



PROTON

**SAFETY DATA SHEET**  
**99.9%**  
**BORAX DECAHYDRATE**

**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

**1.1. Product identifier**

<b>Chemical name :</b>	Disodium tetraboratedecahydrate
<b>EC No :</b>	215-540-4
<b>CAS No. :</b>	1303-96-4
<b>Index No.:</b>	005-011-01-1
<b>REACH registration No.:</b>	01-2119490790-32-0002
<b>Trade names:</b>	Borax Decahydrate
<b>Synonyms:</b>	Borax, Sodium Borate Decahydrate, Disodium Tetraboratedecahydrate

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

The product is used in industrial manufacturing, in particular in:

- Ceramics,
- Detergent,
- Borosilicate glass,
- Insulation fiberglass.

**1.2.2. Uses advised against**

None

**1.3. Details of the supplier of the safety data sheet**

HD Chemicals LTD  
UNIT 9 Scott Business Park  
PL2 2PB Plymouth UK

Contact Person responsible for SDS: Mr Peter Konefal, e-mail: [contact@hdchemicals.co.uk](mailto:contact@hdchemicals.co.uk)

**SECTION 2: HAZARDS IDENTIFICATION**

**2.1. Classification of the substance or mixture**

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

a. Harmonised classification provided in the 1st ATP to CLP (Regulation EC n°790/2009)

Repr. Cat. 1B; H360FD

Specific concentrations limits: Repr. 1B; H360FD: C ≥8.5%

b. Self-classification based on the classification criteria provided in CLP Eye irrit. Cat. 2; H319

Specific concentrations limits: C ≥ 10,0 % Xi ; H319



### 2.1.2. Classification according to Directive 67/548/EEC

Repr. Cat. 2; R60-R61

Xi ; R36

Concentrations limits: C ≥8.5%: R;R60-61

Risk Phrases: R60 ; R61; R36

Safety Phrases: S45; S53; S26

<b>Precautionary Statement Prevention:</b>	P201; P202; P281; P264; P280
<b>Precautionary Statement Response:</b>	P308 + P313; P305+P351+P338; P337+P313
<b>Precautionary Statement Storage:</b>	P405
<b>Precautionary Statement Disposal:</b>	P501

### 2.1.3. Additional information

For Full text of R-S phrases as well as Hazard Class/Statements and Precautionary Statements see section 16.

## 2.2. Label elements

### 2.2.1. Labelling according to Regulation (EC) No. 1272/2008 (CLP)

**Hazard pictograms (CLP):**



Signal word (CLP): DANGER

**Hazard statements (CLP) :**

H319: Causes serious eye irritation

H360FD: May damage fertility or the unborn child

**Precautionary statements (CLP):**

P201: Obtain special instructions before use.

P202: Do not handle until all safety precautions have been read and understood.

P280: Wear protective gloves, eye protection

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308+P313: If exposed or concerned GET MEDICAL ADVICE/ATTENTION.

P405: Store locked up.

### 2.2.2. According to REACH, Annex XVII

Restricted to professional users.

## 2.3. Other hazards

### Emergency overview

Borax decahydrate is a white odourless, powdered substance that is not flammable, combustible, or explosive, and has low acute oral and dermal toxicity.



### Potential health effects

Inhalation is the most significant route of exposure in occupational and other settings. Dermal exposure is not usually a concern because borax decahydrate is poorly absorbed through intact skin.

#### Inhalation

Occasional mild irritation effects to nose and throat may occur from inhalation of borax decahydrate dusts at levels higher than 10 mg/m<sup>3</sup>.

#### Eye contact

Borax decahydrate is a serious eye irritant.

#### Skin contact

Borax decahydrate does not cause irritation to intact skin.

#### Ingestion

Products containing borax decahydrate are not intended for ingestion. Borax decahydrate has low acute toxicity. Small amounts (e.g. a teaspoonful) swallowed accidentally are not likely to cause effects; swallowing amounts larger than that may cause gastrointestinal symptoms.

