

Safety Data Sheet

Basonat® HI 100 NG

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Version: 7.0

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(30567108/SDS_GEN_US/EN)

1. Identification

Product identifier used on the label

Basonat® HI 100 NG

Recommended use of the chemical and restriction on use

Recommended use*: Intermediate (isolated), Hardener for coating materials or adhesives for industrial or professional use, Isocyanate used in the manufacturing of polyurethanes

Recommended use*: Intermediate (isolated); Hardener for coating materials or adhesives for industrial or professional use

Unsuitable for use: consumer

Suitable for use in industrial sector: chemical industry

* The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:

BASF CORPORATION
100 Park Avenue
Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

Emergency telephone number

24 Hour Emergency Response Information

CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification

Chemical family: polyfunctional polyisocyanate

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

Acute Tox.	4 (Inhalation - mist)	Acute toxicity
Skin Sens.	1	Skin sensitization

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4. First-Aid Measures

Description of first aid measures

General advice:

Immediately remove contaminated clothing.

If inhaled:

Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary. Immediate medical attention required.

If on skin:

Wash affected areas thoroughly with soap and water. If irritation develops, seek medical attention.

If in eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist. Remove contact lenses, if present. If symptoms persist, seek medical advice.

If swallowed:

Immediately rinse mouth and then drink 200 - 300 ml water, do not induce vomiting, seek medical attention. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions.

Most important symptoms and effects, both acute and delayed

Symptoms: Information, i.e. 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

Information on: (OLIGOMER) Hexamethylene diisocyanate isocyanurate-type oligomers

Symptoms: Overexposure may cause:, Eye irritation, skin irritation, erythema, nausea, headache, vomiting, dizziness, diarrhea, abdominal cramps

Information on: 1,6-hexamethylene diisocyanate

Symptoms: Overexposure may cause:, Eye irritation, skin irritation, erythema, nausea, headache, vomiting, dizziness, diarrhea, abdominal cramps

Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment: Inhale corticosteroid dose aerosol. Treat according to symptoms (decontamination, vital functions), no known specific antidote, administer corticosteroid dose aerosol to prevent pulmonary edema.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:
dry powder, foam

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Unsuitable extinguishing media for safety reasons:
No data available.

Special hazards arising from the substance or mixture

Hazards during fire-fighting:
harmful vapours

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

Advice for fire-fighters

Protective equipment for fire-fighting:
Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

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.

Impact Sensitivity:

Remarks: Based on the chemical structure there is no shock-sensitivity.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Environmental precautions

This product is regulated by CERCLA ('Superfund').

Methods and material for containment and cleaning up

Spills should be contained, solidified, and placed in suitable containers for disposal.

7. Handling and Storage

Precautions for safe handling

Keep away from sources of ignition - No smoking.

Protection against fire and explosion:

Avoid all sources of ignition: heat, sparks, open flame.

Conditions for safe storage, including any incompatibilities

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

8. Exposure Controls/Personal Protection

Components with occupational exposure limits

1,6-hexamethylene diisocyanate ACGIH, US: TWA value 0.005 ppm ;

Advice on system design:

Ensure adequate ventilation.

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Personal protective equipment

Respiratory protection:

Respiratory protection in case of vapour/aerosol release. 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

Eye protection:

Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

Body protection:

Impermeable protective clothing

General safety and hygiene measures:

Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

Form:	liquid	
Odour:	almost odourless	
Odour threshold:	Not determined due to potential health hazard by inhalation.	
Colour:	colourless to yellowish	
pH value:	not applicable	
solidification temperature:	-70 °C	(DSC (DIN 51007))
Melting point:	No applicable information available.	
Boiling range:	300 - 355 °C	
Sublimation point:	No applicable information available.	
Flash point:	237.5 °C	(ISO 2719)
Flammability:	not flammable	
Lower explosion limit:	For liquids not relevant for classification and labelling. The lower explosion point may be 5 - 15 °C below the flash point.	
Upper explosion limit:	For liquids not relevant for classification and labelling.	
Autoignition:	438 °C	(DIN EN 14522)
Vapour pressure:	3 mbar (20 °C)	
Density:	1.168 g/cm ³ (20 °C)	(ISO 2811-3)
Relative density:	1.168 (20 °C)	
Vapour density:	not determined	
Partitioning coefficient n-octanol/water (log Pow):	9.81	(calculated)
Self-ignition temperature:	not self-igniting	
Thermal decomposition:	140 °C, 10 kJ/kg (DSC (DIN 51007)) The indicated value is for inert gas atmosphere. 290 °C, 280 kJ/kg (DSC (DIN 51007)) The indicated value is for inert gas atmosphere. 425 °C, > 70 kJ/kg (DSC (DIN 51007)) The indicated value is for inert gas atmosphere.	

