

# SAFETY DATA SHEET

NoroTec AB

Date of Issue: June 4, 2020

Version no: .0

Replaces: --

## NoroTec™ Rape Seed

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

#### 1.1 Product identifier

<b>PRODUCT NAME:</b>	NoroTec™ Rape Seed
<b>Group Name</b>	Fertilisers

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

<b>Use of the product</b>	Fertilizers for agricultural crops for foliar treatment based on boric acid, magnesium and manganese.
<b>Limited conditions of use</b>	Not applicable

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

<b>Company</b>	NoroTec AB
<b>Address</b>	Södergatan 74
<b>Zip Code / City or Town</b>	SE-274 34 Skurup
<b>Country</b>	Sweden
<b>Telephone</b>	+46 411 406 60
<b>Contact person</b>	Bo Isacsson
<b>E-mail</b>	mail@norotec.se

#### 1.4 Emergency telephone number

<b>Emergency telephone number</b>	Call 112 – ask for Poisson Information Centre.
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### 2. HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or preparation

**Product definition:** Mixture

#### Classification according to (EG) 1272/2008

STOT RE 2; H373

Aquatic Chronic 3; H412

#### 2.2 Label Information

**Label elements according to (EG) 1272/2008**

Labelling required.



**Signal Word:** Warning

#### Hazard Statement

<b>H373</b>	May cause damage to organs through prolonged or repeated exposure if inhaled or swallowed.
<b>H412</b>	Harmful to aquatic life with long lasting effects.

#### Precautionary statements

<b>P260</b>	Do not breathe dust/fume/gas/mist/vapours/spray.
<b>P314</b>	Get medical advice/attention if you feel unwell

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<b>P273</b>	Avoid release to the environment
<b>P391</b>	Collect spillage.
<b>P501</b>	Dispose of contents/container to a licensed hazardous waste disposal contractor.

#### Contains

Manganese sulphate	10-20 weight-%
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#### 2.3 Other hazards

PBT / vPvB	The product contains no PBT or vPvB substances.
Other hazards which do not cause classification	The product contains the substance boric acid, which can damage the fertility and the unborn baby. Boric acid is an SVHC substance. However, this product contains < 5.5 weight-% boric acid and is therefore classified according to current classification rules as not reproduction toxic.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Substance (UVCB)

No	Component/ ingredient name	EC-number	CAS- number	REACH registration number	Conc. (weight-%)	Classification CLP]
1	Manganese sulphate	232-089-9	10034-96-5	01-2119456624-35-0000	10-20	STOT RE 2, H373 Aquatic Chronic 2, H411
2	Citric acid	201-069-1	77-92-9	01-2119457026-42-0000	2-4	Eye Irrit. 2; H319
3	Boric acid	233-139-2	10043-35-3	01-2119486683-25-0000	2-4	Repr. 1B; H360FD
4	Magnesium nitrate	233-826-7	10377-60-3	01-2119491164-38-0000	20-30	Ox. Sol. 2; H272
5	Water	231-791-2	7732-18-5	--	40-60	Not classified as dangerous

Occupational exposure limits are mentioned under section 8, if such exist. See section 16 for the full text of the hazard statements declared above.

The product contains < 5,5 weight-% boric acid and is therefore not classified as toxic to reproduction.

The mixture exists as an aqueous solution, which makes the substances magnesium nitrate and potassium nitrate not exhibiting any oxidizing properties.

### 4. FIRST AID

#### 4.1 Description of first aid measures

<b>Inhalation</b>	Rest in fresh air.
<b>Skin contact</b>	Remove contaminated clothing. Wash skin thoroughly with soap and water.
<b>Eye contact</b>	Hold eyelids apart. Rinse with water for a few minutes. Consult a physician if irritation persists.
<b>Ingestion</b>	Rinse mouth with water. Drink a few glasses of water or milk. Consult a physician if burning or other symptoms persist in the mouth, throat or gastrointestinal tract.

#### 4.2 Most important symptoms and effects, both acute and delayed

<b>Inhalation</b>	Inhalation may cause burning in the eyes, nose, mouth and throat. The product contains manganese sulphate. Inhalation of spray mist or particles for a longer period can cause chronic manganese intoxication with the influence of the central nervous system. Symptoms of effects include sleepiness, tremors and twitching in the arms and legs.
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<b>Skin contact</b>	Repeated exposure causes dry skin, irritation, redness and cracking.
<b>Eye contact</b>	Splashes may cause reversible irritation of the eyes.
<b>Ingestion</b>	Ingestion may cause burning pain in the mouth, throat and gastrointestinal tract and cause vomiting, diarrhea and reduced general condition.

