

SAFETY DATA SHEET

1. Identification of the substance/preparation and of the company/undertaking

1.1. Product identifier

Trade name Hardener
Product code

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

Intended use Waterborne wood floor finish.

1.3. Details of the supplier of the safety data sheet

Supplier Arboritec AB
Olof Wijksväg 9
SE- 444 65 Jörlanda
Sweden
Phone: +46 (0)303 56 330
Fax: +46 (0)303 56 332
web page: www.arboritec.se
Issuer Jörgen Kaldemark
info@arboritec.se

1.4. Emergency telephone number

In case of medical emergency call 112

Revision date 2013-01-31

Supersedes..... 2010-01-28

2. Hazards identification

2.1. Classification of the substance or mixture

Classification according to EC Regulation (Nr 1272/2008)



Warning

H317 May cause an allergic skin reaction.

H412 Harmful to aquatic life with long lasting effects. Harmful to aquatic life with long lasting effects.

Classification according to EC directives (67/548/EEC, 1999/45/EC)



Irritant

R43 May cause sensitization by skin contact.

R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.2. Label elements

Labelling according to EC Regulation (Nr 1272/2008)

Hazard pictogram(s) :



Signal word : Warning

Contains: : Aliphatic polyisocyanate

Hazard Statement : H317 May cause an allergic skin reaction.

Safety Data Sheet

Hardener

Revision date 2013-01-31

Precautionary Statement

H412 Harmful to aquatic life with long lasting effects. Harmful to aquatic life with long lasting effects.

Prevention:

P261 Avoid breathing dust/mist/vapours/spray.

P272 Contaminated work clothing should not be allowed out of the workplace.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

P363 Wash contaminated clothing before reuse.

Storage/Disposal:

P501 Dispose of contents/container to an authorized consignee of hazardous waste.

Label elements

Labelling according to EC directives (67/548/EEC, 1999/45/EC)

Hazard pictogram(s) :



Signal word :

Irritant

Contains:

: Aliphatic polyisocyanate

Risk phrases :

: R43 May cause sensitization by skin contact.

R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases

S24- Avoid contact with skin.

S37- Wear suitable gloves.

2.3. Other hazards

When spray applying see section 8.

3. Composition/information on ingredients

3.2. Mixtures

Substances	CAS-nr. EC-nr. Registrationnr.	Percen -tage %	Classification		Note
			67/548/EEC	EC Regulation Nr 1272/2008	
Aliphatic polyisocyanate	-- -- --	60-70	Xi; R43-52/53	Skin Sens. 1, H317 Aquatic Chronic 3, H412	1, 2
Dipropylene glycol dimethyl ether	111109-77-4 -- --	30-40	--	--	

For the detailed text of the R phrases and H-phrases mentioned in this section, see section 16.

Explanation of Notes.:

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

[3] Substance meets the criteria for PBT under Regulation (EC) No 1207/2006, Annex XIII

[4] Substance meets the criteria for vPvBs under Regulation (EC) No 1207/2006, Annex XIII

4. First aid measures

4.1. Description of first aid measures

Safety Data Sheet

Hardener

Revision date 2013-01-31

General	In all cases of doubt, or when symptoms persist, seek medical attention Never give anything by mouth to an unconscious person.
Inhalation	Remove to fresh air, keep patient warm and at rest, if breathing is irregular or stopped, administer artificial respiration. Give nothing by mouth. If unconscious place in recovery position and seek medical advice.
Skin contact	Remove contaminated clothing. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.
Eye contact	Remove contact lenses, irrigate copiously with clean, fresh water for at least 5 minutes, holding the eyelids apart and seek medical advice.
Ingestion	If accidentally swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

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

No specific symptoms exist.

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

No specific treatment necessary.

5. Firefighting measures

5.1. Extinguishing media

Recommended extinguishing media : alcohol resistant foam, CO₂, powders, water spray. Do not use water jet.

5.2. Special hazards arising from the substance or mixture

Fire will produce dense black smoke. Decomposition products can be hazardous. At high temperatures create: Carbon monoxide (CO), carbon dioxide (CO₂), smoke, nitrogen gases (NO_x).

