

Safety data sheet

according to 1907/2006/EC, Article 31

Revision: 28.04.2015

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

- **1.1 Product identifier: URETHANE AUTO GLASS ADHESIVE/SEALANT**
- **Stock CUS**
- **Code: 9006**
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Sector of Use**
 SU3 Industrial uses: uses of substances as such or in preparations at industrial sites
 SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
- **1.2 Product category PC1 Adhesives, sealants**
- **Process category**
 PROC4 Use in batch and other process (synthesis) where opportunity for exposure arises
- **Environmental release category ERC5 Industrial use resulting in inclusion into or onto a matrix**
- **Application of the substance / the preparation : Polyurethane sealant**
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
 DOMINION SURE SEAL LTD.
 6175 Danville Road
 Mississauga, Ontario
 CANADA L5T 2H7
 Phone: (905) 670-5411
 Fax : (905) 670-5174
 Internet : <http://www.dominionsureseal.com>
- **Information department: Laboratory**
- **1.4 Emergency telephone number: (905) 670-5411**

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
 Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 Repr. 2 H361d Suspected of damaging the unborn child.
 Skin Irrit. 2 H315 Causes skin irritation.
 Eye Irrit. 2 H319 Causes serious eye irritation.
 Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
 Xi; Irritant
 R36/38: Irritating to eyes and skin.
 Xn; Sensitising
 R42: May cause sensitisation by inhalation.
 R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- **Classification system:**
 The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.

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- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS08

- **Signal word** Danger
- **Hazard-determining components of labelling:**
toluene
4,4'-methylenediphenyl diisocyanate
- **Hazard statements**
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H361d Suspected of damaging the unborn child.
H412 Harmful to aquatic life with long lasting effects.
- **Precautionary statements**
P284 In case of inadequate ventilation wear respiratory protection.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P260 Do not breathe vapours.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P501 Dispose of contents and container in accordance with local regulations.
- **Advised precautionary statements** Keep out of reach of children.
- **Additional information :**
Contains isocyanates. May produce an allergic reaction.
- **Additional information :** Sale forbidden to general public.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterization: Mixtures**
- **Description:** Product containing a polyurethane prepolymer based on diphenylmethanediisocyanate.
- **Dangerous components:**

CAS: 1333-86-4 EINECS: 215-609-9 Reg.nr.: 01-2119384822-32	carbon black substance with a Community workplace exposure limit	15-25%
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CAS: 108-88-3 EINECS: 203-625-9 Reg.nr.: 01-2119471310-51	toluene Xn R48/20-63-65; Xi R38; F R11 R67 Repr. Cat. 3 Flam. Liq. 2, H225; Repr. 2, H361d; STOT RE 2, H373; Asp. Tox. 1, H304; Skin Irrit. 2, H315; STOT SE 3, H336	2-5%
EC number: 926-141-6 Reg.nr.: 01-2119456620-43	hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics Xn R65 R66 Asp. Tox. 1, H304	< 1.5%
CAS: 101-68-8 EINECS: 202-966-0 Reg.nr.: 01-2119457014-47	4,4'-methylenediphenyl diisocyanate 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	< 1%
CAS: 683-18-1 EINECS: 211-670-0 Reg.nr.: 01-2119496066-31	dibutyltin dichloride T+ R26; T Repr. Cat. 2 R60-61-25-48/25; C R34; Xn R21-68; N R50/53 Muta. Cat. 3 Acute Tox. 3, H301; Acute Tox. 2, H330; Muta. 2, H341; Repr. 1B, H360FD; STOT RE 1, H372; Skin Corr. 1B, H314; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H312	< 0.1%

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

SECTION 4: First aid measures

• 4.1 Description of first aid measures

• **General information** Immediately remove any clothing soiled by the product.

• After inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

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. Then consult a doctor.

• **After swallowing** Do not induce vomiting; call for medical help immediately.

• 4.2 Most important symptoms and effects, both acute and delayed

Drowsiness

Headache

Dizziness

Nausea

• 4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures

• 5.1 Extinguishing media

• Suitable extinguishing agents

Carbon dioxide

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Foam

Fire-extinguishing powder

- For safety reasons unsuitable extinguishing agents Water with full jet.

