

Safety Data Sheet

according to Regulation (EC) No 1907/2006



Bergolin PUR-Härter 7D054

Revision date: 12.07.2019

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H317	May cause an allergic skin reaction.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.

Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P403+P235	Store in a well-ventilated place. Keep cool.

Special labelling of certain mixtures

EUH204	Contains isocyanates. May produce an allergic reaction.
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SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Isocyanate in organic solvent

Hazardous components

CAS No	Chemical name	Quantity		
	EC No	Index No	REACH No	
	GHS Classification			
28182-81-2	Hexamethylene-1,6-diisocyanate homopolymer	70 - < 75 %		
	500-060-2			
	Acute Tox. 4, Skin Sens. 1, STOT SE 3; H332 H317 H335			
123-86-4	n-butyl acetate	25 - < 30 %		
	204-658-1	607-025-00-1	01-2119485493-29	
	Flam. Liq. 3, STOT SE 3; H226 H336 EUH066			
822-06-0	hexamethylene-di-isocyanate	< 1 %		
	212-485-8	615-011-00-1	01-2119457571-37	
	Acute Tox. 1, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, Resp. Sens. 1, Skin Sens. 1, STOT SE 3; H330 H302 H315 H319 H334 H317 H335			

Full text of H and EUH statements: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

When in doubt or if symptoms are observed, get medical advice.
Never give anything by mouth to an unconscious person or a person with cramps.
If unconscious place in recovery position and seek medical advice.

After inhalation

Remove casualty to fresh air and keep warm and at rest.
If breathing is irregular or stopped, administer artificial respiration.

After contact with skin

Immediately remove any contaminated clothing, shoes or stockings.
After contact with skin, wash immediately with plenty of water and soap.
Do not wash with: Solvents/Thinner.

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After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical advice immediately.

After ingestion

If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention.

Put victim at rest, cover with a blanket and keep warm.

Do NOT induce vomiting.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

alcohol resistant foam, Carbon dioxide (CO₂), Extinguishing powder, Water mist

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

Burning produces heavy smoke.

Hazardous decomposition products: carbon black. Health hazard.

Use appropriate respiratory protection.

5.3. Advice for firefighters

Use water spray jet to protect personnel and to cool endangered containers.

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Keep away from sources of ignition - No smoking. Ventilate affected area.

Avoid breathing dust/fume/gas/mist/vapours/spray.

Safe handling: see section 7

Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up

Prevent spread over a wide area (e.g. by containment or oil barriers). Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).

Collect in closed containers for disposal.

Clean with detergents. Avoid solvent cleaners.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Persons with a history of asthma, allergies, chronic or recurrent respiratory disease should not be exposed to any process in which this product is used. Examination of lung function should be carried out on a regular basis on persons spraying this product.

Avoid release to the environment. In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop. Only use the material in places where open light, fire and other flammable sources can be kept away. Use explosion-proof electrical equipment. Filling and transfer: Take precautionary measures against static discharges. Provide earthing of containers, equipment, pumps and ventilation facilities.

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Wear anti-static footwear and clothing. Soils have to conform to the "Guidelines for avoidance of ignition hazards due to electrostatic charges (TRGS 727)". Use only antistatically equipped (spark-free) tools.

Never use pressure to empty container. Handle and open container with care. Keep/Store only in original container. Do not allow to enter into surface water or drains. Keep away from sources of heat (e.g. hot surfaces), sparks and open flames.

Avoid contact with skin, eyes and clothes. Avoid: Inhalation of vapours or spray/mists, Inhalation of dust/particles. When using do not eat, drink, smoke, sniff.

Advice on protection against fire and explosion

Solvent - Vapours are heavier than air, spread along floors and form explosive mixtures with air.

Further information on handling

Conditions to avoid: Avoid contact with water. - Protect from moisture.

Carbon dioxide (CO₂) (chemical identity of the evolved gas). Due to gaseous decomposition products, overpressure can occur in tightly sealed containers.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Store in accordance with: Betriebssicherheitsverordnung (BetrSichV).

