

STRUCADH-KD-PUR-RAPID-CLEAR-310ML

Version	Revision Date:	SDS Number:	Date of last issue: 14.12.2023
5.1	17.09.2024	5072493-00010	Date of first issue: 10.10.2019

Section 1: Identification

Product name : STRUCADH-KD-PUR-RAPID-CLEAR-310ML
Product code : 0892 100 102

Manufacturer or supplier's details

Company : Wurth NewZealand Ltd
Address : 99 McLauglins Road
Wiri, Auckland 2104
Telephone : +64 9 262 3040
Emergency telephone number : 0800 764 766
E-mail address : prodsafe@wuerth.com
Telefax : +64 9 262 3030

Recommended use of the chemical and restrictions on use

Recommended use : Adhesives
Restrictions on use : Not applicable

Section 2: Hazard identification**GHS Classification**

Acute toxicity (Inhalation) : Category 2
Skin corrosion/irritation : Category 2
Serious eye damage/eye irritation : Category 2
Respiratory sensitisation : Category 1
Skin sensitisation : Category 1
Carcinogenicity : Category 2
Specific target organ toxicity - single exposure : Category 3
Specific target organ toxicity - repeated exposure : Category 1

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Specific target organ toxicity - repeated exposure (Inhalation) : Category 2 (Respiratory Tract)

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H315 Causes skin irritation.
 H317 May cause an allergic skin reaction.
 H319 Causes serious eye irritation.
 H330 Fatal if inhaled.
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 H335 May cause respiratory irritation.
 H351 Suspected of causing cancer.
 H372 Causes damage to organs through prolonged or repeated exposure.
 H373 May cause damage to organs (Respiratory Tract) through prolonged or repeated exposure if inhaled.

Precautionary statements :

Prevention:

P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P260 Do not breathe vapours.
 P264 Wash skin thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P271 Use only outdoors or in a well-ventilated area.
 P272 Contaminated work clothing should not be allowed out of the workplace.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
 P284 Wear respiratory protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of water.
 P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P308 + P313 IF exposed or concerned: Get medical advice/ attention.
 P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
 P337 + P313 If eye irritation persists: Get medical advice/ at-

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tention.

P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/ doctor.

Storage:

P405 Store locked up.

Disposal:

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

Other hazards which do not result in classification

Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome).

Section 3: Composition/information on ingredients

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
4,4'-Methylenediphenyl diisocyanate, oligomers	25686-28-6	>= 20 -< 30
Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate	Not Assigned	>= 20 -< 30
4,4'-Diphenylmethane diisocyanate	101-68-8	>= 10 -< 20

Section 4: First-aid measures

- General advice : In the case of accident or if you feel unwell, seek medical advice immediately.
When symptoms persist or in all cases of doubt seek medical advice.
- If inhaled : If inhaled, remove to fresh air.
If not breathing, give artificial respiration.
If breathing is difficult, give oxygen.
Get medical attention.
- In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Get medical attention.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.
- In case of eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.
If easy to do, remove contact lens, if worn.
Get medical attention.
- If swallowed : If swallowed, DO NOT induce vomiting.
Get medical attention.
Rinse mouth thoroughly with water.
- Most important symptoms : Respiratory symptoms, including pulmonary edema, may be

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and effects, both acute and delayed		<p>delayed.</p> <p>Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome).</p> <p>Causes skin irritation.</p> <p>May cause an allergic skin reaction.</p> <p>Causes serious eye irritation.</p> <p>Fatal if inhaled.</p> <p>May cause allergy or asthma symptoms or breathing difficulties if inhaled.</p> <p>May cause respiratory irritation.</p> <p>Suspected of causing cancer.</p> <p>Causes damage to organs through prolonged or repeated exposure.</p>
Protection of first-aiders	:	First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).
Notes to physician	:	Treat symptomatically and supportively.

