

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended

Acrolon® ZP-1 VHS Comp. B

Version
1.3

Revision Date:
27.12.2024

Date of last issue: 19.11.2024
Date of first issue: 14.12.2022

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

1.1 Product identifier

Trade name : Acrolon® ZP-1 VHS Comp. B
Product code : 000000000000580689

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

Use of the Sub-stance/Mixture : Coatings and paints, thinners, paint removers
Recommended restrictions on use : Reserved for industrial and professional use.

1.3 Details of the supplier of the safety data sheet

Company : Sherwin-Williams Coatings
Deutschland GmbH
Rieter Tal 1
71665 Vaihingen / Enz
Telephone : +4970421090
E-mail address of person responsible for the SDS : SDS-DE@sherwin.com

1.4 Emergency telephone

National advisory body/Poison Center

Telephone number: Not available

Supplier

Telephone number: +49 (0) 7042 109-0

Hours of operation: Emergency contact available 24 hours a day

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Flammable liquids, Category 3 H226: Flammable liquid and vapor.
Acute toxicity, Category 4 H332: Harmful if inhaled.
Skin irritation, Category 2 H315: Causes skin irritation.

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Eye irritation, Category 2	H319: Causes serious eye irritation.
Skin sensitization, Category 1	H317: May cause an allergic skin reaction.
Specific target organ toxicity - single exposure, Category 3, Respiratory system	H335: May cause respiratory irritation.
Specific target organ toxicity - repeated exposure, Category 2	H373: May cause damage to organs through prolonged or repeated exposure.

2.2 Label elements

Labeling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal Word : Warning

Hazard Statements : H226 Flammable liquid and vapor.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary Statements : **Prevention:**
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260 Do not breathe mist or vapors.
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

Response:

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Hazardous ingredients which must be listed on the label:

Hexamethylene diisocyanate, oligomers
xylene
ethylbenzene
hexamethylene-di-isocyanate

Additional Labeling

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"As from 24 August 2023 adequate training is required before industrial or professional use."

2.3 Other hazards

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

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Hexamethylene diisocyanate, oligomers	28182-81-2 500-060-2	Acute Tox. 4; H332 Skin Sens. 1; H317 STOT SE 3; H335 (Respiratory system)	>= 70 - < 90
2-methoxy-1-methylethyl acetate	108-65-6 203-603-9 607-195-00-7 01-2119475791-29-XXXX	Flam. Liq. 3; H226 STOT SE 3; H336	>= 10 - < 20
xylene	1330-20-7 215-535-7 601-022-00-9 01-2119488216-32-XXXX	Flam. Liq. 3; H226 Acute Tox. 4; H332 Acute Tox. 4; H312 Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H335 (Respiratory system) STOT RE 2; H373 Asp. Tox. 1; H304 Aquatic Chronic 3; H412	>= 10 - < 20
ethylbenzene	100-41-4 202-849-4 601-023-00-4 01-2119489370-35-XXXX	Flam. Liq. 2; H225 Acute Tox. 4; H332 STOT RE 2; H373 (hearing organs) Asp. Tox. 1; H304 Aquatic Chronic 3;	>= 1 - < 2,5

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hexamethylene-di-isocyanate	822-06-0 212-485-8 615-011-00-1 01-2119457571-37-XXXX	H412 Acute Tox. 1; H330 Eye Irrit. 2; H319 STOT SE 3; H335 Skin Irrit. 2; H315 Resp. Sens. 1; H334 Skin Sens. 1; H317 <hr/> specific concentration limit Resp. Sens. 1; H334 >= 0,5 % Skin Sens. 1; H317 >= 0,5 % Resp. Sens. 1; H334 >= 5 % Skin Sens. 1; H317 >= 5 %	>= 0,1 - < 0,5
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For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first-aid measures

- General advice : Move out of dangerous area.
Show this material safety data sheet to the doctor in attendance.
Do not leave the victim unattended.
- If inhaled : Consult a physician after significant exposure.
If unconscious, place in recovery position and seek medical advice.
- In case of skin contact : If skin irritation persists, call a physician.
If on skin, rinse well with water.
If on clothes, remove clothes.
- In case of eye contact : Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Take victim immediately to hospital.

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : There are no data available on the mixture itself. Procedure

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used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS] See Sections 2 and 3 for details. Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. If splashed in the eyes, the liquid may cause irritation and reversible damage. This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Risks : Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.
Harmful if inhaled.
May cause respiratory irritation.
May cause damage to organs through prolonged or repeated exposure.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical

Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire fighting : Do not allow run-off from fire fighting to enter drains or water courses.

