

SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

BORAX (DECAHYDRATE AND PENTAHYDRATE)

Version 2.3
Revision Date 2011/02/11

Print Date 2011/02/11
MSDS code: MBOR100

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

1.1. Product identifier

Trade name : BORAX (DECAHYDRATE AND PENTAHYDRATE)
Substance name : disodium tetraborate decahydrate
Index-No. : 005-011-01-1
CAS-No. : 1303-96-4
EC-No. : 215-540-4

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

Use of the Substance/Mixture : At this time we do not yet have information on identified uses. They will be included in this safety data sheet when available.

Recommended restrictions on use : At that time we do not yet have information on use restrictions. They will be included in this safety data sheet when available.

1.3. Details of the supplier of the safety data sheet

Company : Brenntag UK & Ireland
Albion House, Rawdon Park
GB LS19 7XX Leeds Yeadon
Telephone : 0113 3879 200
Telefax : 0113 3879 280
E-mail address : msds@brenntag.co.uk

1.4. Emergency telephone number

Emergency telephone number : Emergency only telephone number (open 24 hours):
01865 407333 (N.C.E.C. Culham)

2. Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

REGULATION (EC) No 1272/2008

SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

BORAX (DECAHYDRATE AND PENTAHYDRATE)Version 2.3
Revision Date 2011/02/11Print Date 2011/02/11
MSDS code: MBOR100

Hazard class	Hazard category	Target Organs	Hazard statements
Reproductive toxicity	Category 1B		H360FD
Eye irritation	Category 2		H319

For the full text of the H-Statements mentioned in this Section, see Section 16.

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Directive 67/548/EEC or 1999/45/EC	
Hazard symbol / Category of danger	Risk phrases
Toxic to Reproduction Category 2 (Repr.Cat.2)	R60, R61
Irritant (Xi)	R36

For the full text of the R-phrases mentioned in this Section, see Section 16.

Most important adverse effects

Human Health : See section 11 for toxicological information.
 Physical and chemical hazards : See section 9 for physicochemical information.
 Potential environmental effects : See section 12 for environmental information.

2.2. Label elements**Labelling according to Regulation (EC) No 1272/2008**

Hazard symbols :



Signal word : Danger

Hazard statements : H360FD May damage fertility. May damage the unborn child.

SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

BORAX (DECAHYDRATE AND PENTAHYDRATE)

Version 2.3
Revision Date 2011/02/11

Print Date 2011/02/11
MSDS code: MBOR100

	H319	Causes serious eye irritation.
Precautionary statements		
Prevention	: P202	Do not handle until all safety precautions have been read and understood.
	P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
	P264	Wash hands thoroughly after handling.
Response	: P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P337 + P313	If eye irritation persists: Get medical advice/ attention.
Disposal	: P501	Dispose of contents/ container in accordance with the local regulations.

Hazardous components which must be listed on the label:

- disodium tetraborate decahydrate

2.3. Other hazards

No other information is available.

3. Composition/information on ingredients**3.1. Substances**

Chemical Name	Identification Number	Amount [%]
disodium tetraborate decahydrate	Index-No.	: 005-011-01-1
	CAS-No.	: 1303-96-4
	EC-No.	: 215-540-4
		>= 99

Remarks : This product contains a substance included on the candidate list

SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

BORAX (DECAHYDRATE AND PENTAHYDRATE)

Version 2.3
Revision Date 2011/02/11

Print Date 2011/02/11
MSDS code: MBOR100

according to article 59 (1, 10) of regulation EC No. 1907/2006 ('REACH') in a concentration $\geq 0.1\%$ w/w.

4. First aid measures

4.1 Description of first aid measures

- General advice : Take off all contaminated clothing immediately.
- If inhaled : Move to fresh air. If symptoms persist, call a physician.
- In case of skin contact : Wash off immediately with soap and plenty of water.
- In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 5 minutes. If eye irritation persists, consult a specialist.
- If swallowed : Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Induce vomiting if person is conscious. Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : See Section 11 for more detailed information on health effects and symptoms.
- Effects : See Section 11 for more detailed information on health effects and symptoms.

4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : No information available.

