# **SAFETY DATA SHEET**

**BD/BDA HARDENER 30** 



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

1.1 Product identifier

Product name : BD/BDA HARDENER 30

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

**Product description**: Hardener.

1.3 Details of the supplier of the safety data sheet

Boldan Oy, Matkuntie 3, FIN-05200 Rajamäki, tel. +358 (0)9 853 1042

e-mail address of person responsible for this SDS

: info@boldan.fi

**National contact** 

Boldan Oy, Matkuntie 3, FIN-05200 Rajamäki, tel. +358 (0)9 853 1042

#### 1.4 Emergency telephone number

**National advisory body/Poison Centre** 

Telephone number : NHS: 111 (for advise), 999 (for emergency).

#### **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture

**Product definition**: Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT RE 2, H373 Aquatic Chronic 3, H412

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

Hazard pictograms







Signal word : Danger

**Hazard statements** : H302 - Harmful if swallowed.

H314 - Causes severe skin burns and eye damage.

H317 - May cause an allergic skin reaction.

H373 - May cause damage to organs through prolonged or repeated exposure.

H412 - Harmful to aquatic life with long lasting effects.

#### **Precautionary statements**

BD/BDA HARDENER 30

Label No :12818

Date of issue/Date of revision :15/02/2017 Date of previous issue :No previous Version :1 1/13

### SECTION 2: Hazards identification

: P280 - Wear protective gloves. Wear eye or face protection. Wear protective **Prevention** 

clothing.

P273 - Avoid release to the environment.

Response : P304 + P310 - IF INHALED: Immediately call a POISON CENTER or physician.

P301 + P310 + P331 - IF SWALLOWED: Immediately call a POISON CENTER or

physician. Do NOT induce vomiting.

P303 + P353 + P310 - IF ON SKIN (or hair): Rinse skin with water or shower.

Immediately call a POISON CENTER or physician.

P305 + P310 - IF IN EYES: Immediately call a POISON CENTER or physician.

**Storage** 

: P501 - Dispose of contents and container in accordance with all local, regional, **Disposal** 

national and international regulations.

**Hazardous ingredients** : Benzyl alcohol

Poly(methylenecyclohexaneamine)

4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2, 3-epoxypropane, reaction products with m-phenylenebis(methylamine)

m-Xvlene-α,α'-diamine

4,4'-methylenebis(cyclohexylamine)

Supplemental label

elements

: Not applicable.

**Annex XVII - Restrictions** on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

2.3 Other hazards

Other hazards which do not result in classification : None known.

### **SECTION 3: Composition/information on ingredients**

#### 3.2 Mixtures Mixture

Product/ingredient name	Identifiers	%	Classification Regulation (EC) No. 1272/2008 [CLP]	Туре
Benzyl alcohol	REACH #: 01-2119492630-38 EC: 202-859-9 CAS: 100-51-6 Index: 603-057-00-5	≥25 - <50	Acute Tox. 4, H302 Acute Tox. 4, H332	[1]
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2, 3-epoxypropane, reaction products with m-phenylenebis (methylamine)	REACH #: 01-2119965162-39 EC: 500-302-7 CAS: 113930-69-1	≥10 - <25	Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1B, H317 Aquatic Chronic 2, H411	[1]
Poly (methylenecyclohexaneamine)	REACH #: 01-2119983522-33 CAS: 135108-88-2	≥10 - <25	Acute Tox. 4, H302 Skin Corr. 1C, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT RE 2, H373 (oral) Aquatic Chronic 3, H412	[1]
m-Xylene-α,α'-diamine	REACH #: 01-2119480150-50 EC: 216-032-5 CAS: 1477-55-0	≥10 - <22	Acute Tox. 4, H302 Acute Tox. 4, H332 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317	[1]

**BD/BDA HARDENER 30 Label No: 12818** 

Date of issue/Date of revision : 15/02/2017 Date of previous issue Version :1 2/13 : No previous validation

SECTION 3: Composition/information on ingredients				
			Aquatic Chronic 3, H412 EUH071	
2,4,6-tris(dimethylaminomethyl) phenol	REACH #: 01-2119560597-27 EC: 202-013-9 CAS: 90-72-2 Index: 603-069-00-0	≥3 - <5	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319	[1]
4,4'-methylenebis (cyclohexylamine)	REACH #: 01-2119541673-38 EC: 217-168-8 CAS: 1761-71-3	≥1 - <3	Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT RE 2, H373 (oral)	[1]
			See Section 16 for the full text of the H statements declared above.	

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern

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

#### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

**Eye contact** 

: Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

#### Inhalation

: Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

#### Skin contact

Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

#### Ingestion

: Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or

**BD/BDA HARDENER 30 Label No** :12818 3/13 Version :1

### **SECTION 4: First aid measures**

waistband.