Section 5: Fire-fighting measures

Suitable extinguishing media	:	<p>Alcohol-resistant foam</p> <p>Carbon dioxide (CO₂)</p> <p>Dry chemical</p> <p>Water spray in large fire situations</p>
Unsuitable extinguishing media	:	High volume water jet
Specific hazards during fire-fighting	:	<p>Exposure to combustion products may be a hazard to health.</p> <p>If the temperature rises there is danger of the vessels bursting due to the high vapor pressure.</p>
Hazardous combustion products	:	<p>Silicon oxides</p> <p>Carbon oxides</p> <p>Hydrogen cyanide (hydrocyanic acid)</p> <p>Isocyanates</p> <p>Nitrogen oxides (NO_x)</p>
Specific extinguishing methods	:	<p>Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.</p> <p>Use water spray to cool unopened containers.</p> <p>Remove undamaged containers from fire area if it is safe to do so.</p> <p>Evacuate area.</p>
Special protective equipment for firefighters	:	<p>In the event of fire, wear self-contained breathing apparatus.</p> <p>Use personal protective equipment.</p>

Section 6: Accidental release measures

Personal precautions, protection	:	Use personal protective equipment.
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- tive equipment and emergency procedures : Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).
- Environmental precautions : Avoid release to the environment.
Prevent further leakage or spillage if safe to do so.
Prevent spreading over a wide area (e.g. by containment or oil barriers).
Retain and dispose of contaminated wash water.
Local authorities should be advised if significant spillages cannot be contained.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material.
For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container.
Clean up remaining materials from spill with suitable absorbent.
After approximately one hour, transfer to waste container and do not seal, due to evolution of carbon dioxide.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

Section 7: Handling and storage

- Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
- Local/Total ventilation : If sufficient ventilation is unavailable, use with local exhaust ventilation.
- Advice on safe handling : Do not get on skin or clothing.
Do not breathe vapours.
Do not swallow.
Do not get in eyes.
Wash skin thoroughly after handling.
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment
Keep container tightly closed.
Keep away from water.
Protect from moisture.
Already sensitised individuals, and those susceptible to asthma, allergies, chronic or recurrent respiratory disease, should consult their physician regarding working with respiratory irritants or sensitisers.
Take care to prevent spills, waste and minimize release to the environment.
- Hygiene measures : If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working

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place.
When using do not eat, drink or smoke.
Contaminated work clothing should not be allowed out of the workplace.
Wash contaminated clothing before re-use.

Conditions for safe storage : Keep in properly labelled containers.
Store locked up.
Protect from moisture.
Keep in a cool, well-ventilated place.
Store in accordance with the particular national regulations.

Materials to avoid : Do not store with the following product types:
Strong oxidizing agents

Recommended storage temperature : 15 - 25 °C

Further information on storage stability : Keep away from direct sunlight.

Section 8: Exposure controls/personal protection
Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate	Not Assigned	WES-TWA (Inhalable Fraction and Vapour)	0.02 mg/m ³ (NCO)	NZ OEL
	Further information: Skin sensitiser, Respiratory sensitiser			
		WES-STEL (Inhalable Fraction and Vapour)	0.07 mg/m ³ (NCO)	NZ OEL
	Further information: Skin sensitiser, Respiratory sensitiser			
		TWA	0.005 ppm	ACGIH
4,4'-Methylenediphenyl diisocyanate, oligomers	25686-28-6	TWA	0.005 ppm	ACGIH
4,4'-Diphenylmethane diisocyanate	101-68-8	WES-TWA (Inhalable Fraction and Vapour)	0.02 mg/m ³ (NCO)	NZ OEL
	Further information: Skin sensitiser, Respiratory sensitiser			
		WES-STEL (Inhalable Fraction and Vapour)	0.07 mg/m ³ (NCO)	NZ OEL
	Further information: Skin sensitiser, Respiratory sensitiser			
		TWA	0.005 ppm	ACGIH

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Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
4,4'-Diphenylmethane diisocyanate	101-68-8	4,4-Diaminodiphenyl	Urine	End of exposure or end of shift	10 µg/g creatinine	NZ BEI

Engineering measures : Processing may form hazardous compounds (see section 10).
Minimize workplace exposure concentrations.
If sufficient ventilation is unavailable, use with local exhaust ventilation.

Personal protective equipment

Respiratory protection : If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.

Filter type : Combined particulates and organic vapour type

Hand protection

Material : Nitrile rubber
Break through time : \geq 480 min
Glove thickness : \geq 0.35 mm
Protective index : Class 6
Wearing time : \leq 240 min

Remarks : Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.

