



SAFETY DATA SHEET

NITOFLOR HB200 UT HARDENER

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

1.1. Product identifier

Product name NITOFLOR HB200 UT HARDENER

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

Identified uses Hardener component for isocyanate-based floor-coating system.

1.3. Details of the supplier of the safety data sheet

Manufacturer Fosroc Yapi Kimyasallari San. Ve Tic. A.S.
Aydivnevler mah. Sanayi cad. Demirtas Plaza No:13 Kat:3 34854
Maltepe ISTANBUL
TURKEY
+90 216 463 6776
enquiryturkey@fosroc.com

1.4. Emergency telephone number

Emergency telephone +90 262 728 15 07

National emergency telephone number Turkey:
Ulusal Zehir Danışma Merkezi (UZEM) :114
Acil Sağlık Hizmetleri : 112

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (SI 2019 No. 720)

Physical hazards Not Classified

Health hazards Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Resp. Sens. 1 - H334 Skin Sens. 1 - H317 Carc. 2 - H351 STOT SE 3 - H335 STOT RE 2 - H373

Environmental hazards Not Classified

Human health See Section 11 for additional information on health hazards.

Environmental The product is not expected to be hazardous to the environment.

2.2. Label elements

Hazard pictograms



Signal word Danger

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Hazard statements	<p>H332 Harmful if inhaled.</p> <p>H315 Causes skin irritation.</p> <p>H319 Causes serious eye irritation.</p> <p>H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.</p> <p>H317 May cause an allergic skin reaction.</p> <p>H351 Suspected of causing cancer.</p> <p>H335 May cause respiratory irritation.</p> <p>H373 May cause damage to organs through prolonged or repeated exposure.</p>
Precautionary statements	<p>P261 Avoid breathing vapour/ spray.</p> <p>P302+P352 IF ON SKIN: Wash with plenty of water.</p> <p>P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.</p> <p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P312 Call a POISON CENTRE/doctor if you feel unwell.</p> <p>P501 Dispose of contents/ container in accordance with national regulations.</p>
Contains	<p>DIPHENYLMETHANE-DIISOCYANATE, ISOMERS & HOMOLOGUES, Diphenylmethane-2,4'-diisocyanate, DIPHENYLMETHANE-4,4'-DIISOCYANATE</p>
Supplementary precautionary statements	<p>P201 Obtain special instructions before use.</p> <p>P202 Do not handle until all safety precautions have been read and understood.</p> <p>P260 Do not breathe vapour/ spray.</p> <p>P264 Wash contaminated skin thoroughly after handling.</p> <p>P271 Use only outdoors or in a well-ventilated area.</p> <p>P272 Contaminated work clothing should not be allowed out of the workplace.</p> <p>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p>P284 [In case of inadequate ventilation] wear respiratory protection.</p> <p>P308+P313 IF exposed or concerned: Get medical advice/ attention.</p> <p>P314 Get medical advice/ attention if you feel unwell.</p> <p>P321 Specific treatment (see medical advice on this label).</p> <p>P332+P313 If skin irritation occurs: Get medical advice/ attention.</p> <p>P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.</p> <p>P337+P313 If eye irritation persists: Get medical advice/ attention.</p> <p>P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/ doctor.</p> <p>P362+P364 Take off contaminated clothing and wash it before reuse.</p> <p>P403+P233 Store in a well-ventilated place. Keep container tightly closed.</p> <p>P405 Store locked up.</p>

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

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DIPHENYLMETHANE-DIISOCYANATE, ISOMERS & HOMOLOGUES	60-100%
CAS number: 9016-87-9	EC number: 618-498-9
Classification Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Resp. Sens. 1 - H334 Skin Sens. 1 - H317 Carc. 2 - H351 STOT SE 3 - H335 STOT RE 2 - H373	
Diphenylmethane-2,4'-diisocyanate	10-30%
CAS number: 5873-54-1	
Classification Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Resp. Sens. 1 - H334 Skin Sens. 1 - H317 Carc. 2 - H351 STOT SE 3 - H335 STOT RE 2 - H373	
DIPHENYLMETHANE-4,4'-DIISOCYANATE	10-30%
CAS number: 101-68-8	
EC number: 202-966-0	
Classification Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Resp. Sens. 1 - H334 Skin Sens. 1 - H317 Carc. 2 - H351 STOT SE 3 - H335 STOT RE 2 - H373	

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Consult a physician for specific advice.