### 4.3 Indication of any immediate medical attention and special treatment needed

<b>Notes to physician</b>	Treat symptomatically.
<b>Specific treatments</b>	No specific treatment.

## 5. FIRE FIGHTING MEASURES

### 5.1 Extinguishing media

<b>General information</b>	Non-flammable product.
<b>5.1.1 Suitable extinguishing media</b>	The product is not flammable. Choose extinguishing agents based on the surrounding fire
<b>5.1.2 Unsuitable extinguishing media</b>	None

### 5.2 Special hazards arising from the substance or preparation

<b>Hazards from the substance or preparation</b>	No fire or explosion risk exists.
<b>Hazardous thermal decomposition products</b>	Oxides of manganese, sulfur and nitrogen.

### 5.3 Advice to firefighters

<b>5.3.1. Special protective actions for fire-fighters</b>	Avoid inhalation of toxic fumes.
<b>5.3.2 Special protective equipment for fire-fighters</b>	Fire-fighters should use chemically protective clothing and self-contained breathing apparatus.
<b>5.3.3 Further information</b>	If possible, move the product from the fire area. Otherwise cool containers exposed to flames with water until fire is out. Do not allow run-off from firefighting to enter drains or water courses

## 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

Wear appropriate personal protective equipment. Avoid contact with eyes and skin.

For information on personal equipment, see section 8.

### 6.2 Environmental precautions

Avoid dispersal of spilt material in waterways and sewers or contaminate of soil and vegetation. If this is not possible immediately contact the police and relevant authorities.

### 6.3 Methods and materials for containment and cleaning up

Dike spills using vermiculite, sand or other inert absorbent material and place in sealable containers.

Clean up area with detergent and water subsequently. Collected material should be disposed of as hazardous waste.

### 6.4 Reference to other sections

See section 8 for personal protective equipment.

See section 13 for handling of waste materials.

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### 7. HANDLING AND STORAGE

#### 7.1 Precautions for safe handling

<b>Handling</b>	Avoid contact with skin and eyes Avoid breathing vapours/spray mist. Do not eat or drink while handling the product. See Section 8 for personal protective equipment.
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#### 7.2 Conditions for safe storage, including any incompatibilities

<b>Storage conditions</b>	Store in tightly closed original packaging. Keep dry and cool in a well ventilated place.
<b>Conditions to avoid</b>	Protected against frost. Avoid direct sunlight.

#### 7.3 Special characteristics and risks

<b>Conditions to avoid</b>	Keep away from strong alkaline solution and strong oxidizing agents.
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#### 7.4 Specific end use(s)

<b>Specific use (s)</b>	Not relevant.
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### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1 Control parameters

##### Occupational Exposure Limit (Work Exposure Limit)

Country	Name of substance	CAS No	Notation	Identifier	TWA mg/m <sup>3</sup>	STEL mg/m <sup>3</sup>	Source
GB	Manganese sulphate (as manganese)	7439-96-5	--	WEL	0.5	--	EH40/2005

##### Notation

TWA	Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average
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#### 8.2 Exposure Control

Avoid contact with skin and eyes. Do not eat, drink or smoke while working. Avoid breathing vapours/spray mist.

##### 8.2.1 Appropriate technical controls

Not relevant for this product.

##### 8.2.2 Individual protective measures, e.g. protective personal equipment.

<b>8.2.2.1 Respiratory protection</b>	At risk of inhalation of spray mist use respiratory equipment (half mask with particle filter P2).
<b>8.2.2.2 Eye/face protection</b>	Wear tight-fitting safety goggles.
<b>8.2.2.3 Hand protection</b>	Use protective gloves made of neoprene or nitrile rubber.
<b>8.2.2.4 Body protection</b>	Wear appropriate protective clothing.
<b>8.2.2.5 Thermal hazards</b>	The product does not constitute a thermal hazard. No special measures required.
<b>8.2.2.6 Other information</b>	Portable eye wash equipment should be available.

