Safety Data Sheet

Liquid Boron Foliar Fertiliser

According to EC-Regulations 1907/2006 (REACH) & 1272/2008 (CLP)

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

1.1 Product Identifier

Product/Trade name	:	Nitrasol Boron 15% Bn weight/volume
Synonyms	:	Boron 15% Bn weight/volume
EC No	:	not appicable as fertiliser is a mixture
CAS No.	:	not appicable as fertiliser is a mixture
REACH Registration Number.	:	not appicable as fertiliser is a mixture

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

Use of the substance/mixture	:	Fertilizer
Uses advised against	:	This mixture should be limited to use as a fertiliser.

1.3 Details of the supplier of the safety data sheet

Manufacturer/Importer/Supplier	:	BrineFlow Properties and Handling Ltd
Address	:	South Denes Road, Great Yarmouth, Norfolk. NR30 3QD
Telephone number	:	01493 809820

1.4 Emergency telephone number

Telephone number	:	01493 809820

2 Hazards identification

2.1 Classification of the substance or mixture

Classification in accordance with Regulation 1272/2008 (CLP)	:	Reproductive toxicity (Category 1B) H360FD
	:	Acute toxicity, 4, H312, H332
	:	Skin Corrosion, 1B, H314
	:	Specific target organ toxicity - single exposure, 3, Respiratory system, H335
	:	Serious eye damage,1, H318
	:	Long-tem (Chronic) aquatic hazard, 3, H412
Risk phrase(s)	:	H360FD May damage fertility. May damage the unborn child
	:	H312 Hamful in contact with skin
	:	H332 Hamful if inhaled
	:	H314 Causes severe skin burns and eye damage.
	:	H335 May cause respiratory irritation
	:	H318 May cause serious eye damage.
	:	H412 Harmful to aquatic life with long lasting effects

2.2 Label elements

Contains : Boric Acid and Monoethanolamine (MEA)

Hazard pictogram(s) :

Signal word : Danger

Hazard Statement(s) :
H360FD May damage fertility. May damage the unborn child
H302 + H312 + H332 Harmful if swallowed, in contact with skin or if inhaled
H314 Causes severe skin burns and eye damage.
H335 May cause respiratory irritation.
H412 Harmful to aquatic life with long lasting effects

Precautionary statements :

Prevention ●
P202 do not handle until all safety precautions have been read and understood
P260 Do not breathe vapour/spray

Response ●
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
P302+P352 IF ON Skin: Wash with plenty of water.
P304+P340 If INHALED: Remove person to fresh air and keep comfortable for breathing
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

Disposal ●
P501 - Dispose of contents/container in accordance with local/regional/ national/international regulations.

Supplementary ●
P310 - Immediately call a POISON CENTER or doctor/physician
P391 - Collect Spillage

2.3 Other hazards

Not a PBT or vPvB mixture based on ingredients.

3 Composition/information on ingredients

3.1 substance

Hazardous ingredients

Chemical name	CAS no.	EC no.	Generic REACH Registration No.	Classification Regulation (EC) No. 1272/2008 Directive 67/548 (DSD)	% (w/w)
Boric Acid	10043-35-3	233-139-2	01-2119486683-25-0039	 Reproductive toxicity (Category 1B) H360FD H360FD May damage fertility. May damage the unborn child	60-65%
Monoethanilamine (MEA)	141-43-3	205-483-3	01-2119486455-28-XXXX	 Acute Toxicity,4, H302, H332, H312. Skin corrosion, 1B, H314. Serious eye damage,1, H318. Specific target organ toxicity,3, H335. Long-term aquatic hazard,3, H412	20-30%

3.1 substance cont…..

Hazardous ingredients

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Other Ingrediants

Water	7732-18-5	231-791-2	N/A	none	Upto 70%

EC no. means EINECS or ELINCS number.

4 First aid measures

4.1 Description of first aid measures

General : Get medical attention if any discomfort continues

Inhalation : Move the exposed person to fresh air at once. Get medical attention. Provide rest, warmth and fresh air. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention immediately!

Ingestion : Ingestion DO NOT INDUCE VOMITING! NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Remove victim immediately from source of exposure. Drink plenty of water. Get medical attention immediately! Provide rest, warmth and fresh air.

Skin contact : Remove affected person from source of contamination. Get medical attention promptly if symptoms occur after washing. Remove contaminated clothes and rinse skin thoroughly with water.

Eye contact : Remove victim immediately from source of exposure. Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Get medical attention immediately. Continue to rinse. Get medical attention immediately!

4.2 Most important symptoms and effects, both acute and delayed

Inhalation : may cause respiratory irritation. Coughing, chest tightness, feeling of chest pressure.

Ingestion : Harmful if swallowed. Symptoms of accidental over-exposure to high doses of inorganic borate salts have been associated with ingestiom or absorption through severley damaged skin. Thes may include nausea, vomiting and diarrhoea, with delayed effects of skin redness and peeling.