### Reproductive/Developmental

Animal ingestion studies in several species, at high doses, indicate that borates cause reproductive and developmental effects. A human study of occupational exposure to borate dust showed no adverse effect on reproduction. A recent epidemiological study and a peer reviewing report of the past epidemiological studies conducted in China did not show any negative effect of boron on human fertility (10,11).

### Potential ecological effects

Large amounts of borax decahydrate can be harmful to plants and other species. Therefore, releases to the environment should be minimised.

### Signs and symptoms of exposure

Symptoms of accidental over-exposure to borax decahydrate have been associated with ingestion or absorption through large areas of damaged skin. These may include nausea, vomiting, and diarrhoea, with delayed effects of skin redness and peeling (see section 11).

## SECTION 3: Composition/information on ingredients.

### 3.1. Substances

The product contains greater than 99.9 percent (%) borax decahydrate Na<sub>2</sub>B<sub>4</sub>O<sub>7</sub> · 10H<sub>2</sub>O

Chemical Name	EC No. CAS Number	Registration Number	Purity	Risk Phrases	Hazard Statement
Borax decahydrate	215-540-4 1303-96-4	01-2119490790-32-0002	99.9%	R36; R60; R61; Xi	H319 H360FD

For other "Chemical inventory listing", please refer to section 15.

### 4.1. Description of first aid measures

#### Skin contact

No treatment necessary because non-irritating.

#### Eye contact

Use eye wash fountain or fresh water to cleanse eye. If irritation persists for more than 30 minutes, seek medical attention.



### **Inhalation**

If symptoms such as nose or throat irritation are observed, remove to fresh air.

### **Ingestion**

If large amounts are swallowed (i.e. more than one teaspoon), give two glasses of water or milk to drink and seek medical attention.

### **Note to physicians**

Observation only is required for adult ingestion of less than 9 grams of borax decahydrate. For ingestion in excess of 9 grams, maintain adequate kidney function and force fluids. Gastric lavage is recommended for symptomatic patients only. Haemodialysis should be reserved for massive acute ingestion or patients with renal failure. Boron analyses of urine or blood are only useful for documenting exposure and should not be used to evaluate severity of poisoning or to guide treatment (see section 11).

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

Not applicable.

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

Not applicable.

## **SECTION 5: Firefighting measures.**

### **5.1. Extinguishing media**

Use extinguishing media appropriate for the surrounding materials.

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

This product is non-combustible, not flammable or explosive.

### **5.3. Advice for firefighters**

**Special Fire Fighting Procedures:** Cool containers exposed to flames with water until well after the fire is out. Move container from fire area if it can be done without risk. Dyke and collect extinguishing water.

**Protective equipment for fire-fighters:** Use of approved supplied air or self-contained breathing apparatus operated in positive pressure mode must be worn in case of fire.

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

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

Avoid dust formation. In case of exposure to prolonged or high level of airborne dust, wear a personal respirator in compliance with national legislation.

### **6.2. Environmental precautions**

Borax decahydrate is a water-soluble white powder that may, at high concentrations cause damage to trees or vegetation by root absorption (see section 12).



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

#### Land spill

Vacuum, shovel or sweep up borax decahydrate and place in containers for disposal in accordance with applicable local regulations. Avoid contamination of water bodies during clean up and disposal. No personal protective equipment is needed to clean up land spills.

#### Spillage into water

Where possible, remove any intact containers from the water. Advise local water authority that none of the affected water should be used for irrigation or for the abstraction of potable water until natural dilution returns the boron value to its normal environmental background level (see sections 12, 13 and 15).

### 6.4. Reference to other sections

See section 8 and 13 for more information.

## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for safe handling

To maintain package integrity and to minimise caking of the product, bags should be handled on a first-in firstout basis. Good housekeeping and dust prevention procedures should be followed to minimise dust generation and accumulation. Your supplier can advise you on safe handling, please contact the supplier.

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

No special handling precautions are required, but dry, indoor storage is recommended. No specific requirements.

Provide appropriate ventilation and store bags such as to prevent any accidental damage.

