SAFETY DATA SHEET
SYNTHETIC SEA WATER (ASTM D1141-98)

According to UK REACH.

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

1.1. Product identifier

Product name SYNTHETIC SEA WATER (ASTM D1141-98)

Product number 2813

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

Identified uses Laboratory reagent.

Uses advised against No specific uses advised against are identified. Use only for intended applications.

1.3. Details of the supplier of the safety data sheet

Supplier

Reagent Chemical Services
11b - 13 Aston Fields Road
Whitehouse Industrial Estate
Runcorn
Cheshire WA7 3DL
T: 01928 716903 (08.30 - 17.00)
F: 01928 716425
E: info@reagent.co.uk

1.4. Emergency telephone number

Emergency telephone

OHES Environmental Ltd 24-7
Tel. 0333 333 9939 (24 hour)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Not Classified

Environmental hazards Not Classified

2.2. Label elements

Hazard statements NC Not Classified

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

SYNTHETIC SEA WATER (ASTM D1141-98)

SODIUM CHLORIDE **1-5%**

CAS number: 7647-14-5 EC number: 231-598-3 REACH registration number: 01-2119489796-13-XXXX

Classification
Not Classified

Classification (67/548/EEC or 1999/45/EC)
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MAGNESIUM CHLORIDE HEXAHYDRATE **1-5%**

CAS number: 7791-18-6 EC number: 616-575-1

Classification
Not Classified

SODIUM SULPHATE **<1%**

CAS number: 7757-82-6 EC number: 231-820-9 REACH registration number: 01-2119519226-43-XXXX

Classification
Not Classified

CALCIUM CHLORIDE DIHYDRATE **<1%**

CAS number: 10035-04-8 EC number: 600-075-5

Classification
Eye Irrit. 2 - H319

POTASSIUM CHLORIDE **<1%**

CAS number: 7447-40-7 EC number: 231-211-8 REACH registration number: 01-2119539416-36-XXXX

Classification
Not Classified

Classification (67/548/EEC or 1999/45/EC)
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SODIUM HYDROGEN CARBONATE **<1%**

CAS number: 144-55-8 EC number: 205-633-8 REACH registration number: 01-2119457606-32-XXXX

Classification
Not Classified

Classification (67/548/EEC or 1999/45/EC)
-

POTASSIUM BROMIDE **<1%**

CAS number: 7758-02-3 EC number: 231-830-3 REACH registration number: 01-2119962195-33-XXXX

Classification
Not Classified

Classification (67/548/EEC or 1999/45/EC)
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SYNTHETIC SEA WATER (ASTM D1141-98)

STRONTIUM CHLORIDE HEXAHYDRATE		<1%
CAS number: 10025-70-4	EC number: 233-971-6	REACH registration number: 01-2119976354-29-XXXX

Classification
Eye Dam. 1 - H318

BORIC ACID		<1%
CAS number: 10043-35-3	EC number: 233-139-2	REACH registration number: 01-2119486683-25-XXXX

Classification
Repr. 1B - H360FD

SODIUM FLUORIDE		<1%
CAS number: 7681-49-4	EC number: 231-667-8	REACH registration number: 01-2119539420-47-XXXX

Classification
Acute Tox. 3 - H301
Skin Irrit. 2 - H315
Eye Irrit. 2 - H319

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medical personnel.

Inhalation Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt.

Ingestion Rinse mouth thoroughly with water. Remove any dentures. Stop if the affected person feels sick as vomiting may be dangerous. Do not induce vomiting unless under the direction of medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. Maintain an open airway. Loosen tight clothing such as collar, tie or belt.

Skin contact Remove affected person from source of contamination. Rinse immediately with plenty of water.

Eye contact Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Continue to rinse for at least 10 minutes.

Protection of first aiders First aid personnel should wear appropriate protective equipment during any rescue.

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

General information See Section 11 for additional information on health hazards. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation Prolonged inhalation of high concentrations may damage respiratory system.

Ingestion Gastrointestinal symptoms, including upset stomach. Nausea, vomiting.

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Skin contact Prolonged contact may cause dryness of the skin.

Eye contact May cause temporary eye irritation.

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

Notes for the doctor Treat symptomatically.

Specific treatments No special treatment required.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards Irritating gases or vapours.

Hazardous combustion products Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours.

5.3. Advice for firefighters

Protective actions during firefighting Avoid breathing fire gases or vapours. Evacuate area. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapours and protect men stopping the leak.

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions No action shall be taken without appropriate training or involving any personal risk. Keep unnecessary and unprotected personnel away from the spillage. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Wash thoroughly after dealing with a spillage.

6.2. Environmental precautions

Environmental precautions Avoid discharge to the aquatic environment. Large Spillages: Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).

6.3. Methods and material for containment and cleaning up

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Methods for cleaning up Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Reuse or recycle products wherever possible. Approach the spillage from upwind. Small Spillages: If the product is soluble in water, dilute the spillage with water and mop it up. Alternatively, or if it is not water-soluble, absorb the spillage with an inert, dry material and place it in a suitable waste disposal container. Large Spillages: If leakage cannot be stopped, evacuate area. Flush spilled material into an effluent treatment plant, or proceed as follows. Contain and absorb spillage with sand, earth or other non-combustible material. Place waste in labelled, sealed containers. Clean contaminated objects and areas thoroughly, observing environmental regulations. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. The requirements of the local water authority must be complied with if contaminated water is flushed directly to the sewer. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Handle all packages and containers carefully to minimise spills. Keep container tightly sealed when not in use. Avoid the formation of mists.

Advice on general occupational hygiene Wash promptly if skin becomes contaminated. Take off contaminated clothing. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Change work clothing daily before leaving workplace.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store away from incompatible materials (see Section 10). Store in accordance with local regulations. Store away from the following materials: Acids. Alkalis. Oxidising materials.

Storage class Chemical storage.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

SODIUM FLUORIDE

Long-term exposure limit (8-hour TWA): WEL 2.5 (Inorganic, as F) mg/m³
WEL = Workplace Exposure Limit.

DNEL No information available for DNEL of the mixture.

PNEC No information available for PNEC of the mixture.

SODIUM CHLORIDE (CAS: 7647-14-5)

SYNTHETIC SEA WATER (ASTM D1141-98)

DNEL

Workers - Inhalation; Long term systemic effects: 2068.62 mg/m³
Workers - Inhalation; Short term systemic effects: 2068.62 mg/m³
Workers - Dermal; Long term systemic effects: 295.52 mg/kg/day
Workers - Dermal; Short term systemic effects: 295.52 mg/kg/day
General population - Inhalation; Long term systemic effects: 443.28 mg/m³
General population - Inhalation; Short term systemic effects: 443.28 mg/m³
General population - Dermal; Long term systemic effects: 126.65 mg/kg/day
General population - Dermal; Short term systemic effects: 126.65 mg/kg/day
General population - Oral; Long term systemic effects: 126.65 mg/kg/day
General population - Oral; Short term systemic effects: 126.65 mg/kg/day

PNEC

- Fresh water; 5 mg/l
- STP; 500 mg/l
- Soil; 4.86 mg/kg

SODIUM HYDROGEN CARBONATE (CAS: 144-55-8)

DNEL

No information available for DNEL.

PNEC

No information available for PNEC.

BORIC ACID (CAS: 10043-35-3)

DNEL

Workers - Inhalation; Long term systemic effects: 8.3 mg/m³
Workers - Dermal; Long term systemic effects: 392 mg/kg
General population - Inhalation; Long term systemic effects: 4.15 mg/m³
General population - Dermal; Long term systemic effects: 196 mg/kg
General population - Oral; Long term systemic effects: 0.98 mg/kg/day

PNEC

- Fresh water; 2.9 mg/l
- marine water; 2.9 mg/l
- STP; 10 mg/l
- Soil; 5.7 mg/kg

8.2. Exposure controls

Protective equipment

Appropriate engineering controls

Provide adequate ventilation. Good general ventilation should be adequate to control worker exposure to airborne contaminants.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with European Standard EN166. The following protection should be worn: Chemical splash goggles.

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. To protect hands from chemicals, gloves should comply with European Standard EN374. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended. Wear protective gloves made of the following material: Nitrile rubber. Butyl rubber. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material.

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Other skin and body protection	Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.
Hygiene measures	Provide eyewash station and safety shower. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Clean equipment and the work area every day. Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke.
Respiratory protection	Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Provide adequate ventilation. Large Spillages: If ventilation is inadequate, suitable respiratory protection must be worn.
Environmental exposure controls	Not regarded as dangerous for the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Colourless.
Odour	Odourless.
pH	pH (concentrated solution): pH 8.2 - 8.3 @ 20°C
Melting point	Approx. 0°C
Initial boiling point and range	Approx. 100°C @
Flash point	Not relevant. The mixture is non-flammable.
Upper/lower flammability or explosive limits	Not applicable.
Vapour pressure	Not determined.
Vapour density	Not determined.
Relative density	Approx. 1.0 @ °C
Solubility(ies)	Miscible with water.
Partition coefficient	Not determined.
Auto-ignition temperature	Not relevant.
Decomposition Temperature	Not determined.
Viscosity	Not determined.
Explosive properties	Not considered to be explosive.
Oxidising properties	Does not meet the criteria for classification as oxidising.

9.2. Other information

Other information	None.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	The following materials may react with the product: Acids. Alkalis. Oxidising agents.

10.2. Chemical stability

SYNTHETIC SEA WATER (ASTM D1141-98)

Stability Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions May generate heat.

10.4. Conditions to avoid

Conditions to avoid Avoid heat. Freezing.

10.5. Incompatible materials

Materials to avoid Acids. Alkalis. Oxidising agents. May be corrosive to metals.

10.6. Hazardous decomposition products

Hazardous decomposition products Does not decompose when used and stored as recommended.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological effects Not regarded as a health hazard under current legislation.

Acute toxicity - oral

Notes (oral LD_{50}) Based on available data the classification criteria are not met.

Acute toxicity - dermal

Notes (dermal LD_{50}) Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Notes (inhalation LC_{50}) Based on available data the classification criteria are not met.

Skin corrosion/irritation

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

Serious eye damage/irritation

Serious eye damage/irritation Based on available data the classification criteria are not met.

Respiratory sensitisation

Respiratory sensitisation Based on available data the classification criteria are not met.

Skin sensitisation

Skin sensitisation Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met.

Carcinogenicity

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

IARC carcinogenicity None of the ingredients are listed or exempt.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Reproductive toxicity - development Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

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STOT - single exposure Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard

Aspiration hazard Based on available data the classification criteria are not met.

General information No specific health hazards known. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation Prolonged inhalation of high concentrations may damage respiratory system.

Ingestion Gastrointestinal symptoms, including upset stomach. Nausea, vomiting.

Skin contact Prolonged contact may cause dryness of the skin.

Eye contact May cause temporary eye irritation.

Route of exposure Ingestion Inhalation Skin and/or eye contact

Target organs No specific target organs known.

Toxicological information on ingredients.

SODIUM CHLORIDE

Toxicological effects The product is not classified for toxicological properties.

General information No specific health hazards known. The product is classed as non-hazardous, the following information is given as general advice.

Inhalation Dust may irritate the respiratory system. Symptoms following overexposure may include the following: Coughing.

Ingestion Nausea, vomiting.

Skin contact May cause irritation on prolonged or repeated contact.

Eye contact Irritating to eyes.

Acute and chronic health hazards Although not classified as hazardous, the product should be treated with the care and attention appropriate to chemicals.

MAGNESIUM CHLORIDE HEXAHYDRATE

Acute toxicity - inhalation

Notes (inhalation LC_{50}) No specific test data are available.

Skin corrosion/irritation

Skin corrosion/irritation Based on available data the classification criteria are not met.

Serious eye damage/irritation

Serious eye damage/irritation Based on available data the classification criteria are not met.

Respiratory sensitisation

Respiratory sensitisation Based on available data the classification criteria are not met.

Skin sensitisation

SYNTHETIC SEA WATER (ASTM D1141-98)

Skin sensitisation	Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro	Based on available data the classification criteria are not met.
Genotoxicity - in vivo	Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity	There is no evidence that the product can cause cancer.

Reproductive toxicity

Reproductive toxicity - fertility	Based on available data the classification criteria are not met.
Reproductive toxicity - development	This substance has no evidence of toxicity to reproduction.

Specific target organ toxicity - single exposure

STOT - single exposure	Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure	Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard	Not anticipated to present an aspiration hazard, based on chemical structure.

General information	No specific health hazards known.
Inhalation	May cause discomfort.
Ingestion	Stomach pain. Nausea, vomiting.
Skin contact	May cause irritation.
Eye contact	May irritate eyes.
Acute and chronic health hazards	No specific long-term effects known.
Route of exposure	Not specific
Target organs	No specific target organs known.

POTASSIUM CHLORIDE

Toxicological effects	Not regarded as a health hazard under current legislation.

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	3,020.0
Species	Rat
Notes (oral LD_{50})	Based on available data the classification criteria are not met.
ATE oral (mg/kg)	3,020.0

Acute toxicity - dermal

SYNTHETIC SEA WATER (ASTM D1141-98)

Notes (dermal LD_{50})	Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Notes (inhalation LC_{50})	Based on available data the classification criteria are not met.

Skin corrosion/irritation

Skin corrosion/irritation	Not irritating.
Animal data	Based on available data the classification criteria are not met.

Serious eye damage/irritation

Serious eye damage/irritation	Based on available data the classification criteria are not met.

Respiratory sensitisation

Respiratory sensitisation	Based on available data the classification criteria are not met.

Skin sensitisation

Skin sensitisation	Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro	Based on available data the classification criteria are not met.
Genotoxicity - in vivo	Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity	Based on available data the classification criteria are not met.
IARC carcinogenicity	None of the ingredients are listed or exempt.

Reproductive toxicity

Reproductive toxicity - fertility	Based on available data the classification criteria are not met.
Reproductive toxicity - development	Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure	Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure	Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard

Aspiration hazard	Not relevant. Solid.

General information	No specific health hazards known. Dust may irritate the eyes and the respiratory system. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	Dust may irritate the respiratory system. Frequent inhalation of dust over a long period of time increases the risk of developing lung diseases.
Ingestion	May cause discomfort if swallowed. May cause stomach pain or vomiting.
Skin contact	Prolonged contact may cause dryness of the skin.

SYNTHETIC SEA WATER (ASTM D1141-98)

Eye contact	Dust may cause slight irritation.
Route of exposure	Ingestion Inhalation Skin and/or eye contact
Target organs	No specific target organs known.

SODIUM HYDROGEN CARBONATE

Toxicological effects	The product is not classified for toxicological properties.

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	4,000.0
Species	Rat
Notes (oral LD_{50})	LD_{50} >4000 mg/kg, Oral, Rat

Acute toxicity - inhalation

Acute toxicity inhalation (LC_{50} dust/mist mg/l)	4.74
Species	Rat
Notes (inhalation LC_{50})	Dose level: >4.74 mg/l, 4.5 hours, Vapour Rat
ATE inhalation (dusts/mists mg/l)	4.74

General information	No specific health hazards known. The product is classed as non-hazardous, the following information is given as general advice.
Inhalation	Dust may irritate the respiratory system. Symptoms following overexposure may include the following: Coughing.
Ingestion	May cause nausea and vomiting.
Skin contact	May cause irritation on prolonged or repeated contact.
Eye contact	May cause temporary eye irritation.

POTASSIUM BROMIDE

General information	Known or suspected mutagen.
Acute and chronic health hazards	Pregnant women should not be exposed to this substance. Although not classified as hazardous, the product should be treated with the care and attention appropriate to chemicals.

BORIC ACID

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	2,660.0
Species	Rat
ATE oral (mg/kg)	2,660.0

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Acute toxicity - dermal

Notes (dermal LD_{50}) No specific test data are available.

Acute toxicity - inhalation

Notes (inhalation LC_{50}) No specific test data are available.

Skin corrosion/irritation

Skin corrosion/irritation Based on available data the classification criteria are not met.

Serious eye damage/irritation

Serious eye damage/irritation Based