



SAFETY DATA SHEET

# Seaspray 50

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

### 1.1 Product identifier

Tradename:

**Seaspray 50**

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

Relevant identified uses of the substance or mixture:	seed treatment Restricted to professional users.		
Use descriptors (UK REACH):	<b>Sectors of use</b>	<b>Description</b>	
	SU 1	Agriculture, forestry, fishery	
	<b>Product category</b>	<b>Description</b>	
	PC 12	Fertilizers	
Uses advised against :	None known.		

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

Manufacture name and address:	<b>Microferm Ltd</b> Spring Lane North, Malvern Link. WR14 1BU Worcestershire United Kingdom +44 1684 568434 <a href="https://www.microferm.co.uk/">https://www.microferm.co.uk/</a>
Contact person:	Microferm Technical Department
E-mail:	<a href="mailto:sds@microferm.co.uk">sds@microferm.co.uk</a>
Supplier name and address	<b>Emerald Research Ltd</b> Unit 2, Tech Box Hub The AgriTech Centre, Hartpury University GL19 3BE Gloucestershire United Kingdom +44 1242 506206 <a href="https://www.emeraldresearchltd.com">https://www.emeraldresearchltd.com</a>
Contact person:	Emerald Research Ltd Technical Department
E-mail:	: <a href="mailto:info@emeraldresearchltd.com">info@emeraldresearchltd.com</a>
Revision	11/06/2024
SDS Version	1.0

### 1.4 Emergency telephone number

Contact The National Poisons Information Service (dial 111, 24 h service). See section 4 "First aid measures".



## SECTION 2: HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

Not classified according to Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

### 2.2 Label elements

Hazard pictogram(s):	Not applicable.
Signal word:	Not applicable.
Hazard statement(s):	Not applicable.
Precautionary statement(s):	
General:	-
Prevention:	-
Response:	-
Storage:	-
Disposal:	-
Hazardous substances:	None known
Additional labelling:	EUH210, Safety data sheet available on request

### 2.3 Other hazards

Additional warnings:	This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.
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This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/6

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

Not applicable. This product is a mixture.

### 3.2 Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
Sodium benzoate	CAS No.: 532-32-1 EC No.: 208-534-8 UK-REACH: Index No.:	1-3%	Eye Irrit. 2, H319	

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

### Other information

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## SECTION 4: FIRST AID MEASURES

### 4.1 of first aid measures

General information:	In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet. Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.
Inhalation:	Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her.
Skin contact:	Upon irritation: rinse with water. In the event of continued irritation, seek medical assistance
Eye contact:	If in eyes: Flush eyes with water or saline water (20-30 °C) for at least 5 minutes. Remove contact lenses. Seek medical assistance and continue flushing during transport.
Ingestion:	If the person is conscious, rinse the mouth with water and stay with the person. Never give the person anything to drink. In case of malaise, seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the person lean forward with head down to avoid inhalation of or choking on vomited material.
Burns:	Not applicable

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

None known.

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

Treat symptomatically.

### Information to medics

Bring this safety data sheet or the label from this product.

## SECTION 5: FIREFIGHTING MEASURES

### 5.1 Extinguishing media

Not applicable.

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

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire- extinguishing water to enter the sewage system and nearby surface waters.

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:

Nitrogen oxides (NO<sub>x</sub>) Carbon oxides (CO / CO<sub>2</sub>) Some metal oxides

### 5.3 Advice for firefighters

Fire fighters should wear appropriate personal protective equipment.



**SECTION 6: ACCIDENTAL RELEASE MEASURES**

- 6.1 Personal precautions, protective equipment and emergency procedures**  
Ensure adequate ventilation, especially in confined areas. Contaminated areas may be slippery.
- 6.2 Environmental precautions**  
Avoid discharge to lakes, streams, sewers, etc.  
Keep unauthorized persons away from the spill
- 6.3 Methods and material for containment and cleaning up**  
Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.  
Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.
- 6.4 Reference to other sections**  
See section 13 "Disposal considerations" on handling of waste.  
See section 8 "Exposure controls/personal protection" for protective measures.