5.3 Advice for firefighters

Special protective equipment for fire-fighters : Wear self-contained breathing apparatus for firefighting if necessary.

Further information : Collect contaminated fire extinguishing water separately. This

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must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
For safety reasons in case of fire, cans should be stored separately in closed containments.
Use a water spray to cool fully closed containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.
Ensure adequate ventilation.
Remove all sources of ignition.
Evacuate personnel to safe areas.
Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

6.2 Environmental precautions

Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Good housekeeping standards, regular safe removal of waste materials and regular maintenance of spray booth filters will minimise the risks of spontaneous combustion and other fire hazards.

Avoid formation of aerosol.
Do not breathe vapors/dust.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Take precautionary measures against static discharges.

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Provide sufficient air exchange and/or exhaust in work rooms.
Open drum carefully as content may be under pressure.
Dispose of rinse water in accordance with local and national regulations.
Persons susceptible to skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Advice on protection against fire and explosion : Do not spray on a naked flame or any incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Keep away from open flames, hot surfaces and sources of ignition.

Hygiene measures : When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : No smoking. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

Storage class (TRGS 510) : 3

Further information on storage stability : No decomposition if stored and applied as directed.

7.3 Specific end use(s)

Specific use(s) : No data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Hexamethylene diisocyanate, oligomers	28182-81-2	TWA	0,01 mg/m ³ (NCO)	98/24/EC I
	Further information: Skin, Dermal and respiratory sensitisation, Binding			
		STEL	0,02 mg/m ³ (NCO)	98/24/EC I
	Further information: Skin, Dermal and respiratory sensitisation, Binding			
2-methoxy-1-methylethyl acetate	108-65-6	STEL	100 ppm 550 mg/m ³	2000/39/EC
	Further information: Identifies the possibility of significant uptake through the			

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		skin, Indicative		
		TWA	50 ppm 275 mg/m ³	2000/39/EC
		Further information: Identifies the possibility of significant uptake through the skin, Indicative		
		AGW	50 ppm 270 mg/m ³	DE TRGS 900
		Peak-limit category: 1;(I)		
		Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child		
		MAK	50 ppm 270 mg/m ³	DE DFG MAK
		Peak-limit category: 1; I		
		Further information: Damage to the embryo or foetus is unlikely when the MAK value or the BAT value is observed		
xylene	1330-20-7	TWA	50 ppm 221 mg/m ³	2000/39/EC
		Further information: Identifies the possibility of significant uptake through the skin, Indicative		
		STEL	100 ppm 442 mg/m ³	2000/39/EC
		Further information: Identifies the possibility of significant uptake through the skin, Indicative		
		AGW	50 ppm 220 mg/m ³	DE TRGS 900
		Peak-limit category: 2;(II)		
		Further information: Skin absorption		
		MAK	50 ppm 220 mg/m ³	DE DFG MAK
		Peak-limit category: 2; II		
		Further information: Danger of absorption through the skin, Either there are no data for an assessment of damage to the embryo or foetus, including developmental neurotoxicity, or the currently available data are not sufficient for classification in one of the groups A - C		
ethylbenzene	100-41-4	TWA	100 ppm 442 mg/m ³	2000/39/EC
		Further information: Identifies the possibility of significant uptake through the skin, Indicative		
		STEL	200 ppm 884 mg/m ³	2000/39/EC
		Further information: Identifies the possibility of significant uptake through the skin, Indicative		
		AGW	20 ppm 88 mg/m ³	DE TRGS 900
		Peak-limit category: 2;(II)		
		Further information: Skin absorption, When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child		
		MAK	20 ppm 88 mg/m ³	DE DFG MAK
		Peak-limit category: 2; II		
		Further information: Danger of absorption through the skin, Substances that		

