

Safety data sheet

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BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 11.09.2019

Version: 2.0

Product: **Basonat® LR 9056**

(ID no. 30591253/SDS_GEN_00/EN)

Date of print 12.10.2025

1. Identification

Product identifier

Basonat® LR 9056

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

Relevant identified uses: Raw material, for industrial use only

Details of the supplier of the safety data sheet

Company:

BASF SE

67056 Ludwigshafen

GERMANY

Regional Business Unit Dispersions Europe

Telephone: +49 621 60-0

E-mail address: ed-psr@basf.com

Emergency telephone number

International emergency number:

Telephone: +49 180 2273-112

2. Hazards Identification

Classification of the substance or mixture

According to UN GHS criteria

Acute Tox. 4 (Inhalation - mist)

Acute Tox. 5 (oral)

Skin Sens. 1

STOT SE 3 (irritating to respiratory system)

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Aquatic Acute 3
Aquatic Chronic 3

For the classifications not written out in full in this section the full text can be found in section 16.

Label elements

Globally Harmonized System (GHS)

Pictogram:



Signal Word:
Warning

Hazard Statement:

H332	Harmful if inhaled.
H303	May be harmful if swallowed.
H317	May cause an allergic skin reaction.
H335	May cause respiratory irritation.
H402	Harmful to aquatic life.
H412	Harmful to aquatic life with long lasting effects.

Precautionary Statements (Prevention):

P280	Wear protective gloves.
P271	Use only outdoors or in a well-ventilated area.
P260	Do not breathe mist or vapour.
P273	Avoid release to the environment.
P272	Contaminated work clothing should not be allowed out of the workplace.

Precautionary Statements (Response):

P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P303 + P362	IF ON SKIN (or hair): Wash with plenty of soap and water.
P333 + P311	If skin irritation or rash occurs: Call a POISON CENTER or doctor/physician.
P362 + P364	Take off contaminated clothing and wash it before reuse.

Precautionary Statements (Storage):

P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.

Precautionary Statements (Disposal):

P501	Dispose of contents/container to hazardous or special waste collection point.
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According to UN GHS criteria

Hazard determining component(s) for labelling: (OLIGOMER) Hexamethylene diisocyanate isocyanurate-type oligomers

Other hazardsAccording to UN GHS criteria

No specific dangers known, if the regulations/notes for storage and handling are considered.

3. Composition/Information on Ingredients

Substances

Not applicable

MixturesChemical nature

polyfunctional polyisocyanate

Hazardous ingredients (GHS)

According to UN GHS criteria

|(OLIGOMER) Hexamethylene diisocyanate isocyanurate-type oligomers

Content (W/W): $\geq 60\%$ - $\leq 80\%$ Acute Tox. 4 (Inhalation - mist)

CAS Number: 28182-81-2 Skin Sens. 1

STOT SE 3 (irr. to respiratory syst.)

H332, H317, H335

Poly(oxy-1,2-ethanediyl), .alpha.-methyl-.omega.-hydroxy-, polymer with 1,6-diisocyanatohexane, block

Content (W/W): $\geq 20\%$ - $\leq 35\%$ Aquatic Acute 3

CAS Number: 143472-08-6 Aquatic Chronic 3

H402, H412

Hexamethylene diisocyanate

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Content (W/W): < 0,1 %
CAS Number: 822-06-0
EC-Number: 212-485-8
INDEX-Number: 615-011-00-1

Acute Tox. 4 (oral)
Acute Tox. 1 (Inhalation - mist)
Skin Corr./Irrit. 2
Eye Dam./Irrit. 2A
Resp. Sens. 1
Skin Sens. 1
STOT SE 3 (irr. to respiratory syst.)
H319, H315, H330, H302, H334, H317, H335

Specific concentration limit:

Skin Sens. 1: >= 0,5 %

Resp. Sens. 1: >= 0,5 %

For the classifications not written out in full in this section the full text can be found in section 16.

4. First-Aid Measures

Description of first aid measures

Immediately remove contaminated clothing.