Hints on joint storage

Do not store together with: Oxidizing agent, Strong acid, Strong alkali, Amines, Water

Further information on storage conditions

Notice the directions for use on the label.

Keep container tightly closed in a cool, well-ventilated place. Protect from sunlight. Keep away from sources of ignition - No smoking.

Store in a place accessible by authorized persons only.

Always close containers tightly after the removal of product.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
123-86-4	Butyl acetate	150	724		TWA (8 h)	WEL
		200	966		STEL (15 min)	WEL

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DNEL/DMEL values

CAS No	Substance		
DNEL type	Exposure route	Effect	Value
28182-81-2	Hexamethylene-1,6-diisocyanate homopolymer		
Worker DNEL, acute	inhalation	local	1 mg/m ³
Worker DNEL, long-term	inhalation	local	0,5 mg/m ³
123-86-4	n-butyl acetate		
Worker DNEL, acute	inhalation	systemic	600 mg/m ³
Worker DNEL, acute	inhalation	local	600 mg/m ³
Worker DNEL, long-term	inhalation	systemic	300 mg/m ³
Worker DNEL, long-term	inhalation	local	300 mg/m ³
Consumer DNEL, acute	inhalation	systemic	300 mg/m ³
Consumer DNEL, acute	inhalation	local	300 mg/m ³
Consumer DNEL, long-term	inhalation	systemic	35,7 mg/m ³
Consumer DNEL, long-term	inhalation	local	35,7 mg/m ³
Consumer DNEL, long-term	dermal	systemic	6 mg/kg bw/day
Consumer DNEL, acute	dermal	systemic	6 mg/kg bw/day
Consumer DNEL, long-term	oral	systemic	2 mg/kg bw/day
Consumer DNEL, acute	oral	systemic	2 mg/kg bw/day
Worker DNEL, long-term	dermal	systemic	11 mg/kg bw/day
Worker DNEL, acute	dermal	systemic	11 mg/kg bw/day

PNEC values

CAS No	Substance	
Environmental compartment	Value	
28182-81-2	Hexamethylene-1,6-diisocyanate homopolymer	
Freshwater	0,127 mg/l	
Freshwater (intermittent releases)	1,27 mg/l	
Marine water	0,0127 mg/l	
Freshwater sediment	2530 mg/kg	
Marine sediment	253 mg/kg	
Micro-organisms in sewage treatment plants (STP)	100 mg/l	
Soil	505 mg/kg	
123-86-4	n-butyl acetate	
Freshwater	0,18 mg/l	
Freshwater (intermittent releases)	0,356 mg/l	
Marine water	0,018 mg/l	
Freshwater sediment	0,981 mg/kg	
Marine sediment	0,0981 mg/kg	
Micro-organisms in sewage treatment plants (STP)	35,6 mg/l	
Soil	0,093 mg/kg	

Additional advice on limit values

Persons with a history of asthma, allergies, chronic or recurrent respiratory disease should not be exposed to any process in which this product is used. Examination of lung function should be carried out on a regular basis

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on persons spraying this product.

8.2. Exposure controls

Appropriate engineering controls

Provide adequate ventilation.

If handled uncovered, arrangements with local exhaust ventilation should be used if possible.

If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn.

Safety precautions for operators (SPo): Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Protective and hygiene measures

Harmful dust is produced during dry-state pulverisation. Do not subject to grinding. (Avoid dust formation.) If possible, dampen before cutting or drilling. If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn.

Persons already sensitised to diisocyanates may develop allergic reactions when using this product.

Draw up and observe skin protection programme.

Eye/face protection

Wear eye protection/face protection.

Hand protection

Wear protective gloves. Replace when worn. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. Observe the wear time limits as specified by the manufacturer.

Suitable material: butyl rubber or Viton (necessarily consider the permanence of the material and See information supplied by the manufacturer.)

Breakthrough time (maximum wearing time): ____ min.

Use protective skin cream before handling the product.

Skin protection

Wear anti-static footwear and clothing (Natural fibres (e.g. cotton) / heat-resistant synthetic fibres)

Respiratory protection

Provide adequate ventilation. Combination filtering device (EN 14387).