5.3. Advice for firefighters

Appropriate breathing apparatus may be required. Closed containers exposed to fire should be cooled with water. Do not allow run-off from fire fighting to enter drains or water courses.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Exclude sources of ignition and ventilate the area. Avoid breathing vapor 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.

6.2. Environmental precautions

Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers or sewers, inform appropriate authorities in accordance with local regulations.

6.3. Methods and material for containment and 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).

6.4. Reference to other sections

Not applicable

Safety Data Sheet

Hardener

Revision date 2013-01-31

7. Handling and storage

7.1. Precautions for safe handling

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.

Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapors in air and avoid vapor concentrations higher than the occupational exposure limits.

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

Avoid spilling, skin and eye contact. Avoid breathing dust, particulates and spray mist during application. Avoid inhalation of dust.

Smoking, eating and drinking should be prohibited in application area. Remove contaminated clothing and protective gear before you get to an area where meals are taken.

For personal protection see Section 8.

Never use pressure to empty : container is not a pressure vessel.

7.2. Conditions for safe storage, including any incompatibilities

Always keep in containers of same material as the original one.

Comply with the health and safety at work laws.

Store in accordance with applicable regulations for good chemical practice. Please note the instructions on the label. Store between 5 and 20 ° C in a dry and well ventilated place away from heat and direct sunlight.

Keep away from oxidizing agents, from strongly alkaline and strongly acid materials.

No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

7.3. Specific end use(s)

Not applicable.

8. Exposure controls/personal protection

8.1. Control parameters

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.

For the following substances in the product is an exposure limit in accordance with current Swedish National Board of Occupational Exposure Limit List, see under heading 3 substances that are marked with 2 below note

<u>Substance</u>	Cas.nr.	Level limit value (LLV)	Ceiling limit value (CLV)	Short-term value (STV)	Note*
--					

8.2. Exposure controls

Ventilation

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 vapors below the OEL, suitable respiratory protection must be worn. (See Personal Protection.)

Respiratory

By spraying: air-fed respirator.

Safety Data Sheet

Hardener

Revision date 2013-01-31

By other operations than spraying, in well ventilated areas, air-fed respirators could be replaced by a combination charcoal filter and particulate filter mask. Recommended organic vapor (Type AX) and particulate filter, P3.

Gloves

For prolonged or repeated contact use Silver Shield gloves. Instructions and information from the glove supplier on use, storage, maintenance and replacement must be followed.

Eye protection

At the risk of splashing, close-fitting goggles or face shield.

Skin Protection

Use anti-static clothing made of natural fibers or heat-resistant synthetic fibers.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.	
Odour	Faint.	
Odour threshold	Not determined.	
pH	Not determined.	
Melting point/freezing point	Not determined.	
Initial boiling point and boiling range	Not determined.	
Evaporation rate	Not determined.	
Flammability (solid, gas)	Not determined.	
Vapour pressure	Not determined.	
Vapour density	Not determined.	
Partition coefficient: n-octanol/water	Not determined.	/of substance...
Auto-ignition temperature	Not determined.	
Decomposition temperature	Not determined.	/of substance...
Viscosity	Not determined.	
Explosive properties	Not determined.	/of substance...
Oxidising properties	Not determined.	
Solubility(ies) (g/100g H₂O, 20°C)	Not determined.	/of substance...
Relative density (g/ml)	1,1	Temperature (°C): 23
Flash point (°C)	97	Method: ASTM 6450
Flammability or explosive limits, lower (%)	Not determined.	
Flammability or explosive limits, upper (%)	Not determined.	

9.2. Other information

VOC content (initial boiling point less than or equal to 250°C) g/l 30

10. Stability and reactivity

Safety Data Sheet

Hardener

Revision date 2013-01-31

10.1. Reactivity

Not reactive

10.2. Chemical stability

Stable under recommended storage and handling conditions (see section 7).

10.3. Possibility of hazardous reactions

The product reacts slowly with water, resulting in the production of carbon dioxide. In closed containers, pressure buildup could result in distortion, expansion and, in extreme cases, bursting of the container.

10.4. Conditions to avoid

Not applicable.

10.5. Incompatible materials

Keep away from: oxidizing agents, strong alkalis, strong acids, amines, alcohols, water. Uncontrolled exothermic reactions occur with amines and alcohols.