If inhaled:

If difficulties occur after vapour/aerosol has been inhaled, remove to fresh air and seek medical attention.

On skin contact:

Wash thoroughly with soap and water.

On contact with eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open.

On ingestion:

Rinse mouth and then drink 200-300 ml of water. Do not induce vomiting unless told to by a poison control center or doctor.

Most important symptoms and effects, both acute and delayed

Symptoms: Additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11., (Further) symptoms and / or effects are not known so far

Indication of any immediate medical attention and special treatment needed

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

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Suitable extinguishing media:
water spray, dry powder, foam

Unsuitable extinguishing media for safety reasons:
water jet

Special hazards arising from the substance or mixture

harmful vapours

Evolution of fumes/fog. The substances/groups of substances mentioned can be released in case of fire.

Advice for fire-fighters

Special protective equipment:

Wear a self-contained breathing apparatus.

Further information:

The degree of risk is governed by the burning substance and the fire conditions. Contaminated extinguishing water must be disposed of in accordance with official regulations.

6. Accidental Release Measures**Personal precautions, protective equipment and emergency procedures**

Use personal protective clothing. Breathing protection required.

Environmental precautions

Contain contaminated water/firefighting water. Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up

For large amounts: Pump off product.

For residues: Pick up with suitable absorbent material. Dispose of absorbed material in accordance with regulations.

7. Handling and Storage**Precautions for safe handling**

Avoid handling of the substance in case of known skin complaints, hypersensitivity reactions, chronic respiratory disease, asthmatic attacks or bronchial attacks. Avoid contact with the skin, eyes and clothing. Avoid inhalation of dusts/mists/vapours. Avoid frequent and direct contact with substance. Ensure good work practices are implemented. Regular inspection and maintenance of equipment and machines. Clean equipment and the work area every day. Engineering controls have to be used to reduce exposures. Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings. Worker should receive a pre-placement and subsequently a periodically medical examination including a pulmonary function test. Wear suitable face shield. Wear an impervious suit. Use suitable eye protection. Wear chemically resistant gloves in combination with 'basic' employee training. Change gloves, if duration of activity exceeds break through time. Use a

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local exhaust ventilation with adequate effectiveness. In case of insufficient ventilation, wear suitable respiratory equipment.

Protection against fire and explosion:

Take precautionary measures against static discharges.

Conditions for safe storage, including any incompatibilities

Further information on storage conditions: Keep container tightly closed and in a cool place. Keep container dry.

Storage stability:

If moisture enters isocyanate containers, CO₂ forms and pressure builds up.

Protect from temperatures above: 50 °C

Specific end use(s)

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

8. Exposure Controls/Personal Protection**Control parameters**Components with occupational exposure limits

| 822-06-0: Hexamethylene diisocyanate

Exposure controlsPersonal protective equipment

Respiratory protection:

For short-term or slight exposure, use a respiratory mask with filter, for intensive or long-term exposure wear full respiratory protection apparatus Combination filter for gases/vapours of organic compounds and solid and liquid particles (f.e. EN 14387 Type A-P2)

Hand protection:

Chemical resistant protective gloves (EN 374)

Suitable materials for short-term contact (recommended: At least protective index 2, corresponding > 30 minutes of permeation time according to EN 374)

nitrile rubber (NBR) - 0.4 mm coating thickness

fluoroelastomer (FKM) - 0.7 mm coating thickness

Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing.

Manufacturer's directions for use should be observed because of great diversity of types.