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	cause cancer in humans or animals or that are considered to be carcinogenic for humans and for which a MAK value can be derived., Damage to the embryo or foetus is unlikely when the MAK value or the BAT value is observed			
hexamethylene-di-isocyanate	822-06-0	AGW	0,005 ppm 0,035 mg/m3	TRGS 430
	Peak-limit category: 1;=2=(I)			
	Further information: In well-founded cases also a momentary value can be established, that never can be exceeded. This substance will be indicated by = = in combination with an exceeding value., airway sensitizing substance			
		AGW (Vapour and aerosols)	0,005 ppm 0,035 mg/m3	DE TRGS 900
	Peak-limit category: 1;=2=(I)			
	Further information: In well-found cases also a momentary value can be established, that never can be exceeded. This substance will be indicated by = = in combination with an exceeding value., Substance sensitizing through the respiratory system			
		AGW	5 ppm 35 mg/m3	TRGS 430
	Peak-limit category: 1;=2=(I)			
	Further information: In well-founded cases also a momentary value can be established, that never can be exceeded. This substance will be indicated by = = in combination with an exceeding value., airway sensitizing substance			
		AGW (Vapour and aerosols)	5 ppm 35 mg/m3	DE TRGS 900
	Peak-limit category: 1;=2=(I)			
	Further information: In well-found cases also a momentary value can be established, that never can be exceeded. This substance will be indicated by = = in combination with an exceeding value., Substance sensitizing through the respiratory system			
		MAK	0,005 ppm 0,035 mg/m3	DE DFG MAK
	Peak-limit category: 1; I			
	Further information: Danger of sensitization of the airways and the skin, Either there are no data for an assessment of damage to the embryo or foetus, including developmental neurotoxicity, or the currently available data are not sufficient for classification in one of the groups A - C			
		Mow	0,01 ppm 0,07 mg/m3	DE DFG MAK
	Peak-limit category: 1; I			
	Further information: Danger of sensitization of the airways and the skin, Either there are no data for an assessment of damage to the embryo or foetus, including developmental neurotoxicity, or the currently available data are not sufficient for classification in one of the groups A - C			
		TWA	0,01 mg/m3 (NCO)	98/24/EC I
	Further information: Skin, Dermal and respiratory sensitisation, Binding			
		STEL	0,02 mg/m3 (NCO)	98/24/EC I
	Further information: Skin, Dermal and respiratory sensitisation, Binding			

Biological occupational exposure limits

Substance name	CAS-No.	Control parameters	Sampling time	Basis
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xylene	1330-20-7	methylhippuric acid (all isomers): 2.000 mg/l (Urine)	Immediately after exposure or after working hours	TRGS 903
		Methylhippuric acid (toluric acid) (all isomers): 2.000 mg/l (Urine)	Immediately after exposition or after working hours	DE DFG BAT
ethylbenzene	100-41-4	mandelic acid + phenylglyoxylic acid: 250 mg/g creatinine (Urine)	Immediately after exposure or after working hours	TRGS 903
		mandelic acid plus phenylglyoxylic acid: 250 mg/g creatinine (Urine)	Immediately after exposition or after working hours	DE DFG BAT
hexamethylene-di-isocyanate	822-06-0	hexamethylenediamine: 15 µg/g creatinine (Urine)	Immediately after exposure or after working hours	TRGS 903
		hexamethylenediamine: 15 µg/g creatinine (Urine)	Immediately after exposition or after working hours	DE DFG BAT

8.2 Exposure controls

Personal protective equipment

- Eye/face protection : Eye wash bottle with pure water
Safety glasses with side-shields conforming to EN166
- Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.
- Hand protection
- Material : Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374.
- Glove length : Standard glove type.
- Guideline : Equipment should conform to EN 374
- Material : Protective equipment only chosen according to specific regulatory requirements after a risk assessment.
- Remarks : Follow the instructions for use issued by the producer.
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. Be aware that in daily use the durability of a chemical resistant protective glove can be notably shorter than the break through time

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measured according to EN 374, due to the numerous outside influences (e.g. temperature). The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Barrier creams may help to protect the exposed areas of skin, they should however not be applied once exposure has occurred.

The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Skin and body protection : Protective equipment only chosen according to specific regulatory requirements after a risk assessment.
Equipment should conform to EN 14605

Impervious clothing

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Respiratory protection : Equipment should conform to EN 14387
General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

No personal respiratory protective equipment normally required.

Filter type : Combined particulates and organic vapor type (A-P)

Protective measures : In case of insufficient ventilation, wear suitable respiratory equipment.

Environmental exposure controls

Water : The product should not be allowed to enter drains, water courses or the soil.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state : liquid

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Color	:	yellow
Odor	:	slight
Odor Threshold	:	No data available
Boiling point/boiling range	:	> 120 °C
Upper explosion limit / Upper flammability limit	:	10,8 %(V)
Lower explosion limit / Lower flammability limit	:	1 %(V)
Flash point	:	ca. 39 °C Method: closed cup
Autoignition temperature	:	ca. 425 °C
Decomposition temperature	:	Not relevant/applicable due to the nature of the product.
pH	:	Not applicable substance/mixture is non-soluble (in water)
Viscosity		
Viscosity, dynamic	:	90 mPa.s (20 °C)
Viscosity, kinematic	:	> 20,5 mm ² /s (40 °C)
Solubility(ies)		
Water solubility	:	insoluble
Partition coefficient: n-octanol/water	:	Not relevant/applicable due to the nature of the product.
Vapor pressure	:	7,9993 hPa
Density	:	ca. 1,07 g/cm ³ (20 °C)

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Relative vapor density : No data available

9.2 Other information

Explosives : No dangerous reaction known under conditions of normal use.