Inhalation

Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Keep affected person under observation. Get medical attention if any discomfort continues.

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Ingestion	Do not induce vomiting. Rinse mouth thoroughly with water. Get medical attention if any discomfort continues.
Skin contact	Rinse immediately with plenty of water. Wash skin thoroughly with soap and water. Get medical attention if symptoms are severe or persist after washing.
Eye contact	Do not rub eye. Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if symptoms are severe or persist.

4.2. Most important symptoms and effects, both acute and delayed

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	Harmful if inhaled. May cause respiratory irritation.
Ingestion	May be harmful if swallowed.
Skin contact	May cause an allergic skin reaction. Causes skin irritation.
Eye contact	Causes serious eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor	Treat symptomatically.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Dry chemicals, sand, dolomite etc.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards	Toxic gases or vapours.
Hazardous combustion products	Oxides of carbon. Oxides of nitrogen. Isocyanate vapours.

5.3. Advice for firefighters

Protective actions during firefighting	Avoid breathing fire gases or vapours. No action shall be taken without appropriate training or involving any personal risk. Fight fire from safe distance or protected location. In case of fire: Evacuate area.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid contact with skin and eyes. Wear eye and face protection.
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6.2. Environmental precautions

Environmental precautions	Avoid discharge into drains and the aquatic environment.
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6.3. Methods and material for containment and cleaning up

Methods for cleaning up	Absorb spillage with non-combustible, absorbent material. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Collect and dispose of spillage as indicated in Section 13.
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6.4. Reference to other sections

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Reference to other sections Collect and dispose of spillage as indicated in Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid inhalation of vapours. Avoid contact with skin, eyes and clothing. Avoid spilling.

Advice on general occupational hygiene Do not eat, drink or smoke when using this product. Provide eyewash station and safety shower. Take off immediately all contaminated clothing and wash it before reuse. Good personal hygiene procedures should be implemented.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry, cool and well-ventilated place.

Storage class Chemical storage.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

DIPHENYLMETHANE-4,4'-DIISOCYANATE

TWA 0,052mg/m³

Diphenylmethane-2,4'-diisocyanate (CAS: 5873-54-1)

DNEL Workers - Inhalation; Long term systemic effects: 0,05 mg/m³
Workers - Dermal; Acute systemic effects: 50 mg/kg/day

DIPHENYLMETHANE-4,4'-DIISOCYANATE (CAS: 101-68-8)

DNEL Workers - Inhalation; Long term systemic effects: 0,05 mg/m³
Workers - Dermal; Acute systemic effects: 50 mg/kg/day

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate general and local exhaust ventilation. Avoid inhalation of vapours and spray/mists.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Wear tight-fitting, chemical splash goggles or face shield.

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. Wear protective gloves made of the following material: Nitrile rubber. Polyvinyl chloride (PVC).

Other skin and body protection

Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact.

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Hygiene measures	Good personal hygiene procedures should be implemented. Wash hands thoroughly after handling. Change work clothing daily before leaving workplace. Promptly remove any clothing that becomes contaminated.
Respiratory protection	Ensure all respiratory protective equipment is suitable for its intended use and is 'UKCA'-marked. Half mask and quarter mask respirators with replaceable filter cartridges suitable for intended use should be used. Check that the respirator fits tightly and the filter is changed regularly. Wear a respirator fitted with the following cartridge: Gas filter, type B.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Brown.
Odour	Characteristic.
Initial boiling point and range	> 300 °C
Flash point	220 °C
Vapour pressure	19 hPa at 20 °C 48 hPa at 50 °C 56 hPa at 55 °C
Solubility(ies)	Hardens in contact with water.
Explosive properties	Not considered to be explosive.
Oxidising properties	Does not meet the criteria for classification as oxidising.

