

SAFETY DATA SHEET

Futuran Härter



1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Identification of the substance or preparation

Product name : Futuran Härter**Product code** : FH

Use of the substance/preparation

Product use : Hardener. Industrial use only.

Company/undertaking identification

Manufacturer : Akzo Nobel Deco GmbH, Geschäftsbereich Zweihorn
 Düsseldorfstraße 96-100
 D-40721 Hilden
 Deutschland
 Tel: (+49) 0221-5881-0
 Fax: (+49) 0221-5881-355
 internet: www.zweihorn.com

e-mail address of person responsible for this SDS : sdbinfo@akzonobeldeco.de

2. HAZARDS IDENTIFICATION

The product is classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification : R10
 R43, R66, R67

Physical/chemical hazards : Flammable.

Human health hazards : May cause sensitisation by skin contact. Repeated exposure may cause skin dryness or cracking. Vapours may cause drowsiness and dizziness.

Additional warning phrases : Contains isocyanates. See information supplied by the manufacturer. This information is provided by the present Safety Data Sheet.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances presenting a health or environmental hazard within the meaning of the Dangerous Substances Directive 67/548/EEC or assigned an occupational exposure limit.

Chemical name	CAS number	%	Number	Classification
Hexamethylene diisocyanate, oligomers	28182-81-2	50 - 75	500-060-2	R43 [1] [2]
n-butyl acetate	123-86-4	25 - 50	204-658-1	R10 [1] [2] R66, R67
hexamethylene-di-isocyanate	822-06-0	0.1 - 1	212-485-8	T; R23 [1] [2] Xi; R36/37/38 R42/43
See section 16 for the full text of the R-phrases declared above				

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

[3] PBT-substance

[4] vPvB-substance

Occupational exposure limits, if available, are listed in section 8.

4. FIRST AID MEASURES

First-aid measures

- General** : In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical advice.
- Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do not use solvents or thinners.
- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open.
- Ingestion** : If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do not induce vomiting.

5. FIRE-FIGHTING MEASURES

- Extinguishing media** : Recommended: alcohol-resistant foam, CO₂, powders.
- Extinguishing media not to be used** : Do not use water jet.
- Special exposure hazards** : Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard. Appropriate breathing apparatus may be required. Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions** : Exclude sources of ignition and ventilate the area. Avoid breathing vapour or mist. Refer to protective measures listed in sections 7 and 8. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Place in a suitable container.
- Environmental precautions** : Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.
- Methods for cleaning up** : The contaminated area should be cleaned immediately with a suitable decontaminant. One possible (flammable) decontaminant comprises (by volume): water (45 parts), ethanol or isopropyl alcohol (50 parts) and concentrated (d: 0,880) ammonia solution (5 parts). A non-flammable alternative is sodium carbonate (5 parts) and water (95 parts). Add the same decontaminant to the remnants and let stand for several days until no further reaction in an unsealed container. Once this stage is reached, close container and dispose of according to local regulations (see section 13).

Note: see section 8 for personal protective equipment and section 13 for waste disposal.

7. HANDLING AND STORAGE

Persons with a history of asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used.

Examination of lung function should be carried out on a regular basis on persons spraying this preparation.

- Handling** : Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapours in air and avoid vapour concentrations higher than the occupational exposure limits.

In addition, the product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard.

To dissipate static electricity during transfer, earth drum and connect to receiving container with bonding strap. Operators should wear antistatic footwear and clothing and floors should be of the conducting type.

7. HANDLING AND STORAGE

Keep container tightly closed. Precautions should be taken to minimise exposure to atmospheric humidity or water. CO₂ will be formed, which, in closed containers, could result in pressurisation. Care should be taken when re-opening partly-used containers. Keep away from heat, sparks and flame. No sparking tools should be used.

Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this preparation. Avoid inhalation of dust from sanding.

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking.

Put on appropriate personal protective equipment (see section 8).

Never use pressure to empty. Container is not a pressure vessel. Always keep in containers made from the same material as the original one.

Comply with the health and safety at work laws.

When operators, whether spraying or not, have to work inside the spray booth, ventilation is unlikely to be sufficient to control particulates and solvent vapour in all cases. In such circumstances they should wear a compressed air-fed respirator during the spraying process and until such time as the particulates and solvent vapour concentration has fallen below the exposure limits.

Storage : Store in accordance with local regulations. Observe label precautions. Store in a dry, cool and well-ventilated area. Keep away from heat and direct sunlight. Keep away from sources of ignition. Keep away from: oxidising agents, strong alkalis, strong acids, amines, alcohols, water. No smoking. Prevent unauthorised access. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<u>Ingredient name</u>	<u>Occupational exposure limits</u>
Hexamethylene diisocyanate, oligomers	EH40/2005 WELs (United Kingdom (UK), 8/2007). Skin sensitiser. STEL: 0,07 mg/m ³ , (as NCO) 15 minute(s). TWA: 0,02 mg/m ³ , (as NCO) 8 hour(s).
n-butyl acetate	EH40/2005 WELs (United Kingdom (UK), 8/2007). STEL: 966 mg/m ³ 15 minute(s). STEL: 200 ppm 15 minute(s). TWA: 724 mg/m ³ 8 hour(s). TWA: 150 ppm 8 hour(s).
hexamethylene-di-isocyanate	EH40/2005 WELs (United Kingdom (UK), 8/2007). Skin sensitiser. Notes: as NCO STEL: 0,07 mg/m ³ , (as NCO) 15 minute(s). TWA: 0,02 mg/m ³ , (as NCO) 8 hour(s).

Persons with a history of asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used.

Examination of lung function should be carried out on a regular basis on persons spraying this preparation.