Eye protection : Wear the following personal protective equipment:
Safety goggles

Skin and body protection : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.
Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).

Section 9: Physical and chemical properties

Appearance : paste

Colour : transparent

Odour : characteristic

Odour Threshold : No data available

pH : Solvent mixture; pH value determination not possible, no

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	aqueous solution
Melting point/freezing point	: No data available
Initial boiling point and boiling range	: No data available
Flash point	: No data available
Evaporation rate	: No data available
Flammability (solid, gas)	: Not applicable
Flammability (liquids)	: No data available
Upper explosion limit / Upper flammability limit	: No data available
Lower explosion limit / Lower flammability limit	: No data available
Vapour pressure	: No data available
Relative vapour density	: No data available
Density	: 1.12 g/cm ³
Solubility(ies)	
Water solubility	: No data available
Partition coefficient: n-octanol/water	: Not applicable
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	
Viscosity, dynamic	: ca. 37,000 mPa.s (25 °C)
Viscosity, kinematic	: No data available
Explosive properties	: Not explosive
Oxidizing properties	: The substance or mixture is not classified as oxidizing.
Particle characteristics	
Particle size	: Not applicable

Section 10: Stability and reactivity

Reactivity	: Not classified as a reactivity hazard.
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- Chemical stability : Stable if used as directed. Follow precautionary advice and avoid incompatible materials and conditions. Polymerises at high temperatures with evolution of carbon dioxide.
- Possibility of hazardous reactions : Isocyanates react with many materials and the rate of reaction increases with temperature as well as increased contact; these reactions can become violent. Contact is increased by stirring or if the other material mixes with the isocyanate. Exothermic reaction with acids, amines and alcohols. Reacts with water to form carbon dioxide and heat. Isocyanates are not soluble in water and sink to the bottom, but react slowly at the interface. The reaction forms carbon dioxide gas and a layer of solid polyurea. Hazardous decomposition products will be formed upon contact with water or humid air.
- Conditions to avoid : Exposure to moisture
- Incompatible materials : Oxidizing agents
Acids
Bases
Water
Alcohols
Amines
Ammonia
Aluminium
Zinc
Brass
Tin
Copper
Galvanised metals
Humid air
- Hazardous decomposition products : No hazardous decomposition products are known.
-

Section 11: Toxicological information

- Exposure routes : Inhalation
Skin contact
Ingestion
Eye contact

Acute toxicity

Fatal if inhaled.

Product:

- Acute inhalation toxicity : Assessment: The substance/mixture is not toxic on inhalation as defined by dangerous goods regulations.

Acute toxicity estimate: 0.341 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Method: Calculation method

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Components:**4,4'-Methylenediphenyl diisocyanate, oligomers:**

- Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 425
Remarks: Based on data from similar materials
- Acute inhalation toxicity : Acute toxicity estimate: 1.5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Expert judgement
Remarks: Based on data from similar materials
- Acute dermal toxicity : LD50 (Rabbit): > 9,400 mg/kg
Remarks: Based on data from similar materials

Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate:

- Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Assessment: The substance or mixture has no acute oral toxicity
- Acute inhalation toxicity : LC50 (Rat): 0.49 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Remarks: Based on data from similar materials
- Acute dermal toxicity : LD50 (Rabbit): > 9,400 mg/kg
Remarks: Based on data from similar materials

4,4'-Diphenylmethane diisocyanate:

- Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Assessment: The substance or mixture has no acute oral toxicity
Remarks: Based on data from similar materials
- Acute inhalation toxicity : Acute toxicity estimate: 0.0501 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Expert judgement
Remarks: Based on national or regional regulation.
- Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
Remarks: Based on data from similar materials

Skin corrosion/irritation

Causes skin irritation.

Components:**4,4'-Methylenediphenyl diisocyanate, oligomers:**

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Species : Rabbit
Method : OECD Test Guideline 404
Result : Skin irritation
Remarks : Based on data from similar materials

Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate:

Species : Rabbit
Method : OECD Test Guideline 404
Result : Skin irritation

4,4'-Diphenylmethane diisocyanate:

Species : Rabbit
Method : OECD Test Guideline 404
Result : Skin irritation
Remarks : Based on data from similar materials

Serious eye damage/eye irritation

Causes serious eye irritation.

