



Xi; Irritant

- | | |
|------------|--|
| R36/37/38: | Irritating to eyes, respiratory system and skin. |
|------------|--|

- | | |
|------|---|
| R53: | May cause long-term adverse effects in the aquatic environment. |
|------|---|

(Contd. on page 2)

Trade name **LasilCast 1, 2, 5, 6, 8, 10, 12 comp. B**

(Contd. of page 1)

- Information concerning particular hazards for human and environment:
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- Classification system:
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

· Label elements

· Labelling according to EU guidelines:

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

· Code letter and hazard designation of product:



Xn Harmful

· Hazard-determining components of labelling:
4,4'-Diphenyl-Methan-Diisocyanat.oligomere

· Risk phrases:

- 20 Harmful by inhalation.
- 36/37/38 Irritating to eyes, respiratory system and skin.
- 40 Limited evidence of a carcinogenic effect.
- 42/43 May cause sensitisation by inhalation and skin contact.
- 48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.
- 53 May cause long-term adverse effects in the aquatic environment.

· Safety phrases:

- 9 Keep container in a well-ventilated place.
- 23 Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).
- 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- 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).
- 60 This material and its container must be disposed of as hazardous waste.
- 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

· 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:

| | | |
|------------|---|----------|
| 25686-28-6 | 4,4'-Diphenyl-Methan-Diisocyanat.oligomere Xn R20-40-48/20; Xn R42/43; Xi R36/37/38 Carc. Cat. 3 Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335 | 50- 75% |
| 38640-62-9 | alkylated aromatic hydrocarbon R53 Asp. Tox. 1, H304; Aquatic Chronic 4, H413 | 25 - 50% |

(Contd. on page 3)

Printing date 22.11.2012

Version number 25

Revision: 22.10.2012

Trade name **LasilCast 1, 2, 5, 6, 8, 10, 12 comp. B**

(Contd. of page 2)

- Additional information: For the wording of the listed risk phrases refer to section 16.

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: Immediately wash with water and soap and rinse thoroughly.
- After eye contact:
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- After swallowing: If symptoms persist consult doctor.
- Information for doctor:
· Most important symptoms and effects, both acute and delayed No further relevant information available.
- Indication of any immediate medical attention and special treatment needed
No further relevant information available.

5 Firefighting measures

- Extinguishing media
- Suitable extinguishing agents: Extinguishing powder. Do not use water.
- For safety reasons unsuitable extinguishing agents:
Water with full jet
Water
- Special hazards arising from the substance or mixture
Nitrogen oxides (NOx)
Carbon monoxide (CO)
- Advice for firefighters
- Protective equipment: Wear self-contained respiratory protective device.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
cover accouterment bear , exposed person remove
- Environmental precautions: 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.

7 Handling and storage

- Handling:
- Precautions for safe handling
provide for best ventilation in the work space
Prevent formation of aerosols.

(Contd. on page 4)

GB

Printing date 22.11.2012

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Revision: 22.10.2012

Trade name **LasilCast 1, 2, 5, 6, 8, 10, 12 comp. B**

(Contd. of page 3)

- Information about fire - and explosion protection:
Protect against electrostatic charges.
Keep ignition sources away - Do not smoke.
- Conditions for safe storage, including any incompatibilities
- Storage:
Requirements to be met by storerooms and receptacles:
Keep container tightly closed and dry and storage in a good ventilated room.
- Storage temperature: 15 - 25 °C.
- Information about storage in one common storage facility:
Store away from water.
Store away from foodstuffs.
- Further information about storage conditions:
Keep container tightly sealed.
Protect from humidity and water.
- 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:

25686-28-6 4,4'-Diphenyl-Methan-Diisocyanat.oligomere

| | |
|---------------|---|
| MAK (Germany) | Short-term value: 0.05 mg/m ³ Long-term value: 0.05 mg/m ³ |
|---------------|---|