##### 8.2.2 Environmental exposure controls

Avoid release to the environment.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

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

<b>Physical state</b>	Liquid
<b>Colour</b>	Light brown
<b>Odour</b>	Practically odourless

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<b>Odour threshold</b>	Not available
<b>Solubility</b>	Completely soluble in water.
<b>pH (product)</b>	About 5,9
<b>Melting point /freezing point</b>	0°C
<b>Initial boiling point and kitchen range</b>	100°C
<b>Flash point</b>	Not applicable, product is not combustible
<b>Evaporation rate</b>	As water
<b>Flammable (solid, gas)</b>	Not combustible substance.
<b>Burning time</b>	Not applicable
<b>Burning rate</b>	Not applicable
<b>Upper / lower flammability or explosive limits</b>	Not explosive
<b>Steam pressure</b>	As water
<b>Vapour</b>	As water
<b>Relative density</b>	Approximately 1.25 g /cm <sup>3</sup> at 20°C
<b>Octanol / water</b>	Not applicable
<b>Ignition temperature</b>	Not applicable, product is not combustible
<b>Decomposition Temperature</b>	Not applicable, product is not combustible
<b>Oxidising properties</b>	Non-oxidising

### 9.2 Other information

None

## 10. STABILITY AND REACTIVITY

<b>10.1 Reactivity</b>	Non-reactive.
<b>10.2 Chemical stability</b>	Chemically stable under normal conditions of use and storage.
<b>10.3 Possibility of hazardous reactions</b>	Inapplicable in normal conditions of storage and use.
<b>10.4 Conditions to avoid</b>	Strong heat. Direct sunlight. Protect from frost.
<b>10.5 Incompatible materials</b>	Strong alkaline solutions and strong oxidizing agents.
<b>10.6 Hazardous decomposition products</b>	Thermal decomposition results in the formation of oxides of manganese, sulfur and nitrogen.

## 11. TOXICOLOGICAL INFORMATION

### Information on toxicological effects

#### 11.1 Acute toxicity

##### Acute toxicity of manganese sulphate

Exposure route	Value/Unit	Species	Exp. time	Method/note
LD50, oral	782 mg/kg	rat	--	--

##### Acute toxicity of the product

Exposure route	Value/Unit	Species	Exp. time	Method/note
LD50, oral	> 2.000 mg/kg	--	--	ATE-mix, calculated
LD50, dermal	> 2.000 mg/kg	--	--	ATE-mix, calculated
LC50, inhalation	> 20 mg/l	--	4 h	ATE-mix, calculated

### Irritation/Corrosion

Assessment of skin corrosion/irritation, classification

Non-irritating.

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Assessment of eye damage or irritation, classification  
Non-irritating.

#### 11.2 Potential acute effects

<b>Inhalation</b>	Inhalation may cause burning in the eyes, nose, mouth and throat. The product contains manganese sulphate. Inhalation of spray mist or particles for a longer period can cause chronic manganese intoxication with the effects on the central nervous system. Symptoms of effects include sleepiness, tremors and twitching in the arms and legs.
<b>Skin contact</b>	Repeated exposure gives rise to dry skin, irritation, redness and skin cracking.
<b>Eye contact</b>	Splashes may cause reversible irritation of the eyes.
<b>Ingestion</b>	Ingestion may cause burning pain in the mouth, throat and gastrointestinal tract and cause vomiting, diarrhea and reduced general condition.

#### 11.3 Sensitization by inhalation/skin contact

Assessment of sensibility for the product:  
The product does not contain any sensitizing agents.

#### 11.4.1 Germ cell mutagenicity

Assessment of mutagenicity for the product:  
Based on available data, the classification criteria are not met.

#### 11.4.2 Carcinogenicity

Assessment of carcinogenicity for the product:  
Based on available data, the classification criteria are not met.

#### 11.4.3 Reproduction toxicity

Assessment of reproduction toxicity for the product:  
The product is containing the substance boric acid, which can be damaging for fertility.  
The product, however, contains < 5.5 weight.-% boric acid and is classified according to the current classification rules as not toxic to reproduction.

#### 11.5.1 Specific target organ toxicity (single exposure)

STOT assessment single dose toxicity:  
Shall not be classified as a specific target organ toxicant (single exposure).

#### 11.5.2 Repeated dose toxicity and specific organ toxicity (repeated exposure)

STOT assessment of repeated dose toxicity:  
Shall not be classified as a specific target organ toxicant (repeated exposure).  
However, local effect such as dry skin, irritation, redness and skin cracking will occur.