Components:**4,4'-Methylenediphenyl diisocyanate, oligomers:**

Result : Irritation to eyes, reversing within 7 days
Remarks : Based on data from similar materials

Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate:

Result : Irritation to eyes, reversing within 21 days
Remarks : Based on national or regional regulation.

4,4'-Diphenylmethane diisocyanate:

Result : Irritation to eyes, reversing within 7 days
Remarks : Based on national or regional regulation.

Respiratory or skin sensitisation**Skin sensitisation**

May cause an allergic skin reaction.

Respiratory sensitisation

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Components:**4,4'-Methylenediphenyl diisocyanate, oligomers:**

Test Type : Maximisation Test
Exposure routes : Skin contact
Species : Guinea pig

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Method : OECD Test Guideline 406
Result : positive
Remarks : Based on data from similar materials

Assessment : Probability or evidence of skin sensitisation in humans

Exposure routes : Inhalation
Species : Rat
Result : positive
Remarks : Based on data from similar materials

Assessment : Probability of respiratory sensitisation in humans based on animal testing

Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate:

Test Type : Buehler Test
Exposure routes : Skin contact
Species : Guinea pig
Result : positive
Remarks : Based on data from similar materials

Assessment : Probability or evidence of skin sensitisation in humans

Exposure routes : Inhalation
Species : Rat
Result : positive
Remarks : Based on data from similar materials

Assessment : Probability of respiratory sensitisation in humans based on animal testing

4,4'-Diphenylmethane diisocyanate:

Test Type : Buehler Test
Exposure routes : Skin contact
Species : Guinea pig
Result : positive

Assessment : Probability or evidence of skin sensitisation in humans

Exposure routes : Inhalation
Species : Rat
Result : positive
Remarks : Based on data from similar materials

Assessment : Probability of respiratory sensitisation in humans based on animal testing

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Chronic toxicity**Germ cell mutagenicity**

Not classified based on available information.

Components:**4,4'-Methylenediphenyl diisocyanate, oligomers:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative
Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Rat
Application Route: inhalation (dust/mist/fume)
Method: OECD Test Guideline 474
Result: negative
Remarks: Based on data from similar materials

Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative
Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Intraperitoneal injection
Method: OECD Test Guideline 474
Result: negative
Remarks: Based on data from similar materials

4,4'-Diphenylmethane diisocyanate:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Rat
Application Route: inhalation (dust/mist/fume)
Method: OECD Test Guideline 474
Result: negative

Carcinogenicity

Suspected of causing cancer.

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Components:**4,4'-Methylenediphenyl diisocyanate, oligomers:**

Species : Rat
Application Route : inhalation (dust/mist/fume)
Exposure time : 2 Years
Result : positive
Remarks : Based on data from similar materials

Carcinogenicity - Assessment : Limited evidence of carcinogenicity in animal studies

Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate:

Species : Rat
Application Route : inhalation (dust/mist/fume)
Exposure time : 2 Years
Result : positive
Remarks : Based on data from similar materials

Carcinogenicity - Assessment : Limited evidence of carcinogenicity in animal studies

4,4'-Diphenylmethane diisocyanate:

Species : Rat
Application Route : inhalation (dust/mist/fume)
Exposure time : 2 Years
Result : positive
Remarks : Based on data from similar materials

Carcinogenicity - Assessment : Limited evidence of carcinogenicity in animal studies

Reproductive toxicity

Not classified based on available information.

Components:**4,4'-Methylenediphenyl diisocyanate, oligomers:**

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat
Application Route: inhalation (dust/mist/fume)
Method: OECD Test Guideline 414
Result: negative
Remarks: Based on data from similar materials

4,4'-Diphenylmethane diisocyanate:

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat
Application Route: inhalation (dust/mist/fume)
Result: negative
Remarks: Based on data from similar materials

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STOT - single exposure

May cause respiratory irritation.

Components:**4,4'-Methylenediphenyl diisocyanate, oligomers:**

Assessment : May cause respiratory irritation.
Remarks : Based on data from similar materials

Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate:

Assessment : May cause respiratory irritation.