### 7.3. Specific end use(s)

The identified uses for this product are detailed in Section 1.2 See exposure scenario in Annex to the SDS.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

#### Occupational Exposure Limit Values

Substance	Sodium Tetraboratedecahydrate			
CAS No.	1303-96--4			
	Limit value – 8 hours		Limit value – Short term	
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Belgium		2		6
Canada – Quebec		5		



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Denmark	2	4
France	5	
Germany (DFG)	0.75 inhalable aerosol (1)	0.75 inhalable aerosol (1,2)
Poland	0.5	2
Spain	5	
Sweden	2	5
Switzerland	5 inhalable aerosol	5 inhalable aerosol
USA – NIOSH	5	
United Kingdom	5	

Source :IFAInstitutfürArbeitsschutz der DeutschenGesetzlichenUnfallversicherung Remarks

(1) calculated as boron

(2) 15 minutes average value.

Respect regulatory provisions for dust (total and respirable).

*Occupational exposure limits for dust (total and respirable). are treated by OSHA, Cal OSHA and ACGIH as "Particulate Not Otherwise Classified" or "Nuisance Dust"*

ACGIH/TLV 10 mg/m<sup>3</sup>

Cal OSHA/PEL 10 mg/m<sup>3</sup>

OSHA/PEL (total dust) 15 mg/m<sup>3</sup>

OSHA/PEL (respirable dust) 5 mg/m<sup>3</sup>

### DNEL values

Exposure pattern	Type/site of effect	Exposure route	DNEL value
<b>DNEL's for workers</b>			
Acute	Local	Inhalation	22.3mg/m <sup>3</sup>
Long-term	Systemic	Inhalation	12.8mg/m <sup>3</sup>
Long-term	Systemic	Dermal	42478mg/day
<b>DNEL's for the general public</b>			
Acute	Systemic	Oral	1.5mg/kg bw/day
Acute	Local	Inhalation	22.3mg/m <sup>3</sup>
Long-term	Systemic	Dermal (external)	303.5mg/kg bw/day
Long-term	Systemic	Dermal (systemic)	1.5mg/kg bw/day
Long-term	Systemic	Inhalation	6.5mg/m <sup>3</sup>
Long-term	Systemic	Oral	1.5mg/kg bw/day
Long-term	Local	Inhalation	22.3mg/m <sup>3</sup>

Source: Chemical Safety Report of disodium tetraborate, anhydrous.

### PNEC values

**PNEC add, freshwater, marine water= 1.35 mg B/L**

**PNEC add aqua intermittent= 9.1 mg B/L**

**PNEC add freshwater sediment, marine water sediment= 1.8 mg B/kg sediment dry weight**  
**PNEC soil= 5.4 mg B/kg soil dry weight**

**PNEC add, STP= 1.75 mg B/L**

Source: Chemical Safety Report of disodium tetraborate, anhydrous



## 8.2. Exposure controls

### 8.2.1. Appropriate engineering controls.

Use as far as possible in a closed system. Provide a regular control of the atmosphere. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Local exhaust and general ventilation must be adequate to meet exposure standards. Please refer to the annex (exposure scenarios).

**Hand protection:** Use gloves resistant to chemical products corresponding to EN 374:3. Take advice to gloves' supplier.

**Eye protection:** Wear safety glasses with side shields according EN 166.

**Skin and body protection:** Wear closed protective clothing.

**Respiratory protection:** Use respiratory protection mask according to EN 140 or EN 405 with filter type P3 according to EN 143:2000 or FFP3 according to EN 149:2001.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Crystalline solid powder
Colour	White
Odour	Odourless
Odour threshold	Not applicable
pH @20 <sup>0</sup> C	9.3 (0.1% solution) 9.2 (1.0% solution) 9.3 (4.7% solution)
Relative evaporation rate (butylacetate=1)	No data available
Melting point /freezing point	741 °C (heated in closed space) 1575 <sup>0</sup> C
Initial boiling point and boiling range	Not flammable
Flash point	Not applicable
Self-ignition temperature	8H <sub>2</sub> O @ 60°C & -10H <sub>2</sub> O @ 320°C
Decomposition temperature	Not flammable
Flammability (solid, gas)	Negligible @20 <sup>0</sup> C
Vapour pressure	Not applicable
Vapour density	1.72@20 <sup>0</sup> C
Relative Density	4.7%@20 <sup>0</sup> C;65.6%@100 <sup>0</sup> C
Solubility in water	4.92
Solubility Value (g/100g H <sub>2</sub> O@20 <sup>0</sup> C)	Log Kow (Pow): 1.53±0.05 (at 22±1°C) pH 7.5
Partition Coefficient (N-Octanol/Water)	No data available
Viscosity, dynamic	No data available
Explosive properties	Product is not explosive
Oxidising properties	No data available

