



SAFETY DATA SHEET

BORAX

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

PRODUCT NAME: BORAX

PRODUCT NO: RM045

SYNONYMS, TRADE NAMES: DISODIUM TETRABORATE DECAHYDRATE

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EMERGENCY CONTACT NUMBER:

2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

Classification (EC 1272/2008):	Physical Hazards	Not classified
	Health Hazards	Eye Irrit. 2 – H319, Repr. 1B – H360FD
	Environment hazards	Not classified
Classification (67/548/ECC OR 1999/45/EC)		Repr. Cat. 2;R60, R61. Xi;R36

Label Elements

EC No: 215-540-4

Pictogram



Signal Word:	Danger	
Hazard Statements:	H360FD	May damage fertility May damage the unborn child
	H319	Causes serious eye irritation
Precautionary Statements	P201	Obtain special instructions before use.
	P202	Do not handle until all safety precautions have been read and understood
	P264	Wash contaminated skin thoroughly after handling
	P280	Wear protective gloves / protective clothing/ eye protection/ face 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
P337 + P313	IF eye irritation persists : Get medical advice/attention
P405	Store locked up
P501	Dispose of contents/container in accordance with national regulations

Other Hazards

This substance is not classified as PBT/vPvB by current EU criteria.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Substances

Product Name:	SODIUM TETRABORATE DECAHYDRATE
REACH Registration Number:	01-2119490790-32- XXXX
EU index number	005-011-01-1
CAS-No:	1303-96-4
EC No:	215-540-4

Mixtures

Chemical Name	Borax decahydrate
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4 FIRST-AID MEASURES

DESCRIPTION OF FIRST AID MEASURES**INHALATION**

Move affected person to fresh air at once. Rinse nose and mouth with water. Get medical attention if any discomfort continues.

INGESTION

Rinse mouth thoroughly with water Get medical attention if any discomfort continues. Do not induce vomiting. Contact physician if larger quantity has been consumed.

SKIN CONTACT

Remove affected person from source of contamination. Remove contaminated clothing. Wash skin immediately with soap and water. Get medical attention if any discomfort continues.

EYE CONTACT

remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED**INHALATION**

May cause respiratory system irritation.

INGESTION

Nausea, vomiting, diarrhoea.

SKIN CONTACT

Prolonged skin contact may cause redness and irritation.

EYE CONTACT

Irritation of eyes and mucous membranes.

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Notes for the doctor Treat symptomatically.

5 FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA

SUITABLE EXTINGUISHING MEDIA

The product is not flammable. Use fire-extinguishing media suitable for the surrounding fire.

SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

HAZARDOUS COMBUSTION PRODUCTS

No known hazardous decomposition products.

ADVICE FOR FIREFIGHTERS

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Wear positive- pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Wear protective clothing as described in Section 8 of this Safety Data Sheet. Avoid contact with skin and eyes.

Provide adequate ventilation.

ENVIRONMENTAL PRECAUTIONS

ENVIRONMENT PRECAUTIONS

Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.

METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

METHOD FOR CLEANING UP

Avoid generation and spreading of dust. Collect and place in suitable waste disposal containers. Seal securely. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Flush contaminated area with plenty of water.

REFERENCE TO OTHER SECTIONS

REFERENCE TO OTHER SECTIONS

Wear protective clothing as described in Section 8 of this Safety Data Sheet. For waste disposal, see Section 13.

7 HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

USAGE PRECAUTIONS

Avoid spilling, Avoid skin and eye contact. Avoid handling which leads to dust formation. Provide good ventilation.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

STORAGE PRECAUTIONS

Store in tightly closed original container in well-ventilated place.

SPECIFIC END USE(S)

SPECIFIC END USE(S)

The identified uses for this product are detailed in section 1

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

CONTROL PARAMETERS

OCCUPATIONAL EXPOSURE LIMITS

Long-term exposure limit (8-hour TWA): WEL 5 mg/m³

WEL = Workplace Exposure Limits

INGREDIENT COMMENTS

OEL- value for Borates

DNEL

Consumer	Oral	Short Term	Systemic Effects	1.51 mg/kg/day
Consumer	Oral	Long Term	Systemic Effects	1.51 mg/kg/day
Professional	Inhalation	Short Term	Local Effects	22.3 mg/m ³
Professional	Inhalation	Long Term	Local Effects	22.3 mg/m ³
Professional	Inhalation	Long Term	Systemic Effects	12.76 mg/m ³
Consumer	Inhalation	Local Effects	22.3	mg/m ³
Consumer	Inhalation	Long Term	Systemic Effects	6.50 mg/m ³
Industry	Dermal	Long Term	Systemic Effects	599.6 mg/kg/day
Consumer	Dermal	Long Term	Systemic Effects	303.5 mg/kg/day

PNEC

Freshwater	2.02	mg/l	
Marinewater	2.02	mg/l	
Water	Intermittent release	13.7	mg/l
Soil	5.4	mg/kg	
STP	10	mg/l	

EXPOSURE CONTROLS**PROTECTIVE EQUIPMENT****APPROPRIATE ENGINEERING CONTROLS**

Provide adequate general and local exhaust ventilation. Observe any occupational exposure limit for the product or ingredients.

EYE / FACE PROTECTION

The following protection should be worn. Chemical splash goggles.

HAND PROTECTION

Chemical- resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible.

HYGIENE MEASURES

Do not smoke in work area. Wash hands at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes contaminated. Promptly remove any clothing that becomes contaminated. When using do not eat, drink or smoke.

RESPIRATORY PROTECTION

If ventilation is inadequate, suitable respiratory protection must be worn.

9 PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Dust powder. Solid
Colour:	White
Odour:	Odourless
Odour threshold	Not applicable. Not applicable.
PH	PH (diluted solution): 9.3@0.1

Melting Point	> 300°C
Initial Boiling Point and range	Not available
Flash point	Not applicable
Evaporation Rate:	Not applicable
Evaporation Factor:	Not available
Upper/Lower flammability or Explosive limits	Not applicable
Vapour pressure	Not applicable
Vapour density	Not applicable
Relative density	1.71-1.73@23°C
Solubility (ies)	4.974 @ °C Soluble in water
Partition Coefficient	log POW – 0.757
Auto-ignition temperature	Not applicable
Decomposition Temperature	Not available
Viscosity	Not applicable
Explosive Properties:	Not considered to be explosive
Oxidising Properties:	Does not meet criteria for classification as oxidising
<u>OTHER INFORMATION</u>	
Molecular Weight:	381.37

10 STABILITY AND REACTIVITY

REACTIVITY

REACTICITY

There are no known reactivity hazards associated with this product

CHEMICAL STABILITY

STABILITY

Stable at normal ambient temperature and when used as recommended

POSSIBILITY OF HAZARDOUS REACTIONS

POSSIBILITY OF HAZARDOUS REACTIONS

In contact with some metals can generate hydrogen gas, which can form explosive mixtures with air

CONDITIONS TO AVOID

CONDITIONS TO AVOID

Avoid excessive heat for prolonged periods of time

INCOMPATIBLE MATERIALS

MATERIALS TO AVOID

Strong reducing agents. Alkali metals

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS DECOMPOSITION PRODUCTS

Dose not decompose when used and stored as recommended

11 TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

OTHER HEALTH EFFECTS Toxic to Reproductive Health Category 2

ACUTE TOXICITY - ORAL

Acute Toxicity oral LD₅₀ mg/kg) 5,560 mg/kg

Species Rat

Notes (oral LD₅₀) Based on available data the classification criteria are not met

ACUTE TOXCITY-DEMAL

Acute toxicity dermal (LD₅₀mg/kg)	2,000.0
Species	Rabbit
Notes (dermal LD₅₀)	Based on available data the classification criteria are not met

ACUTE TOXCITY-INHALATION

Acute Toxicity Inhalation (LC₅₀ dust/mist mg/l)	2.03
species	Rat
Notes (inhalation LC₅₀)	OECD 403 Based on available data the classification criteria are not met
ATE inhalation (dusts/mists mg/l)	2.03

SKIN CORROSION/IRRITATION

Extreme pH	Not irritating
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SERIOUS EYE DAMAGE/IRRITATION

Serious eye damage/irritation	Moderately irritating
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RESPIRATORY SENSITISATION

Respiratory sensitisation	There is no evidence that the material can lead to respiratory hypersensitivity
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SKIN SENSITISATION

Skin sensitisation	Buehler test: Guinea Pig OECD 406 Not sensitising
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GERM CELL MUTAGENICITY

Genotoxicity –in vitro	Negative Estimated Value This substance has no evidence of mutagenic properties. Based on available data the classification criteria are not met.
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CARCINOGENICITY

Carcinogenicity	1150 mg/kg/day Oral Mouse Estimate Value There is evidence that the products can cause cancer.
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REPRODUCTIVE TOXICITY

Reproductive Toxicity – Fertility	Three-generation study: NOAEL 155 mg/kg/day Oral Rat May damage fertility
Reproductive toxicity development	Developmental toxicity:- NOAEL:85 mg/kg/day, Oral, Rat Known reproductive toxicant based on animal evidence May damage the unborn child.

SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE

STOT – Single exposure	NOAEL 0.186 mg/l/4h Inhalation. Mouse Not classified as a specific target Organ toxicant after a single exposure
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SPECIFIC TARGET ORGAN TOXICITY – REPEATED EXPOSURE

STOT – Repeated exposure	NOAEL 118 mg/kg Oral Rat Not classified as a specific target organ toxicant after repeated exposure
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ASPIRATION HAZARD

Aspiration Hazard	Not applicable
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INHALATION May cause irritation to the respiratory system

INGESTION Nausea, vomiting, diarrhoea

SKIN CONTACT Skin irritation should not occur when used as recommended Prolonged And frequent contact may cause redness and irritation.

EYE CONTACT	cause redness and irritation
ACUTE AND CHRONIC HEALTH HAZARDS	Risk of serious damage to eyes Contains a substance/a group of substances which may damage fertility and the unborn child

12 ECOLOGICAL INFORMATION

EXOTOXICITY The product components are not classified as environmentally hazardous. However large or frequent spills may have hazardous effects on the Environment.

TOXICITY

Acute Toxicity – Fish LC50 96 hours 708 mg/l Pimephales promelas (Fat-head Minnow)

Acute Toxicity – Aquatic Invertebrates EC₅₀ 1000 mg/l Freshwater invertebrates

Acute Toxicity – Aquatic Plants EC₅₀ 247.8 mg/l Selenastrum capricornutum

PERSISTENCE AND DEGRADABILITY

Persistence and degradability The product contains only inorganic substances which are not Biodegradable

BIOACCUMULATIVE POTENTIAL

Partition coefficient log Pow – 0.757

MOBILITY IN SOIL

MOBILITY The product is soluble in water

RESULTS OF PBT AND vPvB ASSESSMENT

Results of PBT and vPvB assessment This substance is not Classified as PBT/ vPvB according to current EU criteria

OTHER ADVERSE EFFECTS

Other adverse effects None known

13 DISPOSAL CONSIDERATIONS

WASTE TREATMENT METHODS

General information Waste is classified as hazardous waste.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the Requirements of the local waste disposal authority.

14 TRANSPORT INFORMATION

GENERAL The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID)

UN NUMBER No information required

UN PROPER SHIPPING NAME No information required

TRANSPORT HAZARD CLASS(ES) No information required

PACKING GROUP No information required

ENVIRONMENTAL HAZARDS

Environmentally Hazardous Substance/Marine Pollutant No

SPECIAL PRECAUTIONS FOR USER No information required

TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL AND THE IBC CODE

Transport in bulk according to

Annex II OF MARPOL 73/78

And the IBC Code

No information required

15 REGULATORY INFORMATION

SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

National regulations The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (S.I 2009 No. 716)

EU legislation Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation, and Restriction of Chemicals (REACH), amended
Regulation (EC) No 1272/2008 of the European parliament and of the council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).
COMMISSION REGULATION (EU) 2015/830 of May 2015.

GUIDANCE CHIP for everyone HSG228
Approved Classification and labelling Guide (Sixth edition) L131
Safety Data sheets for substances and Preparations.

INVENTORY INFORMATION TSCA DSL EINECS KECL MITI IECS

CHEMICAL SAFETY ASSESSMENT

A chemical safety assessment has been carried out

INVENTORIES

Canada DSL/NDSL
DSL

16 OTHER INFORMATION

ABBREVIATIONS AND ACRONYMS USED IN THE SAFETY DATA SHEET	ATE	Acute Toxicity Estimate
	ADR	European Agreement concerning the International Carriage Of Dangerous Goods by road
	ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
	CAS	Chemicals Abstracts Services.
	DNEL	Derived No effects Level

IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
KOW	Octanol- water partition coefficient
LC ₅₀	Lethal Concentration to 50% of a test population
LD ₅₀	Lethal Dose to 50% of a test population (Median Lethal Dose)
PBT	Persistent Bioaccumulative and Toxic substance
PNEC	Predicted No Effect Concentration
REACH	Registration Evaluation Authorisation and Restriction of Chemicals Regulation
(EC) No	1907/2006
RID	European Agreement concerning the International Carriage By Rail
VPvB	Very Persistent and Very Bioaccumulative
IARC	International Agency for Research on Cancer
MARPOL 73/78	International Convention for the Prevention of Pollution from Ships 1973 as modified by the Protocol of 1978
cATpE	Converted Acute Toxicity Point Estimate
BCF	Bioconcentration Factor
BOD	Bioconcentration Oxygen Demand
EC ₅₀	50% of maximal Effective Concentration
LOAEC	Lowest Observed Adverse Effect Concentration
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No Observed Adverse Effect Concentration
NOAEL	No Observed Adverse Effect Level
NOEC	No Observed Effect Level
LOEC	Lowest Observed Effect Concentration
DMEL	Derived Minimal Effect Level
EL50	Exposure Limit 50
hPa	Hectopascal
LL50	Lethal Loading fifty
OECD	Organisation for Economic Co-operation and Development
POW	Octanol-water partition coefficient
SCBA	Self-contained breathing apparatus
STP	Sewage Treatment Plant
VOC	Volatile Organic Compounds

CLASSIFICATION ABBREVIATIONS
AND ACRONYMS

Acute Tox = Acute toxicity
Aquatic Acute = Hazardous to the aquatic environment (acute)
Aquatic Chronic=Hazardous to the aquatic environment (chronic)

RISK PHRASES IN FULL

R36	Irritating to eyes
R60	May impair fertility
R61	May cause harm to the unborn child

HAZARD STATEMENTS IN FULL

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

DISCLAIMER

The foregoing data has been compiled for safety information only and does not form part of any selling specification. Information contained in this SDS is to the best of JML's knowledge correct at the time of publication. However, no guarantee is given to its accuracy, reliability or completeness and the information may not be valid if the product is used in combination with other materials or process. It is the responsibility of the user to ensure that the product which they have selected is entirely suitable for their purpose under their conditions of use and in compliance with current regulatory requirements.