Eye protection:

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Safety glasses with side-shields (frame goggles) (f.e. EN 166) and face shield

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

General safety and hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wearing of closed work clothing is required additionally to the stated personal protection equipment. Do not breathe vapour/aerosol/spray mists. Ensure adequate ventilation. Clean equipment, work area and clothing regularly.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Form:	liquid	
Colour:	colourless to yellowish	
Odour:	faint specific odour	
Odour threshold:	not determined	
pH value:	not applicable	
Melting point:	approx. -46 °C	(DIN 51583)
Boiling point:	not determined	
Flash point:	168 °C	(DIN EN 22719; ISO 2719)
Evaporation rate:	not determined	
Flammability:	not flammable	(derived from flash point)
Lower explosion limit:	As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.	
Upper explosion limit:	As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.	
Ignition temperature:	414 °C	(DIN EN 14522)
Vapour pressure:	< 0,0001 hPa (20 °C)	

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Density: 1,16 g/cm³
(20 °C)
1,14 g/cm³
(50 °C)

Relative density: 1,16
(20 °C)

Relative vapour density (air):
not determined

Solubility in water: Reacts with water.

Solubility (qualitative) solvent(s): polar solvents
soluble

Partitioning coefficient n-octanol/water (log K_{ow}):
Study scientifically not justified.

Self ignition: not self-igniting

Thermal decomposition: No decomposition if used correctly.

Viscosity, dynamic: 1.500 - 3.000 mPa.s (DIN EN ISO 3219)
(23 °C, 50 1/s)

Explosion hazard: not explosive

Fire promoting properties: not fire-propagating

Other information

Self heating ability: It is not a substance capable of spontaneous heating.

Miscibility with water: Reacts with water.

Hygroscopy: hygroscopic

Surface tension: Based on chemical structure, surface activity is not to be expected.

Grain size distribution: The substance / product is marketed or used in a non solid or granular form.

10. Stability and Reactivity**Reactivity**

No hazardous reactions if stored and handled as prescribed/indicated.

Chemical stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions

Reacts with alcohols. Reacts with amines. Reacts with substances which contain active hydrogen.
Reacts with water, with formation of carbon dioxide. The formation of gaseous decomposition products builds up pressure in tightly closed containers.

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Conditions to avoid

Avoid moisture. Avoid humidity. Avoid direct contact with water.

Incompatible materials

Substances to avoid:

water, alcohols, amines

Hazardous decomposition products

Hazardous decomposition products:

No hazardous decomposition products if stored and handled as prescribed/indicated.

11. Toxicological Information**Information on toxicological effects**Acute toxicity

Assessment of acute toxicity:

Virtually nontoxic after a single ingestion. Of moderate toxicity after short-term inhalation. The product has not been tested. The statement has been derived from the properties of the individual components.

Experimental/calculated data:

LD50 rat (oral): > 2.000 mg/kg

The product has not been tested. The statement has been derived from the properties of the individual components.

LC50 rat (by inhalation): > 1 - 5 mg/l 4 h

The substance from the isocyanate substance class has been tested in a form (respirable aerosol) that is different from the forms in which the product is placed on the market and used. Therefore, the test result is not adequate for the purpose of classification and labelling of the product. Based on expert judgement and available data, a modified classification and labeling for acute inhalation toxicity is justified. The generation of a respirable aerosol must be prevented! The product has not been tested. The statement has been derived from the properties of the individual components.

LD50 rat (dermal):

not determined

Information on: (OLIGOMER) Hexamethylene diisocyanate isocyanurate-type oligomers*Experimental/calculated data:**LC50 rat (by inhalation): 0,467 mg/l 4 h (OECD Guideline 403)**The test result applies only to the substance transferred into respirable aerosol (particles < 20 µm).**An aerosol was tested.*
-----Irritation

Assessment of irritating effects:

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Not irritating to eyes and skin. The product has not been tested. The statement has been derived from the properties of the individual components.

Experimental/calculated data:

Skin corrosion/irritation rabbit: non-irritant (OECD Guideline 404)

The product has not been tested. The statement has been derived from the properties of the individual components.

Serious eye damage/irritation rabbit: non-irritant (OECD Guideline 405)

The product has not been tested. The statement has been derived from the properties of the individual components.

Respiratory/Skin sensitization

Experimental/calculated data:

Guinea pig maximization test guinea pig: skin sensitizing

sensitizing effect in animal tests The product has not been tested. The statement has been derived from the properties of the individual components.