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## SECTION 10: STABILITY AND REACTIVITY

### 10.1 Reactivity

Not applicable.

### 10.2. Chemical stability

Borax decahydrate is a stable product, but when heated it loses water, eventually forming anhydrous borax ( $\text{Na}_2\text{B}_4\text{O}_7$ ).

### 10.3. Possibility of hazardous reactions

Reaction with strong reducing agents such as metal hydrides, acetic anhydride or alkali metals will generate hydrogen gas which could create an explosive hazard.

### 10.4. Conditions to avoid

Protect from water, moisture and strong heat

### 10.5. Incompatible materials

Avoid contact with strong reducing agents such as metal hydrides, acetic anhydride or alkali metals

### 10.6. Hazardous decomposition products

Not applicable.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects

#### 11.1.1. Substances

##### Acute Toxicity

Low acute oral toxicity; LD50 in rats is 6,000 mg/kg of body weight.

##### Skin corrosion / irritation

Low acute dermal toxicity; LD50 in rabbits is greater than 2,000 mg/kg of body weight. Borax decahydrate is poorly absorbed through intact skin. Non-irritant.

##### Serious eye damage/ irritation

Borax decahydrate is a serious eye irritant.

##### Respiratory or skin sensitisation

Not applicable.

##### Germ cell mutagenicity

Not applicable.



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### **Carcinogenicity**

Not applicable.

### **Reproductive toxicity**

Animal feeding studies in rat, mouse and dog, at high doses, have demonstrated effects on fertility and testes[2]. Studies with the chemically related boric acid in rat, mouse and rabbit, at high doses, demonstrate developmental effects on the foetus including foetal weight loss and minor skeletal variations. The doses administered were many times in excess of those which humans would normally be exposed to [3,4,5]. Human epidemiological studies show no increase in pulmonary disease in occupational populations with chronic exposures to sodium borate dust. A recent epidemiology study under the conditions of normal occupational exposure to borate dusts indicated no effect on fertility.

### **STOT-single exposure**

Not applicable.

### **STOT-repeated exposure**

Not applicable.

### **Aspiration hazard**

Low acute inhalation toxicity; LC50 in rats is greater than 2.0 mg/l (or g/m<sup>3</sup>).

Boron occurs naturally in sea water at an average concentration of 5 mg B/l and fresh water at 1 mg B/l or less. In dilute aqueous solutions the predominant boron species present is un-dissociated boric acid.

## **SECTION 12: ECOLOGICAL INFORMATION**

### **12.1. Toxicity**

#### **Phytotoxicity**

Boron is an essential micronutrient for healthy growth of plants. However, it can be harmful to boron sensitive plants in higher quantities. Care should be taken to minimise the amount of borate product released to the environment.

#### **Algal toxicity[6]**

Green algae, *Pseudokirchneriellasubcapitata* (Hansveit and Oldersma, 2000)

72-hr EC50 –biomass = 40 mg B/L, or 229 mg boric acid/L.

#### **Invertebrate toxicity[7]**

Daphnia, Daphnids, *Daphnia magna* (Gersich, 1984a)

48-hr LC50 = 133 mg B/L or 760 mg boric acid/L

or 619 mg disodium tetraborate , anhydrous/L

#### **Fish toxicity[8]**

Fish, Fathered minnow, *Pimephalespromelas* (Soucek et al., 2010)

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96-hr LC50 = 79.7 mg B/L or 456 mg boric acid/L  
or 370 mg disodium tetraborate, anhydrous

### **12.2. Persistence and degradability**

Boron is naturally occurring and ubiquitous in the environment. Borax decahydrate decomposes in the environment to natural borate.

