

# SAFETY DATA SHEET

## Boron 20%

This safety data sheet complies with the requirements of:  
Regulation (EC) No. 453/2010 and Regulation (EC) No. 1272/2008



SDS # : NP-DOT-A  
Revision date: 2020-08-11  
Format: EU  
Version 1

### Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product Code(s) NP-DOT-A

Product Name Boron 20%

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

Recommended Use: A fertilizer with micronutrients for use in agriculture and horticulture

Restrictions on use Use as recommended by the label.

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

Manufacturer FMC Agro Limited  
Rectors Lane  
Pentre  
Flintshire  
CH5 2DH  
United Kingdom  
Tel: + 44 1244 537370  
E-mail: fmc.agro.uk@fmc.com

For further information, please contact:

Contact point Tel: +44(0) 1244 537370  
Email: fmc.agro.uk@fmc.com

#### 1.4. Emergency telephone number

Emergency telephone Medical emergencies:

Austria: +43 1 406 43 43  
Belgium: +32 70 245 245  
Bulgaria: +359 2 9154 409  
Cyprus: 1401  
Czech Republic: +420 224 919 293, +420 224 915 402  
Denmark: +45 82 12 12 12  
France: +33 (0) 1 45 42 59 59  
Finland: +358 9 471 977  
Greece: 30 210 77 93 777  
Hungary: +36 80 20 11 99  
Ireland (Republic): +352 1 809 2166  
Italy: +39 02 6610 1029  
Lithuania: +370 523 62052, +370 687 53378  
Luxembourg: +352 8002 5500  
Netherlands: +31 30 274 88 88  
Norway: +47 22 591300

Poland: +48 22 619 66 54, +48 22 619 08 97  
Portugal: 800 250 250 (in Portugal only), +351 21 330 3284  
Romania: +40 21318 3606  
Slovakia: +421 2 54 77 4 166  
Slovenia: +386 41 650 500  
Spain: +34 91 562 04 20  
Sweden: +46 08-331231112  
Switzerland: 145  
United Kingdom: 0870 600 6266 (in the UK only)  
U.S.A. & Canada: +1 800 / 331-3148  
All other countries: +1 651 / 632-6793 (Collect)

For leak, fire, spill, or accident emergencies, call:  
1 800 / 424-9300 (CHEMTREC - U.S.A. & Canada)  
1 703 / 527 3887 (CHEMTREC - All Other Countries - Collect)

## Section 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture Regulation (EC) No 1272/2008

Reproductive toxicity	Category 1B (H360FD)
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### 2.2. Label elements

#### Hazard pictograms



**Hazard Designation**  
Danger

#### Hazard Statements

H360FD - May damage fertility. May damage the unborn child

#### Precautionary Statements

P201 - Obtain special instructions before use  
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  
P405 - Store locked up  
P501: Dispose of contents/container as hazardous waste in accordance with local regulations.

### 2.3. Other hazards

No information available.

## Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

The product is a mixture, not a substance.

### 3.2 Mixtures

Chemical name	EC-No	CAS-No	Weight percent	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH registration number
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DISODIUM OCTABORATE TETRAHYDRATE	234-541-0	12280-03-4	>99.25	Repr. 1B (H360FD)	01-2119490860-33- xxxx
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**Additional Information**

For the full text of the H- and EUH- phrases mentioned in this Section, see Section 16

## Section 4: FIRST AID MEASURES

**4.1. Description of first aid measures**

<b>Eye Contact</b>	Hold eyes open and rinse slowly and gently with water for 15-20 minutes.
<b>Skin Contact</b>	Wash off immediately with soap and plenty of water.
<b>Inhalation</b>	Call a doctor or poison control centre immediately.
<b>Ingestion</b>	Clean mouth with water.

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

<b>Most important symptoms and effects, both acute and delayed</b>	Skin contact: May see mild irritation at the site of contact.
	Eye contact: Possible irritation and redness.
	Ingestion: Possible irritation of the throat.
	Inhalation: May experience irritation of the throat with a feeling of tightness in the chest.
	Delayed/Immediate effects: Immediate effects can be expected after short-term exposure.