Germ cell mutagenicity

Assessment of mutagenicity:

Based on the ingredients, there is no suspicion of a mutagenic effect.

Carcinogenicity

Assessment of carcinogenicity:

No data available.

Reproductive toxicity

Assessment of reproduction toxicity:

No data available.

Developmental toxicity

Assessment of teratogenicity:

No data available.

Specific target organ toxicity (single exposure)

Assessment of STOT single:

Causes temporary irritation of the respiratory tract.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

Assessment of repeated dose toxicity:

No data available.

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Aspiration hazard

No aspiration hazard expected.

12. Ecological Information

Toxicity

Assessment of aquatic toxicity:

The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Toxicity to fish:

LC50 (96 h), Fish

not determined

Aquatic invertebrates:

EC50 (48 h) 10 - 100 mg/l, Daphnia magna

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Aquatic plants:

EC50 (72 h), algae

not determined

Microorganisms/Effect on activated sludge:

EC50 (3 h) > 1.000 mg/l, bacteria

The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Chronic toxicity to fish:

No data available.

Chronic toxicity to aquatic invertebrates:

No data available.

Assessment of terrestrial toxicity:

Study scientifically not justified.

Persistence and degradability

Assessment biodegradation and elimination (H₂O):

The substance can be virtually eliminated from water in suitable effluent treatment plants by biodegradation, stripping and mechanical separation.

Elimination information:

Not readily biodegradable (by OECD criteria).

Bioaccumulative potential

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Assessment bioaccumulation potential:

The product has not been tested.

Mobility in soil

Assessment transport between environmental compartments:

Volatility: The substance will not evaporate into the atmosphere from the water surface.

Adsorption in soil: No data available.

Additional information

Add. remarks environm. fate & pathway:

Treatment in biological waste water treatment plants has to be performed according to local and administrative regulations.

Other ecotoxicological advice:

Do not release untreated into natural waters. The local regulations on waste-water treatment must be followed.

13. Disposal Considerations**Waste treatment methods**

Incinerate in suitable incineration plant, observing local authority regulations.

Contaminated packaging:

Uncontaminated packaging can be re-used.

Packs that cannot be cleaned should be disposed of in the same manner as the contents.

Refer to manufacturer/supplier for information on recovery/recycling.

14. Transport Information**Land transport**

ADR

Not classified as a dangerous good under transport regulations

UN number: Not applicable

UN proper shipping name: Not applicable

Transport hazard class(es): Not applicable

Packing group: Not applicable

Environmental hazards: Not applicable

Special precautions for user: None known

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RID

	Not classified as a dangerous good under transport regulations
UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

Inland waterway transport**ADN**

	Not classified as a dangerous good under transport regulations
UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user:	None known

Transport in inland waterway vessel

Not evaluated

Sea transport**IMDG**

	Not classified as a dangerous good under transport regulations
UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

Air transport**IATA/ICAO**

	Not classified as a dangerous good under transport regulations
UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable

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Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

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

Regulation:	Not evaluated
Shipment approved:	Not evaluated
Pollution name:	Not evaluated
Pollution category:	Not evaluated
Ship Type:	Not evaluated

15. Regulatory Information

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

Not applicable

16. Other Information

Full text of classifications, hazard symbols and hazard statements, if mentioned in section 2 or 3:

Acute Tox.	Acute toxicity
Skin Sens.	Skin sensitization
STOT SE	Specific target organ toxicity — single exposure
Aquatic Acute	Hazardous to the aquatic environment - acute
Aquatic Chronic	Hazardous to the aquatic environment - chronic
Skin Corr./Irrit.	Skin corrosion/irritation
Eye Dam./Irrit.	Serious eye damage/eye irritation
Resp. Sens.	Respiratory sensitization
H332	Harmful if inhaled.
H317	May cause an allergic skin reaction.
H335	May cause respiratory irritation.
H402	Harmful to aquatic life.
H412	Harmful to aquatic life with long lasting effects.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H330	Fatal if inhaled.
H302	Harmful if swallowed.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

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