### **12.3. Bio accumulative potential**

Not significantly bio-accumulative.

### **12.4. Mobility in soil**

The product is soluble in water and is leachable through normal soil.

### **12.5. Results of PBT and vPvB assessment**

Not applicable.

### **12.6. Other adverse effect**

No data available.

## **SECTION 13: DISPOSAL CONSIDERATIONS**

### **13.1. Waste treatment methods**

Small quantities of Borax decahydrate can usually be disposed of at landfill sites. No special disposal treatment is required, but local authorities should be consulted about any specific local requirements. Tonnage quantities of product are not recommended to be sent to landfills. Such product should, if possible, be used for an appropriate application.

In accordance with ADR / RID / ADNR / IMDG / ICAO / IATA

## **SECTION 14: TRANSPORT INFORMATION**

### **14.1. UN number**

Not applicable

### **14.2. UN proper shipping name**

Not classified as dangerous according to Transport Regulations

### **14.3. Transport hazard class(es)**

Not applicable

### **14.4. Packing group**

Not applicable

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#### **14.5. Environmental hazards**

**Environmentally Hazard substance/Marine Pollutant – No**

#### **14.6. Special precautions for user**

No additional information available

#### **14.7. 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**

It should be noted that borates are safe under conditions of normal handling and use, besides, they are essential nutrients to plants, and research shows that they play a beneficial role in human health. CLP classification has been solely based on animal tests where animals were exposed to high doses of boric acid over long periods of time. These doses were many times higher than humans are exposed to under conditions of normal handling and use. Consequently, a precautionary decision was taken by the European Commission. Although we will comply with the body of legislation triggered by that decision, we are in process of all possible legal actions.

##### **Clean Air Act (Montreal Protocol)**

Borax decahydrate was not manufactured with and does not contain any Class I or Class II ozone depleting substances.

##### **Chemical inventory listing**

U.S. EPA TSCA Inventory 1303-96-4

Canadian DSL 1303-96-4

EINECS 215-540-4

South Korea 9212-848

Japanese MITI (1)-69

Ensure all national/local regulations are observed.

##### **EU Reach**

Disodium Tetraborates are listed in the Candidate List of Substances of Very High Concern "SVHC" for eventual inclusion in Annex XIV to REACH Regulation 1907/2006 ("Authorisation List"). (18.06.2010-ED/30/2010).

Disodium tetraborates are listed in the Annex XVII of REACH Regulation 1907/2006 (EU No.109/2012) and their use in consumer products above specific concentration limits are

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restricted. Note that this restriction is only specific to consumer products and do not cover their industrial and/or professional applications. Disodium tetraborates can be used in consumer products below specific concentration limits (which is **C ≥8.5%** for Borax decahydrate).

## 15.2. Chemical safety assessment

Chemical Safety Assessment of Borax Decahydrate (disodium tetraboratedecahydrate) has been carried out under REACH Regulation of the EU.

## SECTION 16: OTHER INFORMATION

### 16.1. Unique change made to the previous version of this Material Safety Data Sheet (MSDS).

Update of the emergency number pursuant to Article 1.4 Annex II of REACH Regulation (see section 1.4)