5. Fire-fighting measures

5.1. Extinguishing media

*SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006***BORAX (DECAHYDRATE AND PENTAHYDRATE)**

Version 2.3
Revision Date 2011/02/11

Print Date 2011/02/11
MSDS code: MBOR100

Suitable extinguishing media : The product itself does not burn.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : No information available.

5.2. Special hazards arising from the substance or mixture

Specific hazards during fire fighting : Incomplete combustion may form toxic pyrolysis products.

5.3. Advice for firefighters

Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

6. Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Personal precautions : Use personal protective equipment. Avoid dust formation.
Avoid contact with the skin and the eyes. Do not breathe dust.
For personal protection see section 8.

6.2 Environmental precautions

Environmental precautions : Should not be released into the environment.
If the product contaminates rivers and lakes or drains inform respective authorities.
If material reaches soil inform authorities responsible for such cases.

6.3 Methods and materials for containment and cleaning up

*SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006***BORAX (DECAHYDRATE AND PENTAHYDRATE)**

Version 2.3
Revision Date 2011/02/11

Print Date 2011/02/11
MSDS code: MBOR100

Methods and materials for containment and cleaning up : Use mechanical handling equipment. Keep in suitable, closed containers for disposal.

Further information : Treat recovered material as described in the section "Disposal considerations".

6.4 Reference to other sections

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

7. Handling and storage**7.1 Precautions for safe handling**

Advice on safe handling : Use personal protective equipment. Provide sufficient air exchange and/or exhaust in work rooms. Avoid contact with the skin and the eyes. Do not breathe dust. Emergency eye wash fountains and emergency showers should be available in the immediate vicinity.

Hygiene measures : Keep away from food, drink and animal feedingstuffs. Smoking, eating and drinking should be prohibited in the application area. Wash hands before breaks and at the end of workday. Take off all contaminated clothing immediately. Keep working clothes separately. Avoid contact with skin and clothing. Do not breathe dust.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store in a place accessible by authorized persons only. Store in original container.

Advice on protection against fire and explosion : The product is not flammable. Normal measures for preventive fire protection.

SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006
BORAX (DECAHYDRATE AND PENTAHYDRATE)

 Version 2.3
 Revision Date 2011/02/11

 Print Date 2011/02/11
MSDS code: MBOR100

Further information on storage conditions : Keep tightly closed in a dry and cool place. Keep in a well-ventilated place.

Advice on common storage : Keep away from food, drink and animal feedingstuffs.
 Materials to avoid: Reducing agents

7.3 Specific end uses

Specific use(s) : No information available.

8. Exposure controls/personal protection
8.1. Control parameters

Component: disodium tetraborate decahydrate	CAS-No. 1303-96-4
Other OELs	

Regulatory Basis : UK. EH40 Workplace Exposure Limits (WELs)
 Regulatory List : EH40 WEL
 Value type : Time Weighted Average (TWA):
 Value : 5 mg/m³

8.2. Exposure controls
Engineering measures

Refer to protective measures listed in sections 7 and 8.

Personal protective equipment
Respiratory protection

Advice : Use the indicated respiratory protection if the occupational exposure limit is exceeded and/or in case of product release (dust).
 Particle filter:P2
 Particle filter:P3

SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

BORAX (DECAHYDRATE AND PENTAHYDRATE)

Version 2.3
Revision Date 2011/02/11

Print Date 2011/02/11
MSDS code: MBOR100

Hand protection

Advice : The glove material has to be impermeable and resistant to the product / the substance / the preparation.
Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).
Protective gloves should be replaced at first signs of wear.
The following information applies to aqueous, saturated solutions.

Material : Natural Rubber

Gloves : ≥ 8 h

Glove thickness : 0.5 mm

Material : polychloroprene

Gloves : ≥ 8 h

Glove thickness : 0.5 mm

Material : Nitrile rubber

Gloves : ≥ 8 h

Glove thickness : 0.35 mm

Material : butyl-rubber

Gloves : ≥ 8 h

Glove thickness : 0.5 mm

Material : Fluorinated rubber

Gloves : ≥ 8 h

Glove thickness : 0.4 mm

SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

BORAX (DECAHYDRATE AND PENTAHYDRATE)

Version 2.3
Revision Date 2011/02/11

Print Date 2011/02/11
MSDS code: MBOR100

Material : Polyvinylchloride

Gloves : \geq 8 h

Glove thickness : 0.5 mm

Eye protection

Advice : Safety goggles

Skin and body protection

Advice : Wear suitable protective clothing.