10.6. 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

11.1. Information on toxicological effects

a) Acute toxicity.	Preparation is not classified as hazardous.
--	
b) Skin corrosion/irritation.	No information available.
c) Serious eye damage/irritation.	May cause irritation and reversible damage after contact with the eyes.
d) Respiratory or skin sensitisation.	Repeated or prolonged contact may degrease the skin, resulting in non-allergic contact dermatitis and absorption through the skin.
Aliphatic polyisocyanate	May cause an allergic skin reaction.
e) Germ cell mutagenicity.	Not considered to be mutagenic.
f) Carcinogenicity.	Not considered to be carcinogenic.
g) Rreproductive toxicity.	No information available.
h) STOT-single exposure.	No information available.
i) STOT-repeated exposure.	No information available.
j) Aspiration hazard.	When spray painting see section 8.

Health hazards, general

There is no data available on the product itself. The preparation has been assessed and classified according to EU regulations.

Inhalation

Based on the properties of the isocyanate components and considering toxicological data on similar preparations, this preparation may cause acute irritation and/or sensitization of the respiratory system, leading to an asthmatic condition, wheezing and tightness of the chest. Sensitized persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the OEL. Repeated exposure may lead to permanent respiratory disability.

Ingestion

Ingestion may cause nausea and vomiting.

Safety Data Sheet

Hardener

Revision date 2013-01-31

Skin contact

May cause an allergic skin reaction.

Eye Contact

Can be irritating and may cause redness and pain.

Health warnings

No information available.

12. Ecological information

There is no data available on the product itself.

12.1. Toxicity

--		
----	--	--

12.2. Persistence and degradability

No information available.

--	
----	--

12.3. Bioaccumulative potential

--	
----	--

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

Not classified as PBT / vPvB of current EU criteria.

12.6. Other adverse effects

No information available.

13. Disposal considerations

13.1. Waste treatment methods

Do not allow into drains or water courses. Wastes and empty containers should be disposed of in accordance with regulations made under the Control of Pollution Act and the Environmental Protection Act.

The waste is classified hazardous with EWC code 08 01 11.

Using information provided in this data sheet advice should be obtained from the Waste Regulation Authority, whether the special waste regulations apply

Instructions for emptying steel drums

Drums to be deposited for recycling must be drained carefully.

Evacuation must be effected at a temperature > 15 ° C. Cap- and slit drum emptied by turning them upside-down.

Drum should be slightly inclined (about 10 degrees) with a slit (opening) in the lowest position. Let the last residue of the product to flow out until the drum is drip free.

High viscosity products may require scraping. The scraping must take into account other information in this SDS.

14. Transport information

General

Safety Data Sheet

Hardener

Revision date 2013-01-31

Transport in accordance with national law and ADR for road, RID for rail, IMDG for sea and ICAO / IATA for air.
For complete information on transport, see transport document.

Transport label

14.1. UN number: --

14.2. UN proper shipping name: --

14.3. Transport hazard class(es): --

14.4. Packing group: --

14.5. Environmental hazards: --

EmS Nr.:--

Marine Pollutant: No

14.6. Special precautions for user: --

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: --

15. Regulatory information

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

The labeling of the product according to EC directives 67/548/EEC, 1999/45/EC, see section 2.

Classification and labeling of substances under Directive 67/548/EC, 1999/45/EC, see section 3.

Classification and labeling of substances according to Regulation (EC) 1272/2008 (CLP) is in section 3.

Safety is designed according to EU Commission Regulation No. 1907/2006.

15.2 Chemical safety assessment

Chemical safety assessment has not been made for the mixture.

16. Other information

Full text of H- and R-phrases appearing in section 3:

Xi Irritant

R43 May cause sensitization by skin contact.

R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

H317 May cause an allergic skin reaction.

H412 Harmful to aquatic life with long lasting effects. Harmful to aquatic life with long lasting effects.

The safety data sheet has been updated in its entirety.

The information of this SDS is based on the present state of our knowledge and on current EU and national laws. The product is not to be used for other purposes than those specified under section 1 without first obtaining written handling instruction. It is always the responsibility of the user to take all necessary steps in order to fulfill the demand laid down in the local rules and legislation. The information in this SDS is meant as a description of the safety requirements of our product : it is not to be considered as a guarantee of the products' properties.