#### 11.6 Aspiration

Shall not be classified as presenting an aspiration hazard.

## 12. ECOLOGICAL INFORMATION

### 12.1. 1 Toxicity

#### Acute aquatic toxicity of manganese sulphate

Test	Value / unit	Test Method	Exp. time	Species
Fish LC50	30 mg/l	ECOTOX Database	96 h	Fathead minnow
Daphnia EC50	8 mg/l	ECOTOX Database	48 h	Daphnia magna
Algae ErC50	61	ECHA Dossier	72 h	Desmodesmus subspicatus

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### 12.1.2 Ecological toxicity

The product is harmful to aquatic organisms.

### 12.2 Persistence and degradability

<b>Conclusion/Summary</b>	The product contains the elements manganese and sulphur. Elements are by definition not biodegradable
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### 12.3 Bioaccumulative potential

<b>Conclusion/Summary</b>	Bioaccumulation of manganese can be expected
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### 12.4 Mobility in soil

The product is mobile in the soil profile due to its high water solubility.  
Adsorption to solid soil particles is not expected.

### 12.5 Results of PBT and vPvB assessment

The product contains no substances which are identified as a PBT or vBvP substance (substance that is persistent, bioaccumulative and toxic).

### 12.6 Other adverse effects

None known

### 12.7 Environmental information/conclusion

The mixture in concentrated form is classified as harmful to aquatic life with long lasting effects.  
Solution ready for use that is spread on arable land is not considered dangerous for the environment.  
However, avoid spreading near lakes and rivers

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

#### Product

<b>Method of disposal</b>	Residues and waste are hazardous waste. Dispose of at an approved disposal facility.
<b>Hazardous waste</b>	Yes

#### Packaging

<b>Method of disposal</b>	Uncleaned empty packaging is hazardous waste. Dispose of at an approved disposal facility.
<b>Hazardous waste</b>	Yes
<b>Special precautions</b>	Not relevant

### European Waste Catalogue (EWC)

<b>EWC Waste Code</b>	<b>Type of waste</b>
02 01 08*	Agrochemical waste containing dangerous substances
15 01 10*	Packaging containing residues of or contaminated by dangerous substances

## 14. TRANSPORT INFORMATION

This product is not classified as dangerous goods.

<b>UN-no:</b>	--
<b>Proper Shipping Name:</b>	--

### ADR / RID (Road / Rail Transport)

<b>Class:</b>	--	<b>Packing Group:</b>	--
<b>Label:</b>	--	<b>Environmental hazards:</b>	--
<b>Hazard number:</b>	--	<b>Tunnel restriction</b>	--

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### IMDG (SEA)

<b>Class:</b>	--	<b>Packing Group:</b>	--
<b>Label</b>	--	<b>EmS</b>	--
<b>Marine Pollutant:</b>	--		

### IATA (Air Transport)

<b>Class:</b>	--	<b>Packing Group:</b>	--
<b>Label:</b>	--	<b>Environmental hazards:</b>	--

### 14.7 Bulk transport in accordance with annex II of convention Marpol 73/78 and IBC-Code

Not applicable.

## 15. REGULATORY INFORMATION

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

Classification and labelling according to (EG) 1272/2008 is available under section 2. This Safety Data Sheet is prepared in accordance with Annex II of the REACH Regulation (EC) 1907/2006 and Regulation (EC) No. 453/2010 Appendix I.

<b>Authorisation</b>	Not required.
<b>Restriction in use</b>	None.
<b>Other EU legislation</b>	This product contains no ozone depleting substance and is not a persistent organic pollutant.

### 15.2 Chemical Safety Assessment

Not relevant for products.

## 16. OTHER INFORMATION

### THE PRODUCER'S NOTES

This safety data sheet is provided by MM-Support AB, Sweden, and approved by NoroTec AB, Sweden.

### LIST OF HAZARD STATEMENTS MENTIONED UNDER SECTION 2 and 3

No.	Text
<b>H373</b>	May cause damage to organs through prolonged or repeated exposure through inhalation or ingestion.
<b>H411</b>	Toxic to aquatic life with long lasting effects.
<b>H412</b>	Harmful to aquatic life with long lasting effects.

### Revision overview

Version	Revision date	Responsible	Changes in section
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