4,4'-Diphenylmethane diisocyanate:

Assessment : May cause respiratory irritation.

STOT - repeated exposure

Causes damage to organs through prolonged or repeated exposure.
May cause damage to organs (Respiratory Tract) through prolonged or repeated exposure if inhaled.

Components:**4,4'-Methylenediphenyl diisocyanate, oligomers:**

Exposure routes : inhalation (dust/mist/fume)
Target Organs : Respiratory Tract
Assessment : Shown to produce significant health effects in animals at concentrations of >0.02 to 0.2 mg/l/6h/d.

Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate:

Exposure routes : inhalation (dust/mist/fume)
Target Organs : Respiratory Tract
Assessment : May cause damage to organs through prolonged or repeated exposure.

4,4'-Diphenylmethane diisocyanate:

Assessment : Causes damage to organs through prolonged or repeated exposure.
Remarks : Based on national or regional regulation.

Repeated dose toxicity**Components:****4,4'-Methylenediphenyl diisocyanate, oligomers:**

Species : Rat
NOAEL : 0.2 mg/m³
LOAEL : 1 mg/m³

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Application Route : inhalation (dust/mist/fume)
Exposure time : 2 yr
Remarks : Based on data from similar materials

Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate:

Species : Rat
NOAEL : 0.0002 mg/l
LOAEL : 0.001 mg/l
Application Route : inhalation (dust/mist/fume)
Exposure time : 2 yr
Remarks : Based on data from similar materials

4,4'-Diphenylmethane diisocyanate:

Species : Rat
NOAEL : 0,2 mg/m³
LOAEL : 1 mg/m³
Application Route : inhalation (dust/mist/fume)
Exposure time : 2 yr
Remarks : Based on data from similar materials

Aspiration toxicity

Not classified based on available information.

Experience with human exposure**Components:****Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate:**

Inhalation : Symptoms: Sensitisation, respiratory tract irritation
Skin contact : Symptoms: Skin irritation
Eye contact : Symptoms: Eye irritation

Section 12: Ecological information**Ecotoxicity****Components:****4,4'-Methylenediphenyl diisocyanate, oligomers:**

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 1,000 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 1,000 mg/l
Exposure time: 24 h
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

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- Toxicity to algae/aquatic plants : ErC50 (Desmodesmus subspicatus (green algae)): > 1,640 mg/l
 Exposure time: 72 h
 Method: OECD Test Guideline 201
 Remarks: Based on data from similar materials
- NOEC (Desmodesmus subspicatus (green algae)): 1,640 mg/l
 Exposure time: 72 h
 Method: OECD Test Guideline 201
 Remarks: Based on data from similar materials
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): > 10 mg/l
 Exposure time: 21 d
 Method: OECD Test Guideline 211
 Remarks: Based on data from similar materials
- Toxicity to microorganisms : EC50: > 100 mg/l
 Exposure time: 3 h
 Method: OECD Test Guideline 209
 Remarks: Based on data from similar materials

Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate:

- Toxicity to fish : LL50 (Danio rerio (zebra fish)): > 1,000 mg/l
 Exposure time: 96 h
 Method: OECD Test Guideline 203
 Remarks: Based on data from similar materials
- Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 100 mg/l
 Exposure time: 24 h
 Method: OECD Test Guideline 202
 Remarks: Based on data from similar materials
- Toxicity to algae/aquatic plants : EL50 (Scenedesmus subspicatus): > 1,640 mg/l
 Exposure time: 72 h
 Method: OECD Test Guideline 201
 Remarks: Based on data from similar materials
- NOELR (Scenedesmus subspicatus): 1,640 mg/l
 Exposure time: 72 h
 Method: OECD Test Guideline 201
 Remarks: Based on data from similar materials
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOELR (Daphnia (water flea)): >= 10 mg/l
 Exposure time: 21 d
 Method: OECD Test Guideline 211
 Remarks: Based on data from similar materials
- Toxicity to microorganisms : EC50: > 100 mg/l
 Exposure time: 3 h
 Method: OECD Test Guideline 209
 Remarks: Based on data from similar materials

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4,4'-Diphenylmethane diisocyanate:

- Toxicity to fish : LC50 (Oryzias latipes (Orange-red killifish)): > 3,000 mg/l
Exposure time: 96 h
Remarks: Based on data from similar materials
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 129.7 mg/l
Exposure time: 24 h
Method: OECD Test Guideline 202
- Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): > 1,640 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials
- NOEC (Desmodesmus subspicatus (green algae)): 1,640 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 10 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211
Remarks: Based on data from similar materials
- Toxicity to microorganisms : EC50: > 100 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209
Remarks: Based on data from similar materials

Persistence and degradability**Components:****4,4'-Methylenediphenyl diisocyanate, oligomers:**

- Biodegradability : Result: Not readily biodegradable.
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 302
Remarks: Based on data from similar materials

Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate:

- Biodegradability : Result: Not readily biodegradable.
Biodegradation: 0 %
Exposure time: 28 d
Remarks: Based on data from similar materials

4,4'-Diphenylmethane diisocyanate:

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Biodegradability : Result: Not readily biodegradable.
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 302
Remarks: Based on data from similar materials

Bioaccumulative potential**Components:****4,4'-Methylenediphenyl diisocyanate, oligomers:**

Bioaccumulation : Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): 200
Remarks: Based on data from similar materials

Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate:

Bioaccumulation : Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): 200
Remarks: Based on data from similar materials

Partition coefficient: n-octanol/water : log Pow: 4.51

4,4'-Diphenylmethane diisocyanate:

Bioaccumulation : Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): 200

Partition coefficient: n-octanol/water : log Pow: 4.51

Mobility in soil

No data available

Other adverse effects

No data available

Section 13: Disposal considerations**Disposal methods**

Waste from residues : Do not dispose of waste into sewer.
Dispose of in accordance with local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.
If not otherwise specified: Dispose of as unused product.

Section 14: Transport information**International Regulations**

UNRTDG

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UN number : Not applicable
Proper shipping name : Not applicable
Class : Not applicable
Subsidiary risk : Not applicable
Packing group : Not applicable
Labels : Not applicable
Environmentally hazardous : no

IATA-DGR

UN/ID No. : UN 3334
Proper shipping name : Aviation regulated liquid, n.o.s.
(4,4'-Methylenediphenyl diisocyanate, oligomers, Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate)
Class : 9
Packing group : III
Labels : Miscellaneous
Packing instruction (cargo aircraft) : 964
Packing instruction (passenger aircraft) : 964

IMDG-Code

UN number : Not applicable
Proper shipping name : Not applicable
Class : Not applicable
Subsidiary risk : Not applicable
Packing group : Not applicable
Labels : Not applicable
EmS Code : Not applicable
Marine pollutant : Not applicable

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations**NZS 5433**

UN number : Not applicable
Proper shipping name : Not applicable
Class : Not applicable
Subsidiary risk : Not applicable
Packing group : Not applicable
Labels : Not applicable
Hazchem Code : Not applicable

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

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Section 15: Regulatory information**Safety, health and environmental regulations/legislation specific for the substance or mixture****HSNO Approval Number**

HSR002671 Surface Coatings and Colourants Acutely Toxic Carcinogenic Group Standard

Tolerable Exposure Limits (TEL)

Not applicable

Environmental Exposure Limits (EEL)

Not applicable

HSW Controls

Certified handler certificate required.

Tracking hazardous substance is required.

Refer to the Health and Safety at Work (Hazardous Substances) Regulations 2017, for further information.

The components of this product are reported in the following inventories:

NZIoC : All ingredients listed or exempt.

Section 16: Other information

Revision Date : 17.09.2024

Further informationSources of key data used to compile the Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

Date format : dd.mm.yyyy

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)

NZ BEI : New Zealand. Biological Exposure Indices

NZ OEL : New Zealand. Workplace Exposure Standards for Atmospheric Contaminants

ACGIH / TWA : 8-hour, time-weighted average

NZ OEL / WES-TWA : Workplace Exposure Standard - Time Weighted average

NZ OEL / WES-STEL : Workplace Exposure Standard - Short-Term Exposure Limit

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); 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; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA

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- 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; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; 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; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

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 is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

NZ / EN