Exposure controls : Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. Air-fed protective respiratory equipment must be worn by the spray operator, even when good ventilation is provided. In other operations, if local exhaust ventilation and good general extraction are not sufficient to maintain concentrations of particulates and solvent vapours below the OEL, suitable respiratory protection must be worn. (See Personal protection.)

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure controls

- Respiratory system** : By spraying: air-fed respirator.
By other operations than spraying, in well ventilated areas, air-fed respirators could be replaced by a combination charcoal filter and particulate filter mask.
- Skin and body** : Personnel should wear antistatic clothing made of natural fibres or of high-temperature-resistant synthetic fibres.
- Hands**
- Gloves** : For prolonged or repeated handling, use the following type of gloves:
- Recommended: foil
Not recommended: nitrile rubber, neoprene, butyl rubber, PVC, fluor rubber
- Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.
- The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.
- Eyes** : Use safety eyewear designed to protect against splash of liquids.
- Environmental exposure controls** : Do not allow to enter drains or watercourses.

9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state** : Liquid.
- Flash point** : Closed cup : 24 °C
- Density** : 1 g/cm³
- Vapour density** : > 1 (Air = 1) (Calculated value for the mixture)
- Explosion limits** : Greatest known range: Lower: 1.7% Upper: 7.6% (n-butyl acetate)

10. STABILITY AND REACTIVITY

- Conditions to avoid** : Stable under recommended storage and handling conditions (see section 7). In a fire, hazardous decomposition products may be produced.
- Materials to avoid** : Keep away from: oxidising agents, strong alkalis, strong acids, amines, alcohols, water. Uncontrolled exothermic reactions occur with amines and alcohols. The product reacts slowly with water, resulting in the production of carbon dioxide. In closed containers, pressure build-up could result in distortion, expansion and, in extreme cases, bursting of the container.
- Hazardous decomposition products** : Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen, hydrogen cyanide, monomeric isocyanates.

11. TOXICOLOGICAL INFORMATION

Based on the properties of the isocyanate components and considering toxicological data on similar preparations, this preparation may cause acute irritation and/or sensitisation of the respiratory system, leading to an asthmatic condition, wheezing and tightness of the chest. Sensitised persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the OEL. Repeated exposure may lead to permanent respiratory disability. 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. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. Repeated or prolonged contact with irritants may cause dermatitis. If splashed in the eyes, the liquid may cause irritation and reversible damage.

Contains Hexamethylene diisocyanate, oligomers, hexamethylene-di-isocyanate. May produce an allergic reaction.

12. ECOLOGICAL INFORMATION

There is no data available on the preparation itself.
Do not allow to enter drains or watercourses.

The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and is not classified as dangerous for the environment.

Aquatic ecotoxicity

Conclusion/Summary : Not available.

Persistence/degradability

Conclusion/Summary : Not available.

PBT : Not applicable.

vPvB : Not applicable.

13. DISPOSAL CONSIDERATIONS

Do not allow to enter drains or watercourses. Residues in empty containers should be neutralised with a decontaminant (see section 6).

Dispose of according to all federal, state and local applicable regulations.

Hazardous waste : The classification of the product meets the criteria for hazardous waste. (EWC 08 01 11)

Packaging : 15 01 10* packaging containing residues of or contaminated by dangerous substances

14. TRANSPORT INFORMATION

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Land - road/railway

UN number : UN1263

Transport document name : PAINT RELATED MATERIAL

Special provision 640 : E

ADR/RID Class : 3

Packing group : III

ADR/RID Label :



Sea

UN number : UN1263

Proper shipping name : PAINT RELATED MATERIAL

IMDG Class : 3

Packing group : III

IMDG Label :



Marine pollutant : No.

Air

UN number : UN1263

Proper shipping name : PAINT RELATED MATERIAL

ICAO/IATA Classification : 3

Packing group : III

14. TRANSPORT INFORMATION

ICAO/IATA label

:

**15. REGULATORY INFORMATION****EU regulations**

: The product is classified and labelled for supply in accordance with the Directive 1999/45/EC as follows:

Hazard symbol or symbols

:



Irritant

Risk phrases

: R10- Flammable.
R43- May cause sensitisation by skin contact.
R66- Repeated exposure may cause skin dryness or cracking.
R67- Vapours may cause drowsiness and dizziness.

Safety phrases

: S23- Do not breathe vapour or spray.
S24- Avoid contact with skin.
S37- Wear suitable gloves.
S51- Use only in well-ventilated areas.

Contains

: Hexamethylene diisocyanate, oligomers

Other EU regulations

Additional warning phrases

: Contains isocyanates. See information supplied by the manufacturer. This information is provided by the present Safety Data Sheet.

The information in this Safety Data Sheet is required pursuant to Annex II to Regulation (EC) No 1907/2006.

Industrial use

: The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation. The provisions of the national health and safety at work regulations apply to the use of this product at work.

16. OTHER INFORMATION

Full text of R-phrases referred to in sections 2 and 3 - United Kingdom (UK)

: R10- Flammable.
R23- Toxic by inhalation.
R36/37/38- Irritating to eyes, respiratory system and skin.
R43- May cause sensitisation by skin contact.
R42/43- May cause sensitisation by inhalation and skin contact.
R66- Repeated exposure may cause skin dryness or cracking.
R67- Vapours may cause drowsiness and dizziness.

Date of issue/ Date of revision

: 2010-02-18.

Notice to reader

The information in this SDS is based on the present state of our knowledge and on current laws. The product is not to be used for purposes other than those specified under section 1 without first obtaining written handling instructions. It is always the responsibility of the user to take all necessary steps to fulfil the demands set out in the local rules and legislation. The information in this SDS is meant to be a description of the safety requirements for our product. It is not to be considered a guarantee of the product's properties.