- DNELs

38640-62-9 alkylated aromatic hydrocarbon

| | | |
|------------|------|---|
| Oral | DNEL | 2.1 mg/kg/d (General population) |
| Dermal | DNEL | 2.1 mg/kg/d (General population) |
| | | 4.3 mg/kg/d (workers) |
| Inhalative | DNEL | 7.4 mg//m ³ (General population) |
| | | 30 mg//m ³ (workers) |

- PNECs

38640-62-9 alkylated aromatic hydrocarbon

| | |
|---------------|----------------------------|
| PNEC | 25 mg/kg (-) |
| PNEC STP | 0.15 mg/L (-) |
| PNEC aqua | 0.26 ug/L (freshwater) |
| | 0.026 ug/L (marine water) |
| PNEC sediment | 0.94 mg/kg (freshwater) |
| | 0.094 mg/kg (marine water) |
| PNEC soil | 0.19 mg/kg (-) |

- 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.

(Contd. on page 5)

GB

Trade name **LasilCast 1, 2, 5, 6, 8, 10, 12 comp. B**

(Contd. of page 4)

- Respiratory protection:



In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Filter P2

- Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- Eye protection:



Tightly sealed goggles

- Body protection: Protective work clothing

9 Physical and chemical properties

- Information on basic physical and chemical properties

- General Information

- Appearance:

| | |
|----------|------------------------------------|
| Form: | Fluid |
| Colour: | According to product specification |
| · Odour: | Characteristic |

- Change in condition

| | |
|------------------------------|---------------|
| Melting point/Melting range: | Undetermined. |
| Boiling point/Boiling range: | 208°C |

- Flash point: 212°C

- Ignition temperature: 520°C

- Self-igniting: Product is not selfigniting.

- Danger of explosion: Product does not present an explosion hazard.

- Vapour pressure at 43°C: < 0.00010 mbar

- Density at 20°C: 1.23 g/cm³

- Solubility in / Miscibility with water: reacts with water forming CO₂, risk of bursting

(Contd. on page 6)

Printing date 22.11.2012

Version number 25

Revision: 22.10.2012

Trade name **LasilCast 1, 2, 5, 6, 8, 10, 12 comp. B**

(Contd. of page 5)

- | | |
|---------------------|--|
| · Viscosity: | |
| Dynamic at 20°C: | 220 mPas |
| VOC (EC) | 0.00 % |
| · Other information | No further relevant information available. |

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 CO₂, in closed containers risk of bursting owing to increase of pressure.
- Conditions to avoid No further relevant information available.
- Incompatible materials: water , alcohol , amine , base and acid
- Hazardous decomposition products: Hydrogen cyanide (prussic acid)

11 Toxicological information

- Information on toxicological effects
- Acute toxicity:

- LD/LC50 values relevant for classification:

25686-28-6 4,4'-Diphenyl-Methan-Diisocyanat.oligomere

| | | |
|------|------|----------------------|
| Oral | LD50 | > 5000 mg/kg (Ratte) |
|------|------|----------------------|

38640-62-9 alkylated aromatic hydrocarbon

| | | |
|------|-------|-------------------------------|
| Oral | LD50 | 4000 mg/kg (Ratte) (OECD 401) |
| | NOAEL | 170 mg/kg (Ratte) |

| | | |
|--------|------|-------------------------------|
| Dermal | LD50 | 4050 mg/kg (Ratte) (OECD 402) |
|--------|------|-------------------------------|

| | | |
|------------|----------|-----------------------------|
| Inhalative | LC50/4 h | 5.8 mg/l (Ratte) (OECD 403) |
|------------|----------|-----------------------------|

- 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.
- Additional toxicological information:
 - The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
 - Harmful
 - Irritant

12 Ecological information

- Toxicity

- Aquatic toxicity:

25686-28-6 4,4'-Diphenyl-Methan-Diisocyanat.oligomere

| | |
|-------------|-----------------|
| EC50 (72 h) | > 100 mg/l (B) |
| | > 1000 mg/l (D) |

| | |
|-------------|-----------------|
| LC50 (96 h) | > 1000 mg/l (F) |
|-------------|-----------------|