Skin contact : causes severe burns. Symptoms of accidental over-exposure to high doses of inorganic borate salts have been associated with ingestiom or absorption through severley damaged skin. Thes may include nausea, vomiting and diarrhoea, with delayed effects of skin redness and peeling.

Eye contact : causes serious eye damage

4.3 Indication of any immediate medical attention and special treatment needed

Note to physician : No specific first aid measures noted.

5 Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media :	Product not flamable - use fire extinguishing media for surrounding materials.
unsuitable extinguishing media :	Product not flamable - use fire extinguishing media for surrounding materials.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture :	Oxides of the following substances: Nitrogen.

5.3 Advice for firefighters

Special fire fighting procedures :	Keep run-off water out of sewers and water sources. Dike for water control.
Special protective equipment for fire-fighters :	Self contained breathing apparatus and full protective clothing must be worn in case of fire.

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Keep unauthorised personnel away.

Do not walk through spilled material.

Avoid exposure to vapours or sprays.

Wear appropriate personal protective equipment.

6.2 Environmental precautions

Prevent the contamination of watercourses and drains and sewage systems and inform the appropriate authority in case of accidental contamination of watercourses.

6.3 Methods and material for containment and cleaning up

Any spillage of fertilizer should be cleaned up promptly, swept up and placed in a clean labelled open container for safe disposal.

Stop flow of material if possibe.

Absorb spillage with suitable absorbant material.

6.4 Reference to other sections

See section 1 for emergency contact information, section 8 for personal protective equipment and section 13 for waste disposal.

7 Handling and storage

7.1 Personal precautions, protective equipment and emergency procedures

Avoid inhalation of vapours or sprays and contact with skin and eyes.

Carefully clean all equipment prior to maintenance and repair.

When handling the product use appropriate personal protective equipment (see section 11).

Carefully clean all equipment prior to maintenance and repair.

7.2 Conditions for safe storage, including any incompatibilities

Locate away from the sources of heat or fire.

On farm, ensure that the fertilizer is not stored near water courses.

Ensure high standard of housekeeping in the storage area.

Any container used for the storage should be sound and kept sealed.

Packaging materials: Plastic synthetic materials. Keep packaging sealed.

7.3 Specific end use(s)

Fertilizer

8 Exposure controls/personal protection

8.1 Control parameters

Derived No Effect Level (DNEL)				
Components	Type	Route	Value	Form
Boric Acid (10043-35-3)	Industrial	Dermal	392mg/kg	systemic effects
		Inhalation	8.3mg/m3	systemic effects
	Consumer	Dermal	196mg/kg	systemic effects
		Inhalation	4.15mg/m3	systemic effects
Ethanolamine (141-43-5)	Industrial	Dermal	1mg/kg bw/day	long term systemic effects
		Inhalation	3.3 mg/m3	long term systemic effects
	Consumer	Dermal	0.24mg/kg bw/day	long term systemic effects
		Inhalation	2mg/m3	long term systemic effects

Predicted No effect Level Concentrations (PNECs)			
Components	Type	Route	Route
Boric Acid (10043-35-3)	Freshwater	n/a	2.02mg/l
	Marinewater	n/a	2.02mg/l
	Spills (Freshwater)	n/a	not available
	sediment (Freshwater)	n/a	not available
	sediment (Marinewater)	n/a	not available
	Soil	n/a	5.4mg/kg
	STP	n/a	10mg/kg
Ethanolamine (141-43-5)	Freshwater	n/a	0.085mg/l
	Marinewater	n/a	0.0085mg/l
	Spills (Freshwater)	n/a	not available
	sediment (Freshwater)	n/a	0.434mg/kg
	sediment (Marinewater)	n/a	0.0434mg/kg
	Soil	n/a	0.0367 mg/kg
	STP	n/a	100mg/l

8.2 Exposure controls

Appropriate engineering measures : Ventilate as needed to control vapour and spray.

Hygienic measures : When handling the product do not eat, drink or smoke.

: Wash hands after handling and before eating, smoking, using the lavatory and end of working period.

: Remove and isolate contaminated clothing. Launder contaminated clothing before reuse.

Individual protection

Respiratory system : Wear full face mask with gas cartridge (ammoniua green)

Skin and body : Protective suit

Hands : Butyl rubber with break through> 30min

Eyes : see respiratory system

Environmental exposure controls : Inform the appropriate authority in case of accidental contamination of watercourses.

: Do not flush into surface water or sanitary sewer system.

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	:	Clear liquid
Odour	:	Slight
Odour threshold	:	n/a
pH	:	typically > 4.5
Melting point/freezing point	:	-5^{o}_{C}
Initial boiling point and boiling range	:	$>100^{o}_{C}$
Flash point	:	n/a
Flammability (solid, gas)	:	Non-combustible. Decomposes on heating. Toxic gases are generated.
Upper/lower flammability or explosive limits	:	Not available
Explosive properties	:	n/a
Auto-ignition temperature	:	n/a
Decomposition temperature	:	$>100^{o}_{C}$
Minimum ignition energy	:	Not available
Critical temperature	:	n/a
Density	:	Typically 1.34 - 1.36 kg/litre
Vapour pressure at 20°C	:	Not available
Vapour density	:	Not available
Partition coefficient	:	Not available
Viscosity	:	Not available
Water solubility	:	highly soluble
Surface tension	:	Not available

10 Stability and reactivity

10.1 Information on basic physical and chemical properties

Stable under recommended storage and handling conditions (see section 7, handling and storage).