Oxidizing properties : No dangerous reaction known under conditions of normal use.

Self-ignition : Not relevant/applicable due to the nature of the product.

SECTION 10: Stability and reactivity

10.1 Reactivity

No hazards to be specially mentioned.
No decomposition if stored and applied as directed.

10.2 Chemical stability

Stable under normal conditions.
No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions : No dangerous reaction known under conditions of normal use.
No decomposition if stored and applied as directed.
Vapors may form explosive mixture with air.

10.4 Conditions to avoid

Conditions to avoid : Temperatures greater than recommended storage temperature.
Heat, flames and sparks.

10.5 Incompatible materials

Materials to avoid : Strong acids and strong bases
Strong oxidizing agents

10.6 Hazardous decomposition products

Carbon dioxide (CO₂), carbon monoxide (CO), oxides of nitrogen (NO_x), dense black smoke.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

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Information on likely routes of exposure : There are no data available on the mixture itself. Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS] See Sections 2 and 3 for details. Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. If splashed in the eyes, the liquid may cause irritation and reversible damage. This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Acute toxicity

Harmful if inhaled.

Product:

Acute inhalation toxicity : Acute toxicity estimate: 1,71 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Expert judgment
Remarks: The value is calculated

Acute dermal toxicity : Acute toxicity estimate: > 2.000 mg/kg
Method: Calculation method

Components:

Hexamethylene diisocyanate, oligomers:

Acute oral toxicity : LD50 Oral (Rat): > 5.000 mg/kg

Acute inhalation toxicity : LC50: 1,5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Expert judgment

2-methoxy-1-methylethyl acetate:

Acute oral toxicity : LD50 Oral (Rat): > 5.000 mg/kg

Acute dermal toxicity : LD50 Dermal (Rabbit): > 5.000 mg/kg

xylene:

Acute oral toxicity : LD50 Oral (Rat): 3.523 mg/kg

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Acute dermal toxicity : LD50 Dermal (Rabbit): 1.700 mg/kg

ethylbenzene:

Acute oral toxicity : LD50 Oral (Rat): 3.500 mg/kg

Acute dermal toxicity : LD50 Dermal (Rabbit): 5.510 mg/kg

hexamethylene-di-isocyanate:

Acute oral toxicity : LD50 Oral (Rat): 746 mg/kg

Acute inhalation toxicity : LC50 (Rat): 0,124 mg/l
Exposure time: 4 h
Test atmosphere: vapor

Acute dermal toxicity : LD50 Dermal (Rat): > 7.000 mg/kg

Skin corrosion/irritation

Causes skin irritation.

Product:

Remarks : May cause skin irritation and/or dermatitis.

Serious eye damage/eye irritation

Causes serious eye irritation.

Product:

Remarks : May cause irreversible eye damage.

Respiratory or skin sensitization

Skin sensitization

May cause an allergic skin reaction.

Respiratory sensitization

Not classified due to lack of data.

Product:

Remarks : Causes sensitization.

Germ cell mutagenicity

Not classified due to lack of data.

Carcinogenicity

Not classified due to lack of data.

Reproductive toxicity

Not classified due to lack of data.

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STOT-single exposure

May cause respiratory irritation.

STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Aspiration toxicity

Not classified due to lack of data.

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Further information

Product:

Remarks : Solvents may degrease the skin.

SECTION 12: Ecological information

12.1 Toxicity

Components:

Hexamethylene diisocyanate, oligomers:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 100 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h

xylene:

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 2,2 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

Toxicity to fish (Chronic toxicity) : NOEC: > 1,3 mg/l
Exposure time: 56 d
Species: Oncorhynchus mykiss (rainbow trout)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 1,17 mg/l
Exposure time: 7 d
Species: Daphnia

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ethylbenzene:

Toxicity to fish : LC50 (Fish): 1 mg/l
Exposure time: 96 h

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

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

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

Product:

Additional ecological information : The product should not be allowed to enter drains, water courses or the soil.

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Harmful to aquatic life.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

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Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.