- 5.2 Special hazards arising from the substance or mixture

In case of fire, the following can be released:

Carbon monoxide (CO)

Nitrogen oxides (NOx)

In certain fire conditions, traces of other toxic gases cannot be excluded, e.g.:

Hydrogen cyanide (HCN)

Isocyanates

- 5.3 Advice for firefighters

- Protective equipment: Wear self-contained respiratory protective device.

SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.

Keep away from ignition sources.

- 6.2 Environmental precautions: Do not allow product to reach sewage system or any water course.

- 6.3 Methods and material for containment and cleaning up:

Pick up mechanically.

Send for recovery or disposal in suitable receptacles.

Do not close them (reaction with water forming carbon dioxide).

- 6.4 Reference to other sections

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

- 7.1 Precautions for safe handling Prevent formation of dust.

- Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

- 7.2 Conditions for safe storage, including any incompatibilities

- Storage

- Requirements to be met by storerooms and receptacles:

Store in a cool location.

Provide ventilation for receptacles.

- Information about storage in one common storage facility: Not required.

- Further information about storage conditions: Protect from humidity and water.

- 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see item 7.

- 8.1 Control parameters

- Components with limit values that require monitoring at the workplace:

1333-86-4 carbon black

WEL

Short-term value: 7 mg/m³Long-term value: 3.5 mg/m³

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108-88-3 toluene	
WEL	Short-term value: 384 mg/m ³ , 100 ppm Long-term value: 191 mg/m ³ , 50 ppm Sk
hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics	
RCP-TWA	Long-term value: 1200 mg/m ³
VME	Long-term value: 1200 mg/m ³
101-68-8 4,4'-methylenediphenyl diisocyanate	
WEL	Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO
683-18-1 dibutyltin dichloride	
WEL	Short-term value: 0.2 mg/m ³ Long-term value: 0.1 mg/m ³ as Sn; Sk

• **Additional information:** The lists that were valid during the creation were used as basis.

• **8.2 Exposure controls**

• **Personal protective equipment**

• **General protective and hygienic measures**

Avoid close or long term contact with the skin.

Wash hands before breaks and at the end of work.

Do not eat, drink, smoke while working.

Pregnant women should avoid inhalation or skin contact.

• **Breathing equipment:**

Use suitable respiratory protective device in case of insufficient ventilation:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

Short term filter device:

Filter AB

• **Protection of hands:**

Nitrile rubber 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.

• **Eye protection:** Tightly sealed goggles.

• **Body protection:** Protective work clothing.

SECTION 9: Physical and chemical properties

• **9.1 Information on basic physical and chemical properties**

• **General Information**

• **Appearance:**

Form: Pasty

Colour: Black

• **Odour:** without

• **Change in condition**

Melting point/Melting range: undetermined

Boiling point/Boiling range: 110 °C

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· Flash point:	> 50 °C
· Flammability (solid)	The product is not subject to classification because its speed of combustion is lower than the limit of the regulation.
· Self-ignition temperature:	> 200 °C
· Self igniting:	Product is not selfigniting at room temperature.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible
· Explosion limits:	
Lower:	1 Vol %
Upper:	8 Vol %
· Density at 20 °C:	1.22
· Solubility in / Miscibility with Water:	Not miscible or difficult to mix.
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions**
Reacts with alcohols, amines, aqueous acids and alkalis.
Reacts with water forming carbon dioxide. Danger of receptacles bursting because of vapour overpressure.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** None to our knowledge at room temperature.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**

· LD/LC50 values that are relevant for classification:		
108-88-3 toluene		
Oral	LD50	5000 mg/kg (rat)
Dermal	LD50	12 124 mg/kg (rab)
Inhalative	LC50/4 h	5320 mg/l (mus)
683-18-1 dibutyltin dichloride		
Oral	LD50	100 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** Sensitization possible through inhalation.

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- **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
Repr. 2

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.
The product contains materials that are harmful to the environment.
Do not allow product to reach ground water, water course or sewage system.
Harmful to aquatic organisms
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation** Incinerator for hazardous waste or authorized dump.
- **Waste disposal key:** 08 04 09*
- **Uncleaned packaging :**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- | | |
|--|---|
| · 14.1 UN-Number | |
| · ADR, ADN, IMDG, IATA | 1133 - Not regulated; meets general Class 3 exemption |
| · 14.2 UN proper shipping name | |
| · ADR, ADN, IMDG | Adhesives |
| · IATA | |
| · 14.3 Transport hazard class(es) | |
| · ADR, ADN, IMDG, IATA | |
| · Class | 3 |
| · 14.4 Packing group | |
| · ADR, IMDG, IATA | III |
| · 14.5 Environmental hazards: | |
| · Marine pollutant: | No |
| · 14.6 Special precautions for user | Note: PGIII; Flash Point > 50 C |

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- | | |
|--|---|
| <ul style="list-style-type: none"> · 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code | Not applicable. |
| <ul style="list-style-type: none"> · Transport/Additional information: | Not classified as hazardous for transport as specified in paragraphs 2.2.41.1.5 of the ADR code, 2.4.2.2.2.1 of the IMDG code and 3.4.1.1.2.1 of the IATA code as the product is a solid and as its combustion speed is lower than 2.2 mm/s |
| <ul style="list-style-type: none"> · UN "Model Regulation": | - |

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has been carried out.

SECTION 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.

This data sheet is particularly in accordance with the european regulations 1907/2006/EC, 1272/2008/EC and their amendments ; it is written according to annex II of the european regulation 453/2010/EC.

- **Relevant phrases**

- | | |
|--------|--|
| H225 | Highly flammable liquid and vapour. |
| H301 | Toxic if swallowed. |
| H304 | May be fatal if swallowed and enters airways. |
| H312 | Harmful in contact with skin. |
| H314 | Causes severe skin burns and eye damage. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H319 | Causes serious eye irritation. |
| H330 | Fatal if inhaled. |
| H332 | Harmful if inhaled. |
| H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| H335 | May cause respiratory irritation. |
| H336 | May cause drowsiness or dizziness. |
| H341 | Suspected of causing genetic defects. |
| H351 | Suspected of causing cancer. |
| H360FD | May damage fertility. May damage the unborn child. |
| H361d | Suspected of damaging the unborn child. |
| H372 | Causes damage to organs through prolonged or repeated exposure. |
| H373 | May cause damage to organs through prolonged or repeated exposure. |
| H400 | Very toxic to aquatic life. |
| H410 | Very toxic to aquatic life with long lasting effects. |
| | |
| R11 | Highly flammable. |
| R20 | Harmful by inhalation. |
| R21 | Harmful in contact with skin. |
| R25 | Toxic if swallowed. |
| R26 | Very toxic by inhalation. |
| R34 | Causes burns. |

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- R36/37/38 Irritating to eyes, respiratory system and skin.
 R38 Irritating to 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.
 R48/25 Toxic: danger of serious damage to health by prolonged exposure if swallowed.
 R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
 R60 May impair fertility.
 R61 May cause harm to the unborn child.
 R63 Possible risk of harm to the unborn child.
 R65 Harmful: may cause lung damage if swallowed.
 R66 Repeated exposure may cause skin dryness or cracking.
 R67 Vapours may cause drowsiness and dizziness.
 R68 Possible risk of irreversible effects.

• **Department issuing MSDS:** Laboratory

• **Contact:** cf. § 1

• **Review :**

An asterisk in the margin of a paragraph means amendments in comparison to the former version.

• **Abbreviations and acronyms:**

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

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Flam. Liq. 2: Flammable liquids, Hazard Category 2

Acute Tox. 3: Acute toxicity, Hazard Category 3

Acute Tox. 2: Acute toxicity, Hazard Category 2

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Muta. 2: Germ cell mutagenicity, Hazard Category 2

Carc. 2: Carcinogenicity, Hazard Category 2

Repr. 1B: Reproductive toxicity, Hazard Category 1B

Repr. 2: Reproductive toxicity, Hazard Category 2

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

STOT RE 1: Specific target organ toxicity - Repeated exposure, Hazard Category 1

STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2

Asp. Tox. 1: Aspiration hazard, Hazard Category 1

Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1

Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

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Annex: Exposure scenario

- **Name** 4,4'-methylenediphenyl diisocyanate
- **Short title of the exposure scenario**
Industrial use for rigid foam, coatings and adhesives and sealants
Professional end use in rigid foam, coatings, adhesives and sealants and other composite material
Consumer end use in rigid foam, coatings and adhesives and sealants
- **Sector of Use**
 SU3 Industrial uses: uses of substances as such or in preparations at industrial sites
 SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
 SU21 Consumer uses: Private households / general public / consumers
- **Product category**
 PC1 Adhesives, sealants
 PC9a Coatings and paints, thinners, paint removers
 PC32 Polymer preparations and compounds
- **Process category**
 PROC4 Use in batch and other process (synthesis) where opportunity for exposure arises
 PROC5 Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)
 PROC7 Industrial spraying
 PROC8a Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities
 PROC8b Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
 PROC9 Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
 PROC15 Use as laboratory reagent
- **Environmental release category**
 ERC5 Industrial use resulting in inclusion into or onto a matrix
 ERC8c Wide dispersive indoor use resulting in inclusion into or onto a matrix
 ERC8f Wide dispersive outdoor use resulting in inclusion into or onto a matrix
 ERC2 Formulation of preparations
- **Conditions of use** According to directions for use.
- **Duration and frequency**
 up to 8 hour(s) per day
 For consumer end use in rigid foam, coatings and adhesives and sealants :
 Covers use up to 1 day/year
 Covers skin contact area up to 2 cm²
- **Physical parameters**
- **Physical state** Liquid
- **Concentration of the substance in the mixture** Raw material.
- **Other operational conditions**
- **Other operational conditions affecting environmental exposure**
 Local fresh water dilution factor: 10
 Local marine water dilution factor : 100
- **Other operational conditions affecting worker exposure**
 Avoid contact with the skin and eyes.
 Indoor application.
 Outdoor application.
 Do not breathe gas/vapour/aerosol.
- **Other operational conditions affecting consumer exposure** Keep out of the reach of children.
- **Other operational conditions affecting consumer exposure during the use of the product**
 Not applicable.

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- **Risk management measures**

- **Worker protection**

Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). Provide extraction ventilation at points where emissions occur. Provide extract ventilation to material transfer points and other openings. Handle in a fumecupboard or under extract ventilation.

If above technical/organisational control measures are not feasible, then adopt following PPE: wear a respirator conforming to EN140 with Type A filter or better.

Use suitable eye protection and gloves. Wear suitable coveralls to prevent exposure to the skin.

- **Organisational protective measures**

Ensure that activities are executed by specialists or authorised personnel only.

- **Technical protective measures**

Ensure that suitable extractors are available on processing machines

Work only in fume cupboard.

Ensure good ventilation/exhaustion at the workplace.

- **Personal protective measures**

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

Tightly sealed goggles.

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

Short term filter device:

Filter A2B2-P3

Butyl, nitrile or polychloroprene rubber gloves of superior quality.

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.

Protective work clothing.

- **Measures for consumer protection**

Ensure adequate labelling.

Keep locked up and out of the reach of children.

Protective gloves

Tightly sealed goggles.

- **Environmental protection measures**

- **Air** No special measures required.

- **Water** Do not allow to reach ground water, water bodies or sewage system.

- **Soil** Prevent contamination of soil.

- **Disposal measures** Disposal must be made according to official regulations.

- **Disposal procedures**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- **Exposure estimation**

- **Worker (dermal)**

The highest dermal exposure to be expected is 5.0 mg / kg / day.

(estimations using EASE)

- **Worker (inhalation)** The highest inhalative exposure to be expected is 0.05 ppm.

- **Environment**

Prediction of highest expected environmental exposure (soil) is 0.27 mg/kg dry weight

The highest environmental exposure to be expected for surface waters is 0.0687 mg / L.

Prediction of highest expected environmental exposure (sea water) is 0.000543 mg/kg

- **Consumer**

The highest inhalative exposure to be expected for consumers is 0.020 ppm.

The highest dermal exposure to be expected for consumers is 0.069 mg / kg / day.

(Consexpo model)

- **Guidance for downstream users**

For the risk assessment, the tools recommended by ECHA can be used.