**SECTION 7: HANDLING AND STORAGE**

- 7.1 Precautions for safe handling**  
Smoking, drinking and consumption of food is not allowed in the work area.  
See section 8 "Exposure controls/personal protection" for information on personal protection.
- 7.2 Conditions for safe storage, including any incompatibilities**  
Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage material:	Keep only in original packaging.
Storage temperature:	Dry, cool and well ventilated Dry, cool and well ventilated
Incompatible materials:	Strong acids Strong oxidizing agents

- 7.3 Specific end use(s)**  
This product should only be used for applications quoted in section 1.2.

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

- 8.1 Control parameters**  
Mn13 EDTA  
Long term exposure limit (8 hours) (mg/m<sup>3</sup>): 0,2 (inhalable fraction as Mn) / 0,05 (respirable fraction as Mn)  
  
The Control of Substances Hazardous to Health Regulations 2002. SI 2002/2677 The Stationery Office 2002. EH40/2005 Workplace exposure limits (Fourth Edition 2020).



## DNEL

### Mn13 EDTA

Duration:	Route of exposure:	DNEL:
Long term – Systemic effects - General population	Dermal	12500 mg/kg bw/day
Long term – Systemic effects - Workers	Dermal	25000 mg/kg bw/day
Long term – Systemic effects - General population	Inhalation	3 mg/m <sup>3</sup>
Long term – Systemic effects - Workers	Inhalation	10 mg/m <sup>3</sup>
Long term – Systemic effects - General population	Oral	2.5 mg/kg bw/day

### Sodium benzoate

Duration:	Route of exposure:	DNEL:
Long term – Systemic effects - General population	Dermal	31.25 mg/kg bw/day
Long term – Systemic effects - Workers	Dermal	62.5 mg/kg bw/day
Long term – Local effects - General population	Inhalation	60 µg/m <sup>3</sup>
Long term – Local effects - Workers	Inhalation	100 µg/m <sup>3</sup>
Long term – Systemic effects - General population	Inhalation	1.5 mg/m <sup>3</sup>
Long term – Systemic effects - Workers	Inhalation	3 mg/m <sup>3</sup>
Long term – Systemic effects - General population	Oral	16.6 mg/kg bw/day

## PNEC

### Mn13 EDTA

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		2.67 mg/L
Intermittent release (freshwater)		1.07 mg/L
Intermittent release (marine water)		107 µg/L
Marine water		270 µg/L
Sewage treatment plant		64 mg/L
Soil		208 µg/kg

### Sodium benzoate



Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		581 µg/L
Freshwater sediment		2.5 mg/kg
Intermittent release (freshwater)		58.1 µg/L
Intermittent release (marine water)		5.81 ng/L
Marine water		58.1 µg/L
Marine water sediment		250 µg/kg
Predators		300 mg/kg
Sewage treatment plant		10 mg/L
Soil		158.7 µg/kg

## 8.2 Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

General recommendations:	Smoking, drinking and consumption of food is not allowed in the work area.
Exposure scenarios:	There are no exposure scenarios implemented for this product.
Exposure limits:	Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.
Appropriate technical measures:	The formation of vapours must be kept at a minimum and below current limit values (see above). Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure eyewash and emergency showers are clearly marked. Apply standard precautions during use of the product. Avoid inhalation of vapours.
Hygiene measures:	In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Pay special attention to hands, forearms and face.
Measures to avoid environmental exposure:	No specific requirements.


## Individual protection measures, such as personal protective equipment

Generally:	Use only UKCA marked protective equipment.
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Respiratory Equipment:


Type	Class	Colour	Standards	
Respiratory protection is not needed in the event of adequate ventilation.				

Skin protection:


Recommended	Type/Category	Standards	
Dedicated work clothing should be worn.	-	-	



Hand protection:

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards	
Latex/Neoprene	0,75	> 30	EN374-2, EN374-3, EN388	

Eye protection:

Type	Standards	
Safety glasses with side shields.	EN166	

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	Brown
Odour / Odour threshold:	Characteristic
pH:	Testing not relevant or not possible due to the nature of the product.
Density (g/cm <sup>3</sup> ):	1.1
Kinematic viscosity:	Testing not relevant or not possible due to the nature of the product.
Particle characteristics:	Does not apply to liquids.

### Phase changes

Melting point/Freezing point (°C):	Testing not relevant or not possible due to the nature of the product.
Softening point/range (waxes and pastes) (°C):	Does not apply to liquids.
Boiling point (°C):	Testing not relevant or not possible due to the nature of the product.
Vapour pressure:	Testing not relevant or not possible due to the nature of the product.
Relative vapour density:	Testing not relevant or not possible due to the nature of the product.
Decomposition temperature (°C):	Testing not relevant or not possible due to the nature of the product.

### Data on fire and explosion hazards

Flash point (°C):	Testing not relevant or not possible due to the nature of the product.
Flammability (°C):	Testing not relevant or not possible due to the nature of the product.
Auto-ignition temperature (°C):	Testing not relevant or not possible due to the nature of



	the product.
Lower and upper explosion limit (% v/v):	Testing not relevant or not possible due to the nature of the product.

### Solubility

Solubility in water:	Testing not relevant or not possible due to the nature of the product.
n-octanol/water coefficient (LogKow):	Testing not relevant or not possible due to the nature of the product.
Solubility in fat (g/L):	Testing not relevant or not possible due to the nature of the product.

### 9.2 Other information

Oxidizing properties:	Testing not relevant or not possible due to the nature of the product.
Other physical and chemical parameters:	No data available.

## SECTION 10: STABILITY AND REACTIVITY

### 10.1 Reactivity

No data available.

### 10.2 Chemical stability

The product is stable under the conditions, noted in section 7 "Handling and storage".

### 10.3 Possibility of hazardous reactions

None known.

### 10.4 Conditions to avoid

None known.

### 10.5 Incompatible materials

Strong acids  
Strong oxidizing agents

### 10.6 Hazardous decomposition products

The product is not degraded when used as specified in section 1.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008 as retained and amended in UK law

#### Acute toxicity

Product/substance	Sodium benzoate
Species:	Rat
Route of exposure:	Oral
Test:	LD50
Result:	2100 mg/kg

#### Skin corrosion/irritation





Product/substance	Sodium benzoate
Test method:	OECD 404
Result:	No adverse effect observed (Not irritating)

### Serious eye damage/irritation

Based on available data, the classification criteria are not met.

### Respiratory sensitisation

Based on available data, the classification criteria are not met.

### Skin sensitisation

Product/substance	Sodium benzoate
Test method:	OECD 429
Species:	Mouse
Result:	No adverse effect observed (not sensitising)

### Germ cell mutagenicity

Product/substance	Sodium benzoate
Test method:	OECD 471
Conclusion:	No adverse effect observed

Product/substance	Sodium benzoate
Test method:	OECD 475
Conclusion:	No adverse effect observed

### Carcinogenicity

Product/substance	Sodium benzoate
Species:	Rat
Route of exposure:	Oral
Test:	NOAEL
Result:	175 mg/kg bw/day

### Reproductive toxicity

Based on available data, the classification criteria are not met.

### STOT-single exposure

Based on available data, the classification criteria are not met.

### STOT-repeated exposure

Product/substance	Sodium benzoate
Species:	Rat
Route of exposure:	Oral
Test:	NOAEL
Result:	1000 mg/kg bw/day

### Aspiration hazard

Based on available data, the classification criteria are not met.

## 11.2 Information on other hazards



### Long term effects

None known.

### Endocrine disrupting properties

This mixture/product does not contain any substances known to have hormone-disrupting properties in relation to health.

### Other information

None known.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1 Toxicity

Product/substance	Sodium benzoate
Species:	Fish, Pimephales promelas
Duration:	96 hours
Test:	LC50
Result:	484 mg/L

Product/substance	Sodium benzoate
Species:	Daphnia, Daphnia magna
Duration:	96 hours
Test:	EC50
Result:	>100 mg/L

Product/substance	Sodium benzoate
Test method:	OECD 201
Species:	Algae, Pseudokirchneriella subcapitata
Duration:	72 hours
Test:	EC50
Result:	30 mg/L

Product/substance	Sodium benzoate
Species:	Fish, Brachydanio rerio
Test:	NOEC
Result:	10 mg/L

### 12.2 Persistence and degradability

Based on available data, the classification criteria are not met.

### 12.3 Bioaccumulative potential

Product/substance	Sodium benzoate
LogKow:	1.88
Conclusion:	-

### 12.4 Mobility in soil

No data available.

### 12.5 Results of PBT and vPvB assessment

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

### 12.6 Endocrine disrupting properties

This mixture/product does not contain any substances considered to have endocrine-disrupting properties in



relation to the environment.

**12.7 Other adverse effects**

None known.

**SECTION 13: DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

Product is not covered by regulations on dangerous waste.  
Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

**EWC code**

Not applicable.

**Specific labelling**

**Contaminated packing**

Packaging containing residues of the product must be disposed of similarly to the product.

**SECTION 14: TRANSPORT INFORMATION**

	<b>14.1 UN / ID</b>	<b>14.2 UN proper shipping name</b>	<b>14.3 Hazard class(es)</b>	<b>14.4 PG*</b>	<b>14.5 Env* *</b>	<b>Other information :</b>
ADR	-	-	-	-	-	-
IMDG	-	-	-	-	-	-

	<b>14.1 UN / ID</b>	<b>14.2 UN proper shipping name</b>	<b>14.3 Hazard class(es)</b>	<b>14.4 PG*</b>	<b>14.5 Env* *</b>	<b>Other information:</b>
IATA	-	-	-	-	-	-

\* Packing group

\*\* Environmental hazards

**Additional information**

Not dangerous goods according to ADR, IATA and IMDG.

**14.6 Special precautions for user**

Not applicable.

**14.7 Maritime transport in bulk according to IMO instruments**

**SECTION 15: REGULATORY INFORMATION**

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

Restrictions for application:	Restricted to professional users.
Demands for specific education:	No specific requirements.



SEVESO - Categories / dangerous substances:	Not applicable.
Additional information:	Not applicable.
Sources:	Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law. Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP) as retained and amended in UK law. Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as retained and amended in UK law.

## 15.2 Chemical safety assessment

No

## SECTION 16: OTHER INFORMATION

### Full text of H-phrases as mentioned in section 3

H319, Causes serious eye irritation.

### The full text of identified uses as mentioned in section 1

SU 1 = Agriculture, forestry, fishery

PC 12 = Fertilizers

### Abbreviations and acronyms

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road

ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor

CAS = Chemical Abstracts Service

CE = Conformité Européenne (European conformity)

CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]

CSA = Chemical Safety Assessment

CSR = Chemical Safety Report

DMEL = Derived Minimal Effect Level

DNEL = Derived No Effect Level

EINECS = European Inventory of Existing Commercial chemical Substances

ES = Exposure Scenario

EUH statement = CLP-specific Hazard statement

EuPCS = European Product Categorisation System

EWC = European Waste Catalogue

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

GWP = Global warming potential

IARC = International Agency for Research on Cancer (IARC)

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

OECD = Organisation for Economic Co-operation and Development

PBT = Persistent, Bioaccumulative and Toxic

PNEC = Predicted No Effect Concentration

RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail

RRN = REACH Registration Number

SCL = A specific concentration limit

SVHC = Substances of Very High Concern

STOT-RE = Specific Target Organ Toxicity - Repeated Exposure

SE = Specific Target Organ Toxicity - Single Exposure TWA = Time weighted average



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UN = United Nations

UVBC = Unknown or variable composition, complex reaction products or of biological materials

VOC = Volatile Organic Compound

vPvB = Very Persistent and Very Bioaccumulative

**Additional information**

Not applicable.

**The safety data sheet is validated by**

Simon Fox MD Emerald Research Ltd

**Other**

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a triangle.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.

Country-language: GB-en