Wear breathing apparatus if exposed to vapours/dusts/aerosols. Self-contained respirator (breathing apparatus) (DIN EN 133).

Environmental exposure controls

Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	liquid
Colour:	colourless
Odour:	characteristic

Test method

Changes in the physical state

Initial boiling point and boiling range:	126 °C
Flash point:	25 °C DIN 53213
Lower explosion limits:	1,2 vol. %
Upper explosion limits:	7,5 vol. %

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Ignition temperature:	>200 °C
Vapour pressure: (at 20 °C)	12 hPa
Density (at 20 °C):	1,06 g/cm ³ DIN 53217
Flow time: (at 20 °C)	36
Solvent separation test:	<3 % (Land transport (ADR/RID))
Solvent content:	25,00 %

9.2. Other information

Solid content:	75,00 %
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SECTION 10: Stability and reactivity

10.1. Reactivity

Decomposes in contact with water. Carbon dioxide (CO₂) (chemical identity of the evolved gas)

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Keep away from: Oxidizing agent, Amines, Alcohols, Water, Strong alkali, Strong acid

Due to gaseous decomposition products, overpressure can occur in tightly sealed containers. Closed containers may burst when pressure and temperature rise.

10.4. Conditions to avoid

In case of fire: May form hazardous decomposition products when exposed to high temperatures.

10.5. Incompatible materials

Exothermic reaction with: Alcohols, Amines

10.6. Hazardous decomposition products

Carbon monoxide Carbon dioxide. Nitrogen oxides (NO_x).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Harmful if inhaled.

ATEmix calculated

ATE (inhalation vapour) 13,70 mg/l; ATE (inhalation aerosol) 1,113 mg/l

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CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
28182-81-2	Hexamethylene-1,6-diisocyanate homopolymer				
	oral	LD50 >2500 mg/kg	Rat		
	dermal	LD50 >2000 mg/kg	Rat		
	inhalation vapour	ATE 11 mg/l			
	inhalation (4 h) aerosol	LC50 0,39 mg/l	Rat		OECD 403
123-86-4	n-butyl acetate				
	oral	LD50 13100 mg/kg	Ratte		
	dermal	LD50 17600 mg/kg	Kaninchen		
	inhalation (4 h) vapour	LC50 >21 mg/l	Ratte		
822-06-0	hexamethylene-di-isocyanate				
	oral	LD50 959 mg/kg	Rat		
	dermal	LD50 >7000 mg/kg	Rat		
	inhalation (4 h) vapour	LC50 0,4 mg/l	Rat		
	inhalation aerosol	ATE 0,005 mg/l			

Irritation and corrosivity

Based on available data, the classification criteria are not met.
Irritating to skin.

Sensitising effects

Contains isocyanates. May produce an allergic reaction. May cause an allergic skin reaction.
(Hexamethylene-1,6-diisocyanate homopolymer; hexamethylene-di-isocyanate)
People who suffer from skin sensitization problems, asthma, allergies, chronic or recurring respiratory illnesses should not be deployed in any process using this preparation.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

STOT-single exposure

May cause respiratory irritation. (Hexamethylene-1,6-diisocyanate homopolymer)
May cause drowsiness or dizziness. (n-butyl acetate)

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.
Contains isocyanates. May produce an allergic reaction. Respiratory or skin sensitisation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Practical experience

Observations relevant to classification

Following inhalation:
May cause respiratory irritation. Potential hazards: Liver and kidney damage. Depression of the central nervous system. Symptoms: Headache. Dizziness. Causes drowsiness or dizziness. unconsciousness.

After skin contact:

The product is skin resorptive. Prolonged/repetitive skin contact may cause skin defatting or dermatitis.

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Following eye contact:
Irritating to eyes. (reversible.)

after ingestion:
Nausea. vomiting. gastro-intestinal ailment.