10.2 Chemical stability

Stable under recommended storage and handling conditions (see section 7, handling and storage).

10.3 Possibility of hazardous reactions

Boric accid is a weak acid which may cause corrosion to base metals.

10.4 Conditions to avoid

Avoid thermal decomposition

Toxic gases are generated when heated.

10.5 Incompatible materials

Strong acids. Strong oxidising agents. Powdered metals. Strong reducing agents

10.6 Hazardous decomposition products

For fire situation: see section 5.

When strongly heated, it evapourates and concentrates and may and decompose releasing toxic fumes.

See also Sections 2 and 9.

11 Toxicological information

11.1 Information on toxicological effects

Acute toxicity	Type	Species	result
Boric Acid (10043-35-3)	Oral LD50	Rat	2000-5000mg/kg
	Dermal LD50	Rabbit	2000mg/kg
	Inhalation LC50	Rat	not available
Ethanolamine (141-43-5)	Oral LD50	Rat	1720mg/kg
	Dermal LD50	Rabbit	1025mg/kg
	Inhalation LC50	Rat	not available

Local effects

Skin irritation : Causes severe burns (MEA component)

Eye irritation : Causes severe burns (MEA component)

Sensitisation : no information available

Mutagenicity : Negative.

Reproductive toxicity : Positive in rats (Boric acid component)

Carcinogenicity : no evidence of carcinpgenicity

12 Ecological information

12.1 Information on toxicological effects

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Aquatic	Type	Species	result
Boric Acid (10043-35-3)	LC50	Algae	52.4mg/l
	LC50	Fish	79.7mg/l
	EC50	Fish	6.4mg/l
Ethanolamine (141-43-5)	LC50	Common Carp	349mg/l
	LC50	Goldfish	170mg/l
	EC50	Daphnia	65mg/l

12.2 Persistence and degradability

Boric Acid (10043-35-3) : Inorganic substance

Ethanolamine (141-43-5) : Biodegrable

12.3 Bioaccumulative potential

Boric Acid (10043-35-3) : low

Ethanolamine (141-43-5) : no information available

12.4 Mobility in soil

This product is soluble in water

12.5 Results of PBT and vPvB assessment

Not a PBT or vPvB mixture based on ingredients.

12.6 Other adverse effects

none known

13 Disposal considerations

13.1 Waste Treatment Methods

Container	:	Containers should be cleaned by appropriate method and then re-used or disposed by landfill or incineration as appropriate, in accordance with local and national regulations.
	:	Do not remove label until container is thoroughly cleaned.
Methods of disposal	:	Depending on degree and nature of contamination dispose of by use as fertilizer on farm, as raw material for liquid fertilizer, or to an authorised waste facility.
	:	Do not empty into drains; dispose of this material and its container in a safe way and in accordance with all applicable local and national regulations.

14 Disposal considerations

14.1 Un Number

ADR/RID	:	
ADN/ADNR	:	
IMDG	:	
ICAO/IATA	:	

14.2 UN Proper shipping name

ADR/RID	:	
ADN/ADNR	:	
IMDG	:	
ICAO/IATA	:	

14.3 Transport hazard class(es)

ADR/RID	:	
ADN/ADNR	:	
IMDG	:	
ICAO/IATA	:	

14.4 Packing group and label

ADR/RID	:	
ADN/ADNR	:	
IMDG	:	
ICAO/IATA	:	

14.5 Environmental hazards

none

14.6 Special Precautions for user

see section 8

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

not applicable

15 Regulatory information

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

This product is classified and labelled in accordance with Regulation (EC) 1272/2008 - CLP Regulation.
This Safety Data Sheet complies with the requirements of Regulation No 1907/2006 - REACH

15.2 Chemical safety assessment

A Chemical Safety Assessment has been carried out - see attached exposure scenario

16 Regulatory information

Abbreviations and acronyms

IMDG	:	International Maritime Code for Dangerous Goods
ADR	:	European Agreement for the Carriage of Dangerous Goods by Road
RID	:	European Agreement for the Carriage of Dangerous Goods by Rail
ICAO	:	International Civil Aviation Organisation
IATA	:	International Air Transport Association
REACH	:	Registration, Evaluation, Authorisation and Restriction of Chemicals
CLP	:	Classification, Labelling and Packaging
CAS	:	Chemical Abstracts Service
vPvB	:	Very persistent and very Bioaccumulative

Disclaimer

The information provided in this safety data sheet is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any proceed, unless specified in the text.