SECTION 14: Transport information

14.1 UN number or ID number

ADR : UN 1866
IMDG : UN 1866
IATA : UN 1866

14.2 UN proper shipping name

ADR : RESIN SOLUTION
IMDG : RESIN SOLUTION
IATA : Resin solution

14.3 Transport hazard class(es)

	Class	Subsidiary risks
ADR	: 3	
IMDG	: 3	
IATA	: 3	

14.4 Packing group

ADR
Packing group : III
Classification Code : F1
Hazard Identification Number : 30
Labels : 3
Tunnel restriction code : (D/E)

IMDG
Packing group : III
Labels : 3
EmS Code : F-E, S-E

IATA (Cargo)
Packing instruction (cargo aircraft) : 366
Packing instruction (LQ) : Y344
Packing group : III
Labels : Flammable Liquids

IATA (Passenger)
Packing instruction (passenger aircraft) : 355

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Packing instruction (LQ) : Y344
Packing group : III
Labels : Flammable Liquids

14.5 Environmental hazards

ADR

Environmentally hazardous : no

IMDG

Marine pollutant : no

14.6 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.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : Conditions of restriction for the following entries should be considered:
Number on list 3

Number on list 74: hexamethylene-di-isocyanate

Number on list 75:

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

Regulation (EU) No 2024/590 on substances that deplete the ozone layer : Not applicable

Regulation (EU) 2019/1021 on persistent organic pollutants (recast) : Not applicable

Regulation (EU) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable

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

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the P5c FLAMMABLE LIQUIDS

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control of major-accident hazards involving dangerous substances.

Water hazard class (Germany) : WGK 2 obviously hazardous to water
Classification according to AwSV, Annex 1 (5.2)

TA Luft List (Germany) : 5.2.5: Organic Substances:
Class 1: 0,3 % 822-06-0
5.2.7.1.3: Substances toxic to reproduction:
others: 0,06 % 70657-70-4, 1589-47-5

Volatile organic compounds : Directive 2010/75/EU of 24 November 2010 on industrial and livestock rearing emissions (integrated pollution prevention and control)
Volatile organic compounds (VOC) content: 25 %

Other regulations:

Take note of Law on the protection of mothers at work, in education and in studies (Maternity Protection Act - MuSchG).

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this mixture.

This product is in full compliance according to REACH regulation 1907/2006/EC.

SECTION 16: Other information

Full text of H-Statements

H225 : Highly flammable liquid and vapor.
H226 : Flammable liquid and vapor.
H304 : May be fatal if swallowed and enters airways.
H312 : Harmful in contact with skin.
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.
H373 : May cause damage to organs through prolonged or repeated exposure.
H373 : May cause damage to organs through prolonged or repeated exposure if inhaled.
H412 : Harmful to aquatic life with long lasting effects.

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Full text of other abbreviations

Acute Tox.	: Acute toxicity
Aquatic Chronic	: Long-term (chronic) aquatic hazard
Asp. Tox.	: Aspiration hazard
Eye Irrit.	: Eye irritation
Flam. Liq.	: Flammable liquids
Resp. Sens.	: Respiratory sensitization
Skin Irrit.	: Skin irritation
Skin Sens.	: Skin sensitization
STOT RE	: Specific target organ toxicity - repeated exposure
STOT SE	: Specific target organ toxicity - single exposure
2000/39/EC	: Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values
98/24/EC I	: Europe. Chemical Agents Directive - Annex I: Binding occupational exposure limit values
DE DFG BAT	: Germany. MAK BAT Annex XIII
DE DFG MAK	: Germany. MAK BAT Annex IIa
DE TRGS 900	: Germany. TRGS 900 - Occupational exposure limit values.
TRGS 430	: Germany. TRGS 430 - Isocyanates
TRGS 903	: TRGS 903 - Biological limit values
2000/39/EC / TWA	: Limit Value - eight hours
2000/39/EC / STEL	: Short term exposure limit
98/24/EC I / STEL	: Limit values Short-term
98/24/EC I / TWA	: Limit values 8 hours
DE DFG MAK / Mow	: Momentary value
DE DFG MAK / MAK	: MAK value
DE TRGS 900 / AGW	: Time Weighted Average
TRGS 430 / AGW	: Occupational Exposure Limit

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic sub-

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stance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Classification of the mixture:

Flam. Liq. 3	H226
Acute Tox. 4	H332
Skin Irrit. 2	H315
Eye Irrit. 2	H319
Skin Sens. 1	H317
STOT SE 3	H335
STOT RE 2	H373

Classification procedure:

Based on product data or assessment
Expert judgment and weight of evidence determination.
Calculation method

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by the manufacturer, including but not limited to the incorporation of products not specified by the manufacturer, or the use or addition of products in proportions not specified by the manufacturer. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

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