Further information

There are no data available on the mixture itself.
Classification according to Regulation (EC) No 1272/2008 [CLP]

SECTION 12: Ecological information

12.1. Toxicity

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
28182-81-2	Hexamethylene-1,6-diisocyanate homopolymer					
	Acute fish toxicity	LC50 >=100 mg/l	96 h	Brachydanio rerio (zebra-fish)		
	Acute algae toxicity	ErC50 >1000 mg/l	72 h	Scenedesmus subspicatus		DIN 38412
	Acute crustacea toxicity	EC50 127 mg/l	48 h	Daphnia magna (Big water flea)		
	Acute bacteria toxicity	(3828 mg/l)	3 h	Activated sludge		OECD 209
123-86-4	n-butyl acetate					
	Acute fish toxicity	LC50 18 mg/l	96 h	Pimephales promelas (fathead minnow)		
	Acute algae toxicity	ErC50 675 mg/l	72 h	Desmodesmus subspicatus		
	Acute crustacea toxicity	EC50 44 mg/l	48 h	Daphnia magna		
	Crustacea toxicity	NOEC 23 mg/l	21 d	Daphnia magna		

12.2. Persistence and degradability

CAS No	Chemical name				
	Method	Value	d	Source	
	Evaluation				
822-06-0	hexamethylene-di-isocyanate				
	OECD 301D	1%	28		

12.3. Bioaccumulative potential

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
28182-81-2	Hexamethylene-1,6-diisocyanate homopolymer	8,38

BCF

CAS No	Chemical name	BCF	Species	Source
822-06-0	hexamethylene-di-isocyanate	367,7		

Further information

There are no data available on the mixture itself.
Do not allow to enter into surface water or drains.

SECTION 13: Disposal considerations

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13.1. Waste treatment methods

Disposal recommendations

Do not allow to enter into surface water or drains.
Suitable material for diluting or neutralizing: SECTION 6: Accidental release measures
Recycle according to official regulations.

List of Wastes Code - residues/unused products

080501 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes not otherwise specified in 08; waste isocyanates; hazardous waste

Contaminated packaging

Completely emptied packages can be recycled.
Recycle according to official regulations.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number: UN 1866
14.2. UN proper shipping name: Resin solution
14.3. Transport hazard class(es): 3
14.4. Packing group: III
Hazard label: 3



Classification code: F1
Special Provisions: 640E
Limited quantity: 5 L
Transport category: 3
Hazard No: 30
Tunnel restriction code: D/E

Other applicable information (land transport)

E1

Marine transport (IMDG)

14.1. UN number: UN 1866
14.2. UN proper shipping name: Resin solution
14.3. Transport hazard class(es): 3
14.4. Packing group: III
Hazard label: 3



Special Provisions: 223, 955
Limited quantity: 5 L
EmS: F-E, S-E

Other applicable information (marine transport)

E1

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 1866
14.2. UN proper shipping name: Resin solution

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14.3. Transport hazard class(es): 3

14.4. Packing group: III

Hazard label: 3



Special Provisions: A3

Limited quantity Passenger: 10 L

IATA-packing instructions - Passenger: 355

IATA-max. quantity - Passenger: 60 L

IATA-packing instructions - Cargo: 366

IATA-max. quantity - Cargo: 220 L

Other applicable information (air transport)

E1

Passenger-LQ: Y344

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not applicable

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3: Hexamethylene-1,6-diisocyanate homopolymer; hexamethylene-di-isocyanate

2010/75/EU (VOC): 25 % (265 g/l)

2004/42/EC (VOC): 25 % (265 g/l)

Information according to 2012/18/EU (SEVESO III): P5c FLAMMABLE LIQUIDS

National regulatory information

Water hazard class (D): 1 - slightly hazardous to water

Additional information

Observe in addition any national regulations!

SECTION 16: Other information

Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]

Classification	Classification procedure
Flam. Liq. 3; H226	On basis of test data
Acute Tox. 4; H332	Calculation method
Skin Sens. 1; H317	Calculation method
STOT SE 3; H335	Calculation method
STOT SE 3; H336	Calculation method

Relevant H and EUH statements (number and full text)

H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.

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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.
EUH066	Repeated exposure may cause skin dryness or cracking.
EUH204	Contains isocyanates. May produce an allergic reaction.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)