Environmental exposure controls

General advice : Should not be released into the environment.
If the product contaminates rivers and lakes or drains inform respective authorities.
If material reaches soil inform authorities responsible for such cases.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form : solid

Colour : white

Odour : odourless

Odour Threshold : Currently we do not have any Information from our supplier about this.

pH : 9.3
47 g/l

Melting point/range : > 62 °C

Boiling point/boiling range : 1,575 °C

Flash point : Currently we do not have any Information from our

SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

BORAX (DECAHYDRATE AND PENTAHYDRATE)

Version 2.3
Revision Date 2011/02/11

Print Date 2011/02/11
MSDS code: MBOR100

	supplier about this.
Evaporation rate	: Currently we do not have any Information from our supplier about this.
Flammability (solid, gas)	: Currently we do not have any Information from our supplier about this.
Upper explosion limit	: Currently we do not have any Information from our supplier about this.
Lower explosion limit	: Currently we do not have any Information from our supplier about this.
Vapour pressure	: Currently we do not have any Information from our supplier about this.
Relative vapour density	: Currently we do not have any Information from our supplier about this.
Density	: 1.71 - 1.73 g/cm ³
Water solubility	: 47 g/l 20 °C
Partition coefficient: n-octanol/water	: Currently we do not have any Information from our supplier about this.
Ignition temperature	: Currently we do not have any Information from our supplier about this.
Thermal decomposition	: Currently we do not have any Information from our supplier about this.
Viscosity, kinematic	: Currently we do not have any Information from our supplier about this.
Explosivity	: Product is not explosive.
Oxidizing properties	: Currently we do not have any Information from our supplier about this.

9.2 Other information

Molecular Weight	: 381.37 g/mol
Bulk density	: 810 kg/m ³

10. Stability and reactivity

10.1. Reactivity

Advice : Stable under recommended storage conditions.

10.2. Chemical stability

SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

BORAX (DECAHYDRATE AND PENTAHYDRATE)

Version 2.3
Revision Date 2011/02/11

Print Date 2011/02/11
MSDS code: MBOR100

Advice : Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions : May release hydrogen by reaction with strong reducing agents. Risk of explosion.

10.4. Conditions to avoid

Conditions to avoid : At heating water will be lost.

10.5. Incompatible materials

Materials to avoid : Strong oxidizing agents
Acids
metal salts
Alkali metals
Reducing agents
Amphoteric metals are attacked developing hydrogen (combustible).

10.6. Hazardous decomposition products

Hazardous decomposition products : No information available.

11. Toxicological information

11.1. Information on toxicological effects

Product: disodium tetraborate decahydrate

CAS-No.

1303-96-4

CMR effects

Reproductive toxicity

Remarks : May damage fertility. May damage the unborn child.

Component: disodium tetraborate decahydrate

CAS-No.

1303-96-4

SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

BORAX (DECAHYDRATE AND PENTAHYDRATE)Version 2.3
Revision Date 2011/02/11Print Date 2011/02/11
MSDS code: MBOR100**Acute toxicity****Inhalation**

Value type : LC50
Value : > 2.03 mg/l
Exposure time : 4 h
Species : rat
Method : OECD Test Guideline 403

Dermal

Value type : LD50
Value : > 10,000 mg/kg
Species : rat

Irritation**Skin**

Species : rabbit
Result : No skin irritation

Eyes

Species : rabbit
Result : Severe eye irritation

Sensitisation

Species : guinea pig
Result : not sensitizing
Method : Buehler Test
Remarks : Patch test on human volunteers did not demonstrate sensitization properties.