9.2. Other information

Other information	Not determined.
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SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	The reactivity data for this product will be typical of those for the following class of materials: Isocyanates.
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10.2. Chemical stability

Stability	Polymerises at about 200 °C with evolution of CO ₂ .
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10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Reacts with water, with formation of carbon dioxide.
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10.4. Conditions to avoid

Conditions to avoid	Avoid freezing and high temperatures.
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10.5. Incompatible materials

Materials to avoid	Reacts with water/moisture causing material to solidify and releasing carbon dioxide.
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10.6. Hazardous decomposition products

Hazardous decomposition products	Oxides of nitrogen. Oxides of carbon. Isocyanates.
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SECTION 11: Toxicological information

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11.1. Information on toxicological effects

Acute toxicity - inhalation

ATE inhalation (dusts/mists mg/l) 1.5

Carcinogenicity

Carcinogenicity Contains a substance which may be potentially carcinogenic.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure.

Inhalation Harmful if inhaled. Corrosive to the respiratory tract.

Ingestion May be harmful if swallowed.

Skin contact May cause an allergic skin reaction. Causes skin irritation.

Eye contact Causes serious eye irritation.

Acute and chronic health hazards May cause damage to organs through prolonged or repeated exposure if inhaled. Suspected of causing cancer.

Route of exposure Inhalation Ingestion Skin and/or eye contact

Target organs Respiratory system, lungs Respiratory tract Skin Eyes

11.2 Other Hazards

Toxicological information on ingredients.

DIPHENYLMETHANE-DIISOCYANATE, ISOMERS & HOMOLOGUES

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ > 10,000 mg/kg, Oral, Rat

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ > 9,400 mg/kg, Dermal, Rabbit

Acute toxicity - inhalation

Notes (inhalation LC₅₀) LC₅₀ 0.31 mg/L 4 h, Inhalation, Rat

ATE inhalation (dusts/mists mg/l) 1.5

Skin corrosion/irritation

Skin corrosion/irritation Slightly irritating.

Specific target organ toxicity - single exposure

STOT - single exposure Inhalation of vapors may cause Irritation of the respiratory tract

Target organs Respiratory tract

Specific target organ toxicity - repeated exposure

STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure.

Target organs Respiratory tract

Diphenylmethane-2,4'-diisocyanate

Acute toxicity - oral

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Notes (oral LD₅₀)	LD ₅₀ > 2,000 mg/kg, Oral, Rat
<u>Acute toxicity - dermal</u>	
Notes (dermal LD₅₀)	LD ₅₀ > 9,400 mg/kg, Dermal, Rabbit
<u>Acute toxicity - inhalation</u>	
Notes (inhalation LC₅₀)	LC50 0.387 mg/L 4 h, Inhalation, Rat
ATE inhalation (dusts/mists mg/l)	1.5
<u>Skin corrosion/irritation</u>	
Skin corrosion/irritation	Causes skin irritation.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	Inhalation of vapors may cause Irritation of the respiratory tract
Target organs	Respiratory tract
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Target organs	Respiratory tract

DIPHENYLMETHANE-4,4'-DIISOCYANATE

<u>Acute toxicity - oral</u>	
Notes (oral LD₅₀)	LD ₅₀ > 2,000 mg/kg, Oral, Rat
<u>Acute toxicity - dermal</u>	
Notes (dermal LD₅₀)	LD ₅₀ > 9,400 mg/kg, Dermal, Rabbit
<u>Acute toxicity - inhalation</u>	
Notes (inhalation LC₅₀)	LC50 0.386 mg/L 4 h, Inhalation, Rat
ATE inhalation (dusts/mists mg/l)	1.5
<u>Skin corrosion/irritation</u>	
Skin corrosion/irritation	Causes skin irritation.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	Inhalation of vapors may cause Irritation of the respiratory tract
Target organs	Respiratory tract
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Target organs	Respiratory tract

SECTION 12: Ecological information

Ecotoxicity The product components are not classified as environmentally hazardous.