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	20 - 145 °C, 0 kJ/kg (Warm storage test) No exothermic decomposition within the mentioned temperature range. 125 °C, 550 J/g (DSC (DIN 51007)) Oxidization on contact with air above the mentioned temperature.	
Viscosity, dynamic:	2,500 - 4,000 mPa.s (23 °C)	(DIN EN ISO 3219, Annex B)
Viscosity, kinematic:	4,760 mm ² /s (20 °C)	
Particle size:	The substance / product is marketed or used in a non solid or granular form.	
Solubility in water:	Reacts with water. not soluble	
Miscibility with water:	Reacts with water.	
Solubility (quantitative):	No applicable information available.	
Solubility (qualitative):	soluble solvent(s): organic solvents,	
Molar mass:	No applicable information available.	
Evaporation rate:	not determined	

10. Stability and Reactivity

Reactivity

Oxidizing properties:
not fire-propagating

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.

Conditions to avoid

Avoid moisture.

Incompatible materials

water, alcohols, amines

Hazardous decomposition products

Decomposition products:

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

Thermal decomposition:

140 °C, 2.5 K/min (DSC (DIN 51007))

The indicated value is for inert gas atmosphere.

290 °C, 2.5 K/min (DSC (DIN 51007))

The indicated value is for inert gas atmosphere.

425 °C, 2.5 K/min (DSC (DIN 51007))

The indicated value is for inert gas atmosphere.

20 - 145 °C (Warm storage test)

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No exothermic decomposition within the mentioned temperature range.
125 °C, 2.5 K/min (DSC (DIN 51007))
Oxidization on contact with air above the mentioned temperature.

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity

Assessment of acute toxicity: Virtually nontoxic after a single ingestion. Virtually nontoxic after a single skin contact. Of moderate toxicity after short-term inhalation.

Information on: (OLIGOMER) Hexamethylene diisocyanate isocyanurate-type oligomers
Assessment of acute toxicity: Virtually nontoxic after a single ingestion. Virtually nontoxic after a single skin contact. Of moderate toxicity after short-term inhalation.

Information on: 1,6-hexamethylene diisocyanate
Assessment of acute toxicity: Of high toxicity after short-term inhalation. In animal studies the substance is virtually nontoxic after a single skin contact. Of moderate toxicity after single ingestion.

Oral

Type of value: LD50
Species: rat (female)
Value: > 2,500 mg/kg (OECD Guideline 423)

Inhalation

Type of value: LC50
Species: rat (male/female)
Value: 0.467 mg/l (OECD Guideline 403)
Exposure time: 4 h

The test result applies only to the substance transferred into respirable aerosol (particles < 20 µm). 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!

Dermal

Type of value: LD50
Species: rat (male/female)
Value: > 2,000 mg/kg (OECD Guideline 402)

Assessment other acute effects

Assessment of STOT single:
Causes temporary irritation of the respiratory tract.

Irritation / corrosion

Assessment of irritating effects: May cause slight irritation to the skin. May cause slight irritation to the eyes.

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Information on: (OLIGOMER) Hexamethylene diisocyanate isocyanurate-type oligomers
Assessment of irritating effects: May cause slight irritation to the skin. May cause slight irritation to the eyes.

Information on: 1,6-hexamethylene diisocyanate
Assessment of irritating effects: Irritating to eyes and skin.

Skin

Species: rabbit
Result: Slightly irritating.
Method: OECD Guideline 404

Eye

Species: rabbit
Result: Slightly irritating.
Method: OECD Guideline 405

Sensitization

Assessment of sensitization: Caused skin sensitization in animal studies.

Information on: (OLIGOMER) Hexamethylene diisocyanate isocyanurate-type oligomers
Assessment of sensitization:
Caused skin sensitization in animal studies.

Information on: 1,6-hexamethylene diisocyanate
Assessment of sensitization:
The substance may cause sensitization of the respiratory tract. Sensitization after skin contact possible.