### 16.2. List of abbreviation and acronyms used in this MSDS.

**MSDS** :Material Safety Data Sheet

**Index N°**: atomic number of the element most characteristic of the properties of the substance

**CAS N°**: Chemical Abstracts Service number

**EC N°** :EINECS Number : European Inventory of Existing Commercial Substances

**REACH** :Registration, Evaluation, Authorisation and Restrictions of Chemicals Regulation (EC) N°1907/2006

**DSD**: Dangerous Substances Directive 67/548/EEC

**Repr. Cat. 1B**: substance presumed human reproductive toxicant

**Eye irrit. Cat. 2**: substance inducing potential reversible eye irritation

**CLP**: Classification Labelling Packaging Regulation: Regulation (EC) N°1272/2008

**1st ATP** :1st Adaptation to Technical and scientific Progress

**LD50**: Median Lethal Dose

**LC50**: Lethal Concentration, 50%

**N.A.** Not Applicable

**DNEL**: Derived No effect Level

**PNEC**: Predicted No Effect Concentration

**CSR**: Chemical Safety Report

**OSHA**: Occupational Safety & Health Administration

**Cal OSHA**: The State of California Division of Occupational Safety and Health (DOSH)

**PEL**: Permissible Exposure Limits

**ACGIH**: American Conference of Governmental Industrial Hygienists

**TLV**: Threshold Limit Value

**Japanese MITI**: Japanese Ministry of International Trade and Industry

**EC50**: Half maximal effective concentration

**PBT**: Persistent, Bioaccumulative and Toxic substance

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**vPvB:** Very Persistent and Very Bioaccumulative

**UN:** United Nations

**U.S. EPA TSCA Inventory:** Inventory of the chemical substances manufactured or processed in the United States according to Toxic Substances Control Act compiled and published under the authority of the Environmental Protection Agency

**Canadian DSL:** Canadian Domestic Substances List

**16.3. List of relevant R phrases, hazard statements, safety phrase and/or precautionary statements used in this MSDS.**

According to DSD Directive	According to CLP Regulation
Risk Phrases	Hazard Statements
<p><b>R60</b> : May impair fertility  <b>R61</b> : May cause harm to the unborn child  <b>R36</b> : Irritating to eyes</p>	<p><b>H360 FD:</b> May damage fertility or the unborn child  <b>H319:</b> Causes serious eye irritation</p>
<p><b>S45:</b> In case of accident or if you feel unwell, contact a doctor or poisons information centre immediately (show the label where possible).  <b>S53:</b> Avoid exposure—obtain special instructions before use.  <b>S26:</b> In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.</p>	<p><b>Prevention</b>  <b>P201:</b> Obtain special instructions before use.  <b>P202:</b> Do not handle until all safety precautions have been read and understood.  <b>P264:</b> Wash eyes thoroughly after handling.  <b>P280:</b> Wear protective gloves/ protective clothing/ eye protection/ face protection.  <b>Response</b>  <b>P308 + P313:</b> If exposed or concerned: get medical advice/attention.  <b>P305+P351+P338:</b> IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  <b>P337+P313:</b> If eye irritation persists: Get medical advice/attention.  <b>Storage</b>  <b>P405:</b> Store locked up.  <b>Disposal:</b>  <b>P501:</b> Dispose of contents/containers in accordance with local regulations.</p>

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## 16.4. References.

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2. Weir R J, Fisher R S, Toxicol. Appl. Pharmacol., (1972), 23, 351-364
3. National Toxicology Program (NTP) – Technical Report Series No. TR324, NIH Publication No. 88-2580 (1987), PB88 213475/XAB
4. Fail *et al.*, Fund. Appl. Toxicol. (1991) 17, 225-239
5. Heindelet *et al.*, Fund. Appl. Toxicol. (1992) 18, 266-277
6. Hansveit and Oldersma, 2000; TNO Nutrition and Food Research Institute. Report No. V99.157.
7. Gersich, FM (1984a). Environ.Toxicol.Chem., 3 #1, 89-94 (1984)
8. Soucek *et al.*, 2010. Illinois Natural History Survey, University of Illinois.
9. Birge W J, Black J A, EPA-560/-76-008 (April 1977) PB 267 085
10. Scialli AR, Bonde JP, Brüske-Hohlfeld I, Culver D, Li Y, Sullivan FM; ELSEVIER 2009
11. Robbins WA, Xun L, Jia J, Kennedy N, Elashoff DA, Ping L. ;ELSEVIER 2009;(Reproductive Toxicology)
- 12.
13. For general information on the toxicology of borates see ECETOC Technical Report No. 63 (1995); Patty's Industrial Hygiene and Toxicology, 4th Edition Vol. II, (1994) Chap. 42, 'Boron'.

14.

## 16.5. Disclaimer of Liability.

15.

16. *This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*

17.

18. **DISCLAIMER OF LIABILITY** *The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable*