



SAFETY DATA SHEET

Boric acid

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

PRODUCT NAME: BORIC ACID

PRODUCT NO: RM046

SYNONYMS, TRADE NAMES: ORTHOBORIC ACID

IDENTIFIED USES: CHEMICAL

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EMERGENCY CONTACT NUMBER:

2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

<u>Classification (EC/1272/2008)</u>	Physical hazards	Not Classified
	Health hazards	Repr. 1B – H360FD
	Environmental hazards	Not Classified

Label elements

EC number: 233-139-2

Pictogram



Signal word: Danger

Hazards statements	H360FD May damage fertility. May damage the unborn child.
Precautionary statements	P202 Do not handle until all safety precautions have been read and understood.
	P280 Wear protective gloves/protective clothing/eye protection/face protection.
	P308+P313 IF exposed or concerned: Get medical advice/attention.
	P501 Dispose of contents/ container in accordance with national regulations.

OTHER HAZARDS

This substance is not classified as PBT or vPvB according to current EU criteria.

3 COMPOSITION/INFORMATION ON INGREDIENTS

SUBSTANCE

Product name	BORIC ACID
REACH registration number	01-2119486683-25-XXXX
EU index number	005-007-00-2
CAS number	10043-35-3
EC number	233-139-2
Composition comments	The data shown are in accordance with the latest EC Directives.

4 FIRST-AID MEASURES

DESCRIPTION OF FIRST AID MEASURES**INHALATION**

Move affected person to fresh air at once. Get medical attention if any discomfort continues.

INGESTION

Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Rinse mouth thoroughly with water. Give plenty of water to drink. Get medical attention if any discomfort continues.

SKIN CONTACT

Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if any discomfort continues.

EYE CONTACT

Rinse immediately with plenty of water. 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**EYE CONTACT**

May cause temporary eye irritation.

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED**NOTE FOR THE DOCTOR**

No specific recommendations. If in doubt, get medical attention promptly.

5 FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA

SUITABLE EXTINGUISHING MEDIA

Use fire-extinguishing media suitable for the surrounding fire.

SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

SPECIAL HAZARDS

The product is non-combustible. Irritating gases or vapours.

ADVICE FOR FIREFIGHTERS

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

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

6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

PERSONAL PRECAUTIONS

Wear protective clothing as described in section 8 of this safety data sheet. Avoid inhalation of dust.

Avoid contact with skin and eyes. Provide adequate ventilation.

ENVIRONMENTAL PRECAUTIONS

ENVIRONMENTAL PRECAUTIONS

Do not discharge into drains or watercourses or onto the ground. Spillages or uncontrolled discharge into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.

METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

METHODS FOR CLEANING UP

Avoid generation and spreading of dust. Collect and place in suitable waste disposal containers and 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. Collect and place in a suitable waste disposal containers and seal securely. For waste disposal, see Section 13.

REFERENCE TO OTHER SECTIONS

REFERENCE TO OTHER SECTIONS

Wear protective clothing as described in Section 8 of this safety data sheet.

7 HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

USAGE PRECAUTIONS

Avoid spilling. Avoid contact with skin and eyes. Avoid handling which leads to dust formation. Provide adequate ventilation.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

STORAGE PRECAUTIONS

Store in tightly-closed, original container in a dry, cool and 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

INGREDIENT COMMENTS

No exposure limits known for ingredient(s)

DNEL

- Workers - inhalation; Long term systemic effects: 8.28 mg/m³
 Workers - Dermal; Long term systemic effects: 392.0 mg/kg/day
 Consumer - Oral; Short term systemic effects: 0.98 mg/kg/day
 Consumer - Oral; Long term systemic effects: 0.98 mg/kg/day
 Consumer - Inhalation; Long term systemic effects: 4.15 mg/m³
 Consumer - Dermal; Long term systemic effects: 196.0 mg/kg/day

PNEC

- Fresh water; 2.02 mg B/L
- Marine water; 2.02 mg B/L
- Intermittent release; 13.7 mg B/L
- Soil; 5.4 mg B/kg
- STP; 10mg B/L

EXPOSURE CONTROLS**PROTECTIVE EQUIPMENT****EYE/FACE PROTECTION**

The following protection should be worn. Chemical splash goggles. Personal protective equipment for eye and face protection should comply with European Standard EN166.

OTHER SKIN AND BODY PROTECTION

Wear rubber apron. Wear rubber footwear.

RESPIRATORY PROTECTION

If ventilation is inadequate, suitable respiratory protection must be worn. EN136/140/141/145/143/149

9 PHYSICAL AND CHEMICAL PROPERTIES**INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES**

Appearance	Crystalline solid. Solid
Colour	White.
Odour	No information available.
Odour threshold	No Information available.
pH	pH (diluted solution): 5.1. (1.0% solution)
Melting point	>171°C
Initial boiling point and range	No information available.
Flash point	No information available.
Evaporation rate	No information available.
Evaporation factor	No information available.
Flammability (solid, gas)	No information available.
Upper/Lower flammability or	No information available.

explosive limits	
Other flammability	No information available.
Vapour pressure	No information available.
Vapour density	No information available.
Relative density	1.49-1.51 @23°C
Bulk density	No information available.
Solubility(ies)	Soluble in water 49.2 g/l water@20°C
Partition coefficient	log Pow: ~-1.09
Auto-ignition temperature	No information available.
Decomposition Temperature	No information available.
Viscosity	No information available.
Explosive properties	No information available.
Explosive under the influence of a flame	No information available.
Oxidising properties	No information available.
<u>OTHER INFORMATION</u>	
Refractive index	No information available.
Particle size	No information available.
Molecular weight	61.83
Volatility	No information available.
Saturation concentration	No information available.
Critical temperature	No information available.
Volatile organic compound	No information available.

10 STABILITY AND REACTIVITY

REACTIVITY

REACTIVITY

There are no known reactivity hazards associated with this product.

CHEMICAL STABILITY

STABILITY

Stable at normal ambient temperatures and when used as recommended.

POSSIBILITY OF HAZARDOUS REACTIONS

POSSIBILITY OF HAZARDOUS REACTIONS Not determined.

CONDISITIONS TO AVOID

CONDISITIONS TO AVOID Avoid excessive heat for prolonged periods of time.

INCOMPATIBLE MATERIALS

MATERIALS TO AVOID Strong reducing agents. Strong acids.

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS DECOMPOSITION PRODUCTS Does not decompose when used and stored as recommended.

11 TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

ACUTE TOXICITY -ORAL

ACUTE TOXICITY -ORAL (LD₅₀) 2,660.0

mg/kg

SPECIES

Rat

ATE ORAL (mg/kg)

2,660.0

SKIN CORROSION/IRRITATION

ANIMAL DATA

OECD 404 Not irritating. Based on available data the classification criteria are not met.

SERIOUS EYE DAMAGE/IRRITATION

SERIOUS EYE DAMAGE/ IRRITATION

Not irritating. Based on available data the classification criteria are not met.

RESPIRATORY SENSITISATION

RESPIRATORY SENSITISATION

No information available.

SKIN SENSITISATION

SKIN SENSITISATION

No information available.

GERM CELL MUTAGENICITY

GENOTOXICITY – IN VITRO

No information available.

CARCINOGENICITY

CARCINOGENICITY

No information available.

REPRODUCTIVE TOXICITY

REPRODUCTIVE TOXICITY -FERTILITY

May damage fertility.

REPRODUCTIVE TOXICITY DEVELOPMENT

May damage unborn child.

SPECIFIC TARGET ORGAN TOXICITY- SINGLE EXPOSURE

STOT – SINGLE EXPOSURE

No information available.

SPECIFIC TARGET ORGAN TOXICITY- REPEATED EXPOSURE

STOT- REPEATED EXPOSURE

No information available.

ASPIRATION HAZARD

ASPIRATION HAZARD

No information Available.

INHALATION

May cause respiratory system irritation.

INGESTION

May cause stomach pain or vomiting.

SKIN CONTACT

Slightly Irritating.

EYE CONTACT

Irritating to eyes.

12 ECOLOGICAL INFORMATION

ECOTOXICITY

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

TOXICITY**TOXICITY**

Not considered toxic to fish

ACUTE AQUATIC TOXICITY**ACUTE TOXICITY – FISH**

LC50, 96 Hours: 50 – 100 mg/l, fish

ACUTE TOXICITY - AQUATIC**INVERTEBRATES**

EC₅₀ 48 Hours: 133 mg/l, Daphnia magna

PERSISTENCE AND DEGRADABILITY**PERSISTENCE AND DEGRADABILITY**

There are no data on the degradability of this product.

BIOACCUMULATIVE POTENTIAL**BIOACCUMULATIVE POTENTIAL**

No data available on Bioaccumulation.

PARTITION COEFFICIENT

Log Pow: ~ - 1.09

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 or vPvB according to EU criteria.

OTHER ADVERSE EFFECTS**OTHER ADVERSE EFFECTS**

No Determined

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 regulations on the transport of dangerous goods (IMDG,IATA,ADR/RID).

UN NUMBER

Not applicable.

UN PROPER SHIPPING NAME

Not applicable.

TRANSPORT HAZARD CLASS (ES)

No transport warning sign required.

PACKING GROUP

Not applicable.

ENVIRONMENTAL HAZARDS

Environmentally hazardous substance/marine pollutant

No.

SPECIAL PRECAUTIONS FOR USER

Not applicable.

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 applicable.

15 REGULATORY INFORMATION**SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE****EU LEGISLATION**

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Regulation, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

Regulation (EC) No 1272/2008 of the European Parliament and the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

COMMISSION REGULATION (EU) No 2015/830 of 28 May 2015.

CHEMICAL SAFETY ASSESSMENT

A chemical safety assessment has been carried out.

INVENTORIES**EU-EINECS/ELINCS**

All the ingredients are listed or exempt.

16 OTHER INFORMATION

Abbreviations and acronyms	ATE:	Acute Toxicity Estimate.
Used in the safety data sheet	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:	Chemical Abstracts Service.
	DNEL:	Derived No Effect Level.
	IATA:	International Air Transport Association.
	IMDG:	International Maritime Dangerous Goods.
	Kow:	Octanol-water partition coefficient.
	LC₅₀	Lethal Concentration to 50% of a test population.
	LD₅₀	Lethal Dose to 50% of a test population (Median Lethal Dose)
	PBT:	Persistent, Bioaccumulative and toxic substance.
	PNEC:	Predicated No Effect Concentration.
	REACH:	Registration, Evaluation, authorisation and Restriction of

Chemicals Regulation (EC) No 1907/2006.

RID:	European Agreement concerning the international Carriage of Dangerous Goods 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:	Biochemical Oxygen Demand.
EC₅₀:	50% of maximal Effective Concentration.
LOAEC:	Lowest Observed Adverse Effect Concentration.
LOAEL:	Lowest Observed Adverse Effect Level.
NOAEC:	No Observed Adverse Effect Concentration.
NOEL:	No Observed Adverse Effect Level.
NOEC:	No Observed Adverse Effect Concentration.
LOEC:	Lowest Observed Adverse 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)

Hazard statement in full H360FD May damage fertility. May damage 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.