12.1. Toxicity

Toxicity Not considered toxic to fish.

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Ecological information on ingredients.

DIPHENYLMETHANE-DIISOCYANATE, ISOMERS & HOMOLOGUES

Acute aquatic toxicity

Acute toxicity - fish	LC ₅₀ , 96 hours: > 1,000 mg/L, Danio rerio
Acute toxicity - aquatic invertebrates	EC ₅₀ , 24 hours: > 1,000 mg/L, Daphnia magna NOEC, 21 days: > 10 mg/L, Daphnia magna
Acute toxicity - aquatic plants	EC ₅₀ , 72 hours: > 1.64 mg/L, Scenedesmus subspicatus
Acute toxicity - microorganisms	EC ₅₀ , 3 hours: > 100 mg/L, Activated sludge
Acute toxicity - terrestrial	NOEC, 14 days: > 1000 mg/kg, Avena Sativa (oats)

Diphenylmethane-2,4'-diisocyanate

Acute aquatic toxicity

Acute toxicity - fish	LC ₅₀ , 96 hours: > 1,000 mg/L, Danio rerio
Acute toxicity - aquatic invertebrates	EC ₅₀ , 24 hours: > 1,000 mg/L, Daphnia magna NOEC, 21 days: > 10 mg/L, Daphnia magna
Acute toxicity - aquatic plants	EC ₅₀ , 72 hours: > 1.64 mg/L, Scenedesmus subspicatus
Acute toxicity - microorganisms	EC ₅₀ , 3 hours: > 100 mg/L, Activated sludge
Acute toxicity - terrestrial	NOEC, 14 days: > 1000 mg/kg, Avena Sativa (oats)

DIPHENYLMETHANE-4,4'-DIISOCYANATE

Acute aquatic toxicity

Acute toxicity - fish	LC ₅₀ , 96 hours: > 1,000 mg/L, Danio rerio
Acute toxicity - aquatic invertebrates	EC ₅₀ , 24 hours: > 1,000 mg/L, Daphnia magna NOEC, 21 days: > 10 mg/L, Daphnia magna
Acute toxicity - aquatic plants	EC ₅₀ , 72 hours: > 1.64 mg/L, Scenedesmus subspicatus
Acute toxicity - microorganisms	EC ₅₀ , 3 hours: > 100 mg/L, Activated sludge
Acute toxicity - terrestrial	NOEC, 14 days: > 1000 mg/kg, Avena Sativa (oats)

12.2. Persistence and degradability

Persistence and degradability Not readily biodegradable.

Ecological information on ingredients.

DIPHENYLMETHANE-DIISOCYANATE, ISOMERS & HOMOLOGUES

Stability (hydrolysis)	Hydrolyses rapidly in water.
Biodegradation	Not readily biodegradable.

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Diphenylmethane-2,4'-diisocyanate

Stability (hydrolysis)	Hydrolyses rapidly in water.
Biodegradation	Not inherently biodegradable.

DIPHENYLMETHANE-4,4'-DIISOCYANATE

Stability (hydrolysis)	Hydrolyses rapidly in water.
Biodegradation	Not inherently biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential The product is not bioaccumulating.

12.4. Mobility in soil

Mobility The product hardens to a solid, immobile substance.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information The generation of waste should be minimised or avoided wherever possible.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Waste liquid components should be suitable for incineration at an approved facility.

SECTION 14: Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

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Not applicable.

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

Transport in bulk according to Annex II of MARPOL 73/78 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 legislation Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).
Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet DNEL: Derived No Effect Level.
PNEC: Predicted No Effect Concentration.
PBT: Persistent, Bioaccumulative and Toxic substance.
vPvB: Very Persistent and Very Bioaccumulative.
LC50: Lethal Concentration to 50 % of a test population.
LD50: Lethal Dose to 50% of a test population (Median Lethal Dose).
REACH: The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020 No. 1577.

General information Only trained personnel should use this material.

Revision comments This is the first issue.

Revision date 28/12/2022

Revision 1

SDS number 31067

Hazard statements in full H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure.

This 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. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.