Guinea pig maximization test
Species: guinea pig
Result: sensitizing
sensitizing effect in animal tests

Aspiration Hazard

No aspiration hazard expected.

Chronic Toxicity/Effects

Repeated dose toxicity

Assessment of repeated dose toxicity: After repeated exposure the prominent effect is local irritation.

Genetic toxicity

Assessment of mutagenicity: The substance was not mutagenic in bacteria. The substance was not mutagenic in mammalian cell culture.

Carcinogenicity

Assessment of carcinogenicity: Study scientifically not justified.

Reproductive toxicity

Assessment of reproduction toxicity: Study scientifically not justified.

Teratogenicity

Assessment of teratogenicity: Study scientifically not justified.

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12. Ecological Information

Toxicity

Aquatic 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. There is a high probability that the product is not acutely harmful to aquatic organisms.

There is a high probability that the product is not acutely harmful to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations. The product may hydrolyse. The test result maybe partially due to degradation products.

Toxicity to fish

LC0 (96 h) \geq 100 mg/l, Brachydanio rerio (OECD 203; ISO 7346; 92/69/EEC, C.1, static)

The product may hydrolyse. The test result maybe partially due to degradation products. The product has low solubility in the test medium. An eluate has been tested. Nominal concentration.

Aquatic invertebrates

EL50 (48 h) 127 mg/l, Daphnia magna (Directive 92/69/EEC, C.2, static)

Nominal concentration. The product may hydrolyse. The test result maybe partially due to degradation products.

Aquatic plants

EC50 (72 h) $>$ 1,000 mg/l (growth rate), Scenedesmus subspicatus (OECD Guideline 201, static)

Nominal concentration. The product may hydrolyse. The test result maybe partially due to degradation products.

Chronic toxicity to fish

Study not necessary due to exposure considerations.

Chronic toxicity to aquatic invertebrates

Study not necessary due to exposure considerations.

Assessment of terrestrial toxicity

No data available concerning terrestrial toxicity.

Study not necessary due to exposure considerations.

Microorganisms/Effect on activated sludge

Toxicity to microorganisms

OECD Guideline 209 static

activated sludge of a predominantly domestic sewage/EC20 (3 h): 880 mg/l

Nominal concentration. The product may hydrolyse. The test result maybe partially due to degradation products.

Persistence and degradability

Assessment biodegradation and elimination (H₂O)

Poorly biodegradable. The product is unstable in water. The elimination data also refer to products of hydrolysis.

Elimination information

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1 % BOD of the ThOD (28 d) (OECD 301D; EEC 92/69, C.4-E) (aerobic, activated sludge, domestic, non-adapted)

Assessment of stability in water

In contact with water the substance will hydrolyse rapidly.

Information on Stability in Water (Hydrolysis)

$t_{1/2} < 1$ h, (OECD Guideline 111, pH 4)

$t_{1/2} < 1$ h, (OECD Guideline 111, pH 7)

$t_{1/2} < 1$ h, (OECD Guideline 111, pH 9)

Bioaccumulative potential

Assessment bioaccumulation potential

Significant accumulation in organisms is not to be expected.
The product has not been tested. The statement has been derived from the structure of the product.

Bioaccumulation potential

Bioconcentration factor: 367.7, Fish (calculated)
Analogous: Assessment derived from products with similar chemical character.

Mobility in soil

Assessment transport between environmental compartments

The substance will not evaporate into the atmosphere from the water surface.
No data available.

Additional information

Other ecotoxicological advice:

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

13. Disposal considerations

Waste disposal of substance:

Dispose of in a licensed facility. Do not discharge into waterways or sewer systems without proper authorization.

Container disposal:

Dispose of in a licensed facility. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

RCRA: None

14. Transport Information

Land transport

USDOT

Not classified as a dangerous good under transport regulations

Sea transport

IMDG

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Not classified as a dangerous good under transport regulations

Air transport IATA/ICAO

Not classified as a dangerous good under transport regulations

15. Regulatory Information

Federal Regulations

Registration status:

Chemical TSCA, US released / listed

EPCRA 311/312 (Hazard categories): Refer to SDS section 2 for GHS hazard classes applicable for this product.

NFPA Hazard codes:

Health: 2 Fire: 1 Reactivity: -W- Special:

16. Other Information

SDS Prepared by:

BASF NA Product Regulations
SDS Prepared on: 2021/11/18

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