#### **Protection of first-aiders**

No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

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

#### Potential acute health effects

**Eye contact** : Causes serious eye damage.

Inhalation : No known significant effects or critical hazards.

**Skin contact**: Causes severe burns. May cause an allergic skin reaction.

**Ingestion**: Harmful if swallowed.

#### Over-exposure signs/symptoms

**Eye contact** : Adverse symptoms may include the following:

pain watering redness

Inhalation : No specific data.

**Skin contact**: Adverse symptoms may include the following:

pain or irritation

redness

blistering may occur

**Ingestion**: Adverse symptoms may include the following:

stomach pains

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

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed.

The exposed person may need to be kept under medical surveillance for 48 hours.

**Specific treatments**: No specific treatment.

## **SECTION 5: Firefighting measures**

#### 5.1 Extinguishing media

Suitable extinguishing

media

: Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing** 

media

: None known.

### 5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture

: In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous combustion products

: In a fire, decomposition may produce toxic gases/fumes.

5.3 Advice for firefighters

Special protective actions for fire-fighters

: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters

: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

BD/BDA HARDENER 30 Label No :12818

Date of issue/Date of revision : 15/02/2017 Date of previous issue : No previous Version : 1 4/13

#### **SECTION 6: Accidental release measures**

#### 6.1 Personal precautions, protective equipment and emergency procedures

#### For non-emergency personnel

: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders: If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

#### 6.2 Environmental precautions

: Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

#### 6.3 Methods and material for containment and cleaning up

#### **Small spill**

: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

#### Large spill

: Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. 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. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.

#### 6.4 Reference to other sections

: See Section 1 for emergency contact information. See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information.

### **SECTION 7: Handling and storage**

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

#### 7.1 Precautions for safe handling

#### **Protective measures**

: Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

#### Advice on general occupational hygiene

: 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. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

validation

#### 7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

#### 7.3 Specific end use(s)

**BD/BDA HARDENER 30 Label No**:12818 Date of issue/Date of revision 5/13 : No previous Version : 1

: 15/02/2017 Date of previous issue

### **SECTION 7: Handling and storage**

Recommendations

: Not available.

**Industrial sector specific** 

Not available.

solutions

### SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

#### 8.1 Control parameters

#### Occupational exposure limits

No exposure limit value known.

# Recommended monitoring procedures

: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

#### **DNELs/DMELs**

No DNELs/DMELs available.

#### **PNECs**

No PNECs available

#### 8.2 Exposure controls

Appropriate engineering controls

: If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

#### **Individual protection measures**

**Hygiene measures** 

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

#### Eye/face protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

# Skin protection Hand protection

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Recommendations: Wear suitable gloves tested to EN374.

< 1 hour (breakthrough time): Nitrile gloves. thickness > 0.3 mm

> 8 hours (breakthrough time): 4H / Silver Shield® gloves.

BD/BDA HARDENER 30 Label No :12818

Date of issue/Date of revision : 15/02/2017 Date of previous issue

: No previous validation

Version :1

6/13

### SECTION 8: Exposure controls/personal protection

Wash hands before breaks and immediately after handling the product.

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist

before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be

selected based on the task being performed and the risks involved and should be

approved by a specialist before handling this product.

**Respiratory protection** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved

standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product

and the safe working limits of the selected respirator.

Filter type:

spray application Filter type:

**Environmental exposure** controls

**Body protection** 

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### **SECTION 9: Physical and chemical properties**

### 9.1 Information on basic physical and chemical properties

**Appearance** 

**Physical state** : Liquid. Colour Various Odour Slight

Not available. **Odour threshold** Not available. Melting point/freezing point : Not available. Initial boiling point and : Not available.

boiling range

: Closed cup: 101°C Flash point

Not available. **Evaporation rate** Flammability (solid, gas) : Not available. Upper/lower flammability or Lower: 1.3% explosive limits Upper: 13% Vapour pressure : Not available. Vapour density Not available. **Density** 1.1 kg/l

Solubility(ies) : Not available. Partition coefficient: n-octanol/: Not available.

**Auto-ignition temperature** : Not available. **Decomposition temperature** Not available. **Viscosity** Not available. **Explosive properties** Not available. **Oxidising properties** Not available.

9.2 Other information

VOC : 7 g/I

No additional information.

**BD/BDA HARDENER 30 Label No: 12818** Date of issue/Date of revision 7/13 : No previous Version :1

: 15/02/2017 Date of previous issue validation

### **SECTION 10: Stability and reactivity**

10.1 Reactivity

: No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability

: The product is stable.

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid

: No specific data.

10.5 Incompatible materials

: No specific data.

10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products

should not be produced.