(Contd. on page 7)

GB

Trade name **LasilCast 1, 2, 5, 6, 8, 10, 12 comp. B**

(Contd. of page 6)

38640-62-9 alkylated aromatic hydrocarbon



| | |
|------------|---------------------------------------|
| EC0 (48h) | 0.16 mg/l (Daphnia Magna) (OECD 202) |
| EC0 (72h) | 0.15 mg/l (A) (OECD 201) |
| LC0(96h) | 0.5 mg/l (F) (OECD 203) |
| NOEC (21d) | 0.013 µg/l (Daphnia Magna) (OECD 202) |

- 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:
- 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.
Must be specially treated adhering to official regulations.
- Uncleaned packaging:
- Recommendation: Disposal must be made according to official regulations.

14 Transport information

- UN-Number
 - ADR, ADN
 - IMDG, IATA
- Void
UN3082
- UN proper shipping name
 - ADR, ADN
 - IMDG
 - IATA
- Void
ENVIRONMENTALLY HAZARDOUS SUBSTANCE,
LIQUID, N.O.S. (alkylated aromatic hydrocarbon),
MARINE POLLUTANT
ENVIRONMENTALLY HAZARDOUS SUBSTANCE,
LIQUID, N.O.S. (alkylated aromatic hydrocarbon)
- Transport hazard class(es)
 - ADR, ADN
 - Class
 - IMDG, IATA
- Void
- 

- Class
 - Label
- 9 Miscellaneous dangerous substances and articles.
9

(Contd. on page 8)

Trade name **LasilCast 1, 2, 5, 6, 8, 10, 12 comp. B**

(Contd. of page 7)

| | |
|---|------------------------|
| · Packing group | Void |
| · ADR | III |
| · IMDG, IATA | III |
| · Environmental hazards: | |
| · Marine pollutant: | Yes |
| | Symbol (fish and tree) |
| · Special marking (IATA): | Symbol (fish and tree) |
| · Special precautions for user | Not applicable. |
| · EMS Number: | F-A,S-F |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · UN "Model Regulation": | - |

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Labelling according to EU guidelines:
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.
- Code letter and hazard designation of product:



Xn Harmful

- Hazard-determining components of labelling:
4,4'-Diphenyl-Methan-Diisocyanat.oligomere
- Risk phrases:
 - 20 Harmful by inhalation.
 - 36/37/38 Irritating to eyes, respiratory system and skin.
 - 40 Limited evidence of a carcinogenic effect.
 - 42/43 May cause sensitisation by inhalation and skin contact.
 - 48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.
 - 53 May cause long-term adverse effects in the aquatic environment.
- Safety phrases:
 - 9 Keep container in a well-ventilated place.
 - 23 Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).
 - 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 - 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).
 - 60 This material and its container must be disposed of as hazardous waste.
 - 61 Avoid release to the environment. Refer to special instructions/safety data sheets.
- National regulations:
- Waterhazard class: Water hazard class 1 (VwVwS 17.05.99): slightly hazardous for water.
- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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(Contd. on page 9)

Trade name **LasilCast 1, 2, 5, 6, 8, 10, 12 comp. B**

(Contd. of page 8)

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

- H304 May be fatal if swallowed and enters airways.
- 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.
- H413 May cause long lasting harmful effects to aquatic life.
- R20 Harmful by inhalation.
- R36/37/38 Irritating to eyes, respiratory system and skin.
- R40 Limited evidence of a carcinogenic effect.
- R42/43 May cause sensitisation by inhalation and skin contact.
- R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.
- R53 May cause long-term adverse effects in the aquatic environment.

· Department issuing MSDS: environment protection department

· Contact:

Herr Karasmann Tel. +49 (0)451-49960-0
Herr Grützmacher Tel. +49 (0)2056-25863-6

· 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
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
VOC: Volatile Organic Compounds (USA, EU)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

· * Data compared to the previous version altered.