12. Ecological information

SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

BORAX (DECAHYDRATE AND PENTAHYDRATE)

Version 2.3
Revision Date 2011/02/11

Print Date 2011/02/11
MSDS code: MBOR100

12.1. Toxicity

Component: disodium tetraborate decahydrate	CAS-No. 1303-96-4
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Acute toxicity

Fish

Species : Oncorhynchus mykiss
Exposure Time : 96 h
Value type : LC50
Value : 74 mg/l

algae

Species : Desmodesmus subspicatus (green algae)
Exposure time : 96 h
Value type : EC50
Value : 158 mg/l
Method : DIN 38412

Bacteria

Species : Pseudomonas putida
Exposure time : 16 h
Value type : EC10
Value : 35.4 mg/l

12.2. Persistence and degradability

Product: disodium tetraborate decahydrate	CAS-No. 1303-96-4
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Persistence and degradability

Persistence

Remarks : no data available

SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

BORAX (DECAHYDRATE AND PENTAHYDRATE)Version 2.3
Revision Date 2011/02/11Print Date 2011/02/11
MSDS code: MBOR100**Biodegradability**

Remarks : The methods for determining biodegradability are not applicable to inorganic substances.

12.3. Bioaccumulative potential**Product:** disodium tetraborate decahydrate**CAS-No.**
1303-96-4**Bioaccumulation**

Remarks : no data available

12.4. Mobility in soil**Product:** disodium tetraborate decahydrate**CAS-No.**
1303-96-4**Mobility**

Remarks : The product is mobile in water environment.

12.5. Results of PBT and vPvB assessment**Product:** disodium tetraborate decahydrate**CAS-No.**
1303-96-4**Results of PBT and vPvB assessment**

Remarks : no data available

12.6. Other adverse effects**Product:** disodium tetraborate decahydrate**CAS-No.**
1303-96-4**Additional ecological information**

SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

BORAX (DECAHYDRATE AND PENTAHYDRATE)

Version 2.3
Revision Date 2011/02/11

Print Date 2011/02/11
MSDS code: MBOR100

Remarks : The product is mobile in water environment.
Do not flush into surface water or sanitary sewer system.
Avoid subsoil penetration.

13. Disposal considerations

13.1. Waste treatment methods

Product : Disposal together with normal waste is not allowed. Special disposal required according to local regulations. Do not let product enter drains. Contact waste disposal services.

Contaminated packaging : Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning. Packagings that cannot be cleaned are to be disposed of in the same manner as the product.

European Waste Catalogue Number : No waste code according to the European Waste Catalogue can be assigned for this product, as the intended use dictates the assignment. The waste code is established in consultation with the regional waste disposer.

14. Transport information

Not dangerous goods

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

Not applicable.

14.4. Packaging group

Not applicable.

SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

BORAX (DECAHYDRATE AND PENTAHYDRATE)

Version 2.3
Revision Date 2011/02/11

Print Date 2011/02/11
MSDS code: MBOR100

14.5. Environmental hazards

Not applicable.

14.6. Special precautions for user

Not applicable.

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

IMDG : Not applicable.

15. Regulatory information

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

Other regulations : Occupational restrictions: Take note of Dir 92/85/EEC on the safety and health of pregnant workers at work and of Dir 94/33/EC on the protection of young people at work.

15.2. Chemical Safety Assessment

Currently we do not have any Information from our supplier about this.

16. Other information

Full text of R-phrases referred to under sections 2 and 3.

R36 Irritating to eyes.

R60 May impair fertility.

R61 May cause harm to the unborn child.

Full text of H-Statements referred to under sections 2 and 3.

SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

BORAX (DECAHYDRATE AND PENTAHYDRATE)

Version 2.3
Revision Date 2011/02/11

Print Date 2011/02/11
MSDS code: MBOR100

H319 Causes serious eye irritation.
H360FD May damage fertility. May damage the unborn child.

Further information

Other information : Restricted to professional users. Attention - Avoid exposure - obtain special instructions before use.
The information provided in this Safety Data Sheet is correct to our knowledge at the date of its revision. The information given only describes the products with regard to safety arrangements and is not to be considered as a warranty or quality specification and does not constitute a legal relationship. The information contained in this Safety Data Sheet relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text

|| Indicates updated section.