### **SECTION 11: Toxicological information**

### 11.1 Information on toxicological effects

#### **Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
Benzyl alcohol	LD50 Dermal	Rabbit	2000 mg/kg	-
	LD50 Oral	Rat	1230 mg/kg	-
m-Xylene-α,α'-diamine	LC50 Inhalation Gas.	Rat	700 ppm	1 hours
	LD50 Dermal	Rabbit	2 g/kg	-
	LD50 Oral	Rat	930 mg/kg	-
2,4,6-tris	LD50 Dermal	Rat	1280 mg/kg	-
(dimethylaminomethyl)				
phenol				
	LD50 Oral	Rat	1200 mg/kg	-

#### **Conclusion/Summary**

: Not available.

### **Acute toxicity estimates**

Route	ATE value
Inhalation (gases)	1102.8 mg/kg 30671.1 ppm 25.44 mg/l

#### **Irritation/Corrosion**

Product/ingredient name	Result	Species	Score	Exposure	Observation
Benzyl alcohol	Skin - Mild irritant	Man	-	48 hours 16	-
				milligrams	
	Skin - Moderate irritant	Pig	-	100 Percent	-
	Skin - Moderate irritant	Rabbit	-	24 hours 100	-
				milligrams	
m-Xylene-α,α'-diamine	Eyes - Severe irritant	Rabbit	-	24 hours 50	-
				Micrograms	
	Skin - Severe irritant	Rabbit	-	24 hours 750	-
				Micrograms	
2,4,6-tris	Eyes - Severe irritant	Rabbit	-	24 hours 50	-
(dimethylaminomethyl) phenol				Micrograms	
·	Skin - Mild irritant	Rat	-	0.025	-
				Mililiters	
	Skin - Severe irritant	Rat	-	0.25 Mililiters	-
	Skin - Severe irritant	Rabbit	-	24 hours 2	-
				milligrams	
4,4'-methylenebis	Eyes - Severe irritant	Rabbit	-	24 hours 10	-
(cyclohexylamine)				microliters	

**Conclusion/Summary** : Not available.

**BD/BDA HARDENER 30 Label No: 12818** Date of issue/Date of revision : 15/02/2017 Date of previous issue : No previous Version :1 8/13

### **SECTION 11: Toxicological information**

**Sensitisation** 

**Conclusion/Summary**: Not available.

**Mutagenicity** 

**Conclusion/Summary**: Not available.

**Carcinogenicity** 

**Conclusion/Summary**: Not available.

**Reproductive toxicity** 

Conclusion/Summary : Not available.

**Teratogenicity** 

Conclusion/Summary: Not available.

Specific target organ toxicity (single exposure)

Not available.

#### Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Poly(methylenecyclohexaneamine) 4,4'-methylenebis(cyclohexylamine)	Category 2	Oral	Not determined
	Category 2	Oral	Not determined

#### **Aspiration hazard**

Not available.

Information on the likely

routes of exposure

: Not available.

#### Potential acute health effects

**Eye contact** : Causes serious eye damage.

**Inhalation** : No known significant effects or critical hazards.

**Skin contact**: Causes severe burns. May cause an allergic skin reaction.

Ingestion : Harmful if swallowed.

#### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact**: Adverse symptoms may include the following:

pain watering redness

Inhalation : No specific data.

**Skin contact**: Adverse symptoms may include the following:

pain or irritation

redness

blistering may occur

**Ingestion** : Adverse symptoms may include the following:

stomach pains

#### Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate : Not available.

effects

Potential delayed effects : Not available.

Long term exposure

Potential immediate : Not available.

effects

Potential delayed effects : Not available.

Potential chronic health effects

BD/BDA HARDENER 30 Label No :12818

Date of issue/Date of revision : 15/02/2017 Date of previous issue : No previous Version : 1

9/13

## **SECTION 11: Toxicological information**

Not available.

**Conclusion/Summary**: Not available.

General : May cause damage to organs through prolonged or repeated exposure. Once

sensitized, a severe allergic reaction may occur when subsequently exposed to very

low levels.

Carcinogenicity : No known significant effects or critical hazards.
 Mutagenicity : No known significant effects or critical hazards.
 Teratogenicity : No known significant effects or critical hazards.
 Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Other information : Not available.

### **SECTION 12: Ecological information**

#### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Benzyl alcohol	Acute LC50 10000 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours
m-Xylene-α,α'-diamine	EC50 15.2 mg/l	Daphnia - Daphnia magna	48 hours
•	LC50 75 mg/l	Fish - Leuciscus idus	96 hours
4,4'-methylenebis (cyclohexylamine)	Acute EC50 141.2 mg/l	Algae	72 hours
	Acute EC50 9.24 mg/l Acute LC50 67.8 mg/l	Daphnia Fish	48 hours 96 hours

Conclusion/Summary : Not available.

#### 12.2 Persistence and degradability

No known significant effects or critical hazards.