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

<b>Indication of immediate medical attention and special treatment needed, if necessary</b>	Treat symptomatically.
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## Section 5: FIREFIGHTING MEASURES

**5.1. Extinguishing media****Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

<b>Small Fire</b>	Dry chemical. Carbon dioxide (CO <sub>2</sub> ).
<b>Large Fire</b>	Water spray. Foam.

**Unsuitable extinguishing media**

No information available

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

None in particular.

<b>Hazardous Combustion Products</b>	None known.
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**5.3. Advice for firefighters**

As in any fire, wear self-contained breathing apparatus and full protective gear.

**Section 6: ACCIDENTAL RELEASE MEASURES****6.1. Personal precautions, protective equipment and emergency procedures****Personal Precautions**

For personal protection see section 8. Avoid contact with the skin and the eyes. Stop leak if you can do it without risk.

For further clean-up instructions, call Emergency Hotline number listed in Section 1 "Product and Company Identification" above.

**For emergency responders**

Use personal protection recommended in Section 8.

**6.2. Environmental precautions**

Do not discharge into drains or rivers. Contain the spillage using bunding. Accidental release into water courses must be alerted to the appropriate regulatory body.

**6.3. Methods and material for containment and cleaning up****Methods for Containment**

Avoid dust formation. Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up**

Pick up and transfer to properly labelled containers.

**Prevention of secondary hazards****Land spill**

Vacuum, shovel or sweep up 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 for more information. See section 13 for more information.

**Section 7: HANDLING AND STORAGE****7.1. Precautions for safe handling****Handling**

Ensure adequate ventilation.

**Hygiene measures**

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke when using this product.

**7.2. Conditions for safe storage, including any incompatibilities****Storage**

Keep container tightly closed in a dry and well-ventilated place. Avoid contact with reducing agents.

**7.3. Specific end use(s)****Specific Use(s)**

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

**Risk Management Methods (RMM)**

The information required is contained in this Safety Data Sheet.

**Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

### 8.1. Control parameters

<b>Derived No Effect Level (DNEL)</b>	DNELs for workers Long-term, Systemic, Inhalation = 6.9 mg/m <sup>3</sup> Long-term, Systemic, Dermal = 326 mg/kg bw/day
	DNELs for the general public Acute, Systemic, Oral = 0.81 mg/kg bw/day Long-term, Systemic, Dermal = 163.3 mg /kg bw/day Long-term, Systemic, Inhalation = 3.5 mg/m <sup>3</sup> Long-term, Systemic, Oral = 0.81 mg/kg bw/day.
<b>Predicted No Effect Concentration (PNEC)</b>	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 add, STP = 1.75 mg B/L.

### 8.2. Exposure controls

<b>Engineering measures</b>	Ensure adequate ventilation, especially in confined areas.
<b>Personal protective equipment</b>	
<b>Eye/Face Protection</b>	Safety Glasses. Eye wash bottle with pure water.
<b>Hand Protection</b>	Protective gloves.
<b>Skin and Body Protection</b>	Wear protective gloves/clothing.
<b>Respiratory Protection</b>	Not required under normal use. Use respiratory protection where ventilation is insufficient or exposure is prolonged(ref. EN 136, EN 140, EN 141, EN 143, EN 149, EN 405).
<b>Environmental exposure controls</b>	Refer to specific Member State legislation for requirements under Community environmental legislation.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

<b>Physical State</b>	Solid
<b>Appearance</b>	Solid
<b>Odour</b>	Odourless
<b>Colour</b>	White
<b>Odour threshold</b>	No information available
<b>pH</b>	8.5
<b>Melting point/freezing point</b>	815 °C
<b>Boiling point/boiling range</b>	No information available
<b>Flash point</b>	does not flash
<b>Evaporation Rate</b>	No information available
<b>Flammability (solid, gas)</b>	
<b>Flammability Limit in Air</b>	
Upper flammability limit:	No information available
Lower flammability limit	No information available
<b>Vapour pressure</b>	Negligible
<b>Vapour density</b>	No information available
<b>Specific gravity</b>	1.34 - 1.36
<b>Water solubility</b>	9.7 % @ 20°C; 27.4 @ 40°C
<b>Solubility in other solvents</b>	No information available
<b>Partition coefficient</b>	No information available

Autoignition temperature	No information available
Decomposition temperature	No information available
Viscosity, kinematic	No information available
Viscosity, dynamic	No information available
Explosive properties	No information available
Oxidising properties	Non-oxidizing

**9.2. Other information**

Softening point	No information available
Molecular weight	No information available
VOC content (%)	No information available
Density	No information available
Bulk density	No information available
K <sub>st</sub>	No information available

**Section 10: STABILITY AND REACTIVITY****10.1. Reactivity**

Stable under recommended storage conditions

**10.2. Chemical stability**

Stable under recommended storage conditions.

**Explosion data**

**Sensitivity to Mechanical Impact** No information available.

**Sensitivity to Static Discharge** No information available.

**10.3. Possibility of hazardous reactions****Hazardous polymerisation**

Hazardous polymerization does not occur.

**Hazardous reactions**

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

**10.4. Conditions to avoid**

Excessive heat.

**10.5. Incompatible materials**

Strong reducing agents.

**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 Information**

Product does not present an acute toxicity hazard based on known or supplied information.

LD50 Oral	> 2550 mg/kg (rat)
LD50 Dermal	> 2000 mg/kg (rabbit)
Inhalation LC50	No information available

**Skin corrosion/irritation**  
**Serious eye damage/eye irritation**  
**Sensitisation**  
**Mutagenicity**  
**Carcinogenicity**

Non-irritating.  
Non-irritating.  
Non-sensitizing  
Not mutagenic.  
Not classifiable as a human carcinogen.

**Reproductive toxicity**  
**STOT - single exposure**  
**STOT - repeated exposure**  
**Symptoms**

Product is or contains a chemical which is a known or suspected reproductive hazard.  
Not classified.  
Not classified.  
Skin contact: May see mild irritation at the site of contact.  
  
Eye contact: Possible irritation and redness.  
  
Ingestion: Possible irritation of the throat.  
  
Inhalation: May experience irritation of the throat with a feeling of tightness in the chest.  
  
Delayed/Immediate effects: Immediate effects can be expected after short-term exposure.

**Aspiration hazard**

The product does not present an aspiration pneumonia hazard.

## Section 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

#### **Ecotoxicity**

The ecotoxicity of the product is measured as:

Green algae, *Pseudokirchneriella subcapitata*:  
72-hr EC50 –biomass = 40 mg B/L or 191 mg disodium octaborate tetrahydrate/L

Daphnia, Daphnids, *Daphnia magna*:  
48-hr LC50 = 133 mg B/L or 635 mg disodium octaborate tetrahydrate/L

Fish, Fatheted minnow, *Pimephales promelas*:  
96-hr LC50 = 79.7 mg B/L or 380 mg disodium octaborate tetrahydrate/L

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 minimize the amount of borate product released to the environment. Disodium octaborate tetrahydrate should only be used as part of a balanced plant nutrition program preferably after soil and/or tissue analysis.

### 12.2. Persistence and degradability

Boron is naturally occurring and ubiquitous in the environment. The disodium octaborate tetrahydrate decomposes in the natural environment to borate.

### 12.3. Bioaccumulative potential

Does not bioaccumulate.

### 12.4. Mobility in soil

#### **Mobility in soil**

Mobile in soil.

#### **Mobility**

No information available.

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

No information available.

**12.6. Other adverse effects**

No information available

## Section 13: DISPOSAL CONSIDERATIONS

**13.1. Waste treatment methods**

<b>Waste from residues / unused products</b>	Small quantities 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.
<b>Contaminated Packaging</b>	Clean container with water. Dispose of rinse water in accordance with local and national guidelines. Dispose of in accordance with local regulations.
<b>OTHER INFORMATION</b>	NOTE : The user's attention is drawn to the possible existence of specific European, national or local regulations regarding disposal.

## Section 14: TRANSPORT INFORMATION

**NOTE**

NOT CLASSIFIED AS DANGEROUS IN THE MEANING OF TRANSPORT REGULATIONS.

**IMDG/IMO**

<b>14.1 UN/ID no</b>	Not regulated
<b>14.2 Proper Shipping Name</b>	Not regulated
<b>14.3 Hazard class</b>	Not regulated
<b>14.4 Packing Group</b>	Not regulated
<b>14.5 Environmental Hazards</b>	Not applicable
<b>14.6 Special Provisions</b>	None
<b>14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code</b>	This product is not transported in bulk containers.

**RID**

<b>14.1 UN/ID no</b>	Not regulated
<b>14.2 Proper Shipping Name</b>	Not regulated
<b>14.3 Hazard class</b>	Not regulated
<b>14.4 Packing Group</b>	Not regulated
<b>14.5 Environmental Hazard</b>	Not applicable
<b>14.6 Special Provisions</b>	None

**ADR/RID**

<b>14.1 UN/ID no</b>	Not regulated
<b>14.2 Proper Shipping Name</b>	Not regulated
<b>14.3 Hazard class</b>	Not regulated
<b>14.4 Packing Group</b>	Not regulated
<b>14.5 Environmental Hazard</b>	Not applicable
<b>14.6 Special Provisions</b>	None

**ICAO/IATA**

<b>14.1 UN/ID no</b>	Not regulated
<b>14.2 Proper Shipping Name</b>	Not regulated



14.3 Hazard class	Not regulated
14.4 Packing Group	Not regulated
14.5 Environmental Hazard	Not applicable
14.6 Special Provisions	None

## Section 15: REGULATORY INFORMATION

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

#### European Union

##### Authorisations and/or restrictions on use:

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV)

This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

##### Persistent Organic Pollutants

Not Applicable

##### Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not Applicable

#### International Inventories

Chemical name	TSCA (United States)	DSL (Canada)	EINECS/ELINCS (Europe)	ENCS (Japan)	China (IECSC)	KECL (Korea)	PICCS (Philippines)	AICS (Australia)
DISODIUM OCTABORATE TETRAHYDRATE 12280-03-4					X		X	

### 15.2. Chemical safety assessment

A Chemical Safety Assessment has been carried out for this substance

## Section 16: OTHER INFORMATION

### Key or legend to abbreviations and acronyms used in the safety data sheet

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

H360FD - May damage fertility. May damage the unborn child

#### Legend

ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road
CAS:	CAS (Chemical Abstracts Service)
Ceiling:	Maximum limit value:
DNEL:	Derived No Effect Level (DNEL)
EINECS:	EINECS (European Inventory of Existing Chemical Substances)
GHS:	Globally Harmonised System (GHS)
IATA:	International Air Transport Association (IATA)
ICAO:	International Civil Aviation Organization
IMDG:	International Maritime Dangerous Goods (IMDG)
LC50:	LC50 (lethal concentration)
LD50:	LD50 (lethal dose)
PBT:	Persistent, Bioaccumulative, and Toxic (PBT) Chemicals
RID:	Regulations Concerning the International Transport of Dangerous Goods by Rail

STEL: Short term exposure limit  
SVHC: Substances of Very High Concern for Authorisation:

TWA: time weighted average  
vPvB: very Persistent and very Bioaccumulative

Revision date: 2020-08-11

Reason for revision: Initial Release.

Training Advice This material should only be used by persons who are made aware of its hazardous properties and have been instructed in the required safety precautions.

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**End of Safety Data Sheet**