**Conclusion/Summary**: Not available.

#### 12.3 Bioaccumulative potential

LogPow	BCF	Potential
0.87	-	low
-	4.77	low
-	209 to 219	low
0.18	2.69	low
0.219	-	low
2.03	-	low
	0.87 - - 0.18 0.219	0.87 - 4.77 - 209 to 219 0.18 0.219 - 2.69 

#### 12.4 Mobility in soil

Soil/water partition : No coefficient (Koc)

: Not available.

Mobility : Not available.

#### 12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

BD/BDA HARDENER 30

Date of issue/Date of revision : 15/02/2017 Date of previous issue : No previous validation : 10/13

### **SECTION 12: Ecological information**

**vPvB** : Not applicable.

12.6 Other adverse effects : No known significant effects or critical hazards.

### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods

#### **Product**

**Methods of disposal** 

: The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and nonrecyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** 

The classification of the product may meet the criteria for a hazardous waste.

European waste catalogue: 080111\*, 200127\* (EWC)

**Packaging** 

**Methods of disposal** 

: The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** 

: This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

### **SECTION 14: Transport information**

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	UN3066	UN3066	UN3066	UN3066
14.2 UN proper shipping name	PAINT	PAINT	PAINT	PAINT
14.3 Transport hazard class(es)	8	8	8	8
14.4 Packing group	II	II	II	II
14.5 Environmental hazards	Yes.	Yes.	Yes.	No.
Additional information	The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.  Tunnel code (E)	The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.	The environmentally hazardous substance mark may appear if required by other transportation regulations.

user

14.6 Special precautions for : 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.

**BD/BDA HARDENER 30 Label No**:12818

Date of issue/Date of revision Version :1 11/13 : 15/02/2017 Date of previous issue : No previous

### SECTION 14: Transport information

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

: Not available.

### **SECTION 15: Regulatory information**

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

**Annex XIV** 

None of the components are listed.

Substances of very high concern

None of the components are listed.

**Annex XVII - Restrictions** 

on the manufacture,

placing on the market

and use of certain

dangerous substances,

mixtures and articles

Other EU regulations

: Not determined. **Europe inventory** 

**Seveso Directive** 

This product is not controlled under the Seveso Directive.

**International regulations** 

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

**Rotterdam Convention on Prior Inform Consent (PIC)** 

Not listed.

**UNECE Aarhus Protocol on POPs and Heavy Metals** 

Not listed.

15.2 Chemical Safety

**Assessment** 

This product contains substances for which Chemical Safety Assessments are still

CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No.

required.

### **SECTION 16: Other information**

Indicates information that has changed from previously issued version.

Abbreviations and

: ATE = Acute Toxicity Estimate

acronyms

1272/2008] DMEL = Derived Minimal Effect Level

DNEL = Derived No Effect Level

EUH statement = CLP-specific Hazard statement PBT = Persistent. Bioaccumulative and Toxic PNEC = Predicted No Effect Concentration

RRN = REACH Registration Number

vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

**BD/BDA HARDENER 30 Label No: 12818** 

Date of issue/Date of revision : 15/02/2017 Date of previous issue : No previous Version :1 12/13

### **SECTION 16: Other information**

Classification		Justification
Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT RE 2, H373		Calculation method
<b>statements</b> H314 H315 H317		Harmful if swallowed. Causes severe skin burns and eye damage. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage.

**Full text of classifications** [CLP/GHS]

H411 H412	Toxic to aquatic life with long lasting effects. Harmful to aquatic life with long lasting effects.
	ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 LONG-TERM AQUATIC HAZARD - Category 2 LONG-TERM AQUATIC HAZARD - Category 3 Corrosive to the respiratory tract. SERIOUS EYE DAMAGE/ EYE IRRITATION - Category
Eye Irrit. 2, H319	1 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
Skin Corr. 1B, H314 Skin Corr. 1C, H314 Skin Irrit. 2, H315 Skin Sens. 1, H317 Skin Sens. 1B, H317 STOT RE 2, H373	SKIN CORROSION/IRRITATION - Category 1B SKIN CORROSION/IRRITATION - Category 1C SKIN CORROSION/IRRITATION - Category 2 SKIN SENSITIZATION - Category 1 SKIN SENSITIZATION - Category 1B SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
STOT RE 2, H373 (oral)	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (oral) - Category 2

Causes serious eye irritation.

repeated exposure if swallowed.

May cause damage to organs through prolonged or

May cause damage to organs through prolonged or

Harmful if inhaled.

repeated exposure.

Date of issue/ Date of revision

: 15/02/2017

H319

H332

H373

Date of previous issue

: No previous validation

**Version** : 1

#### **Notice to reader**

To the best of our knowledge, the information contained herein is accurate. However, neither the abovenamed supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

**BD/BDA HARDENER 30 Label No: 12818** : 15/02/2017 Date of previous issue Version :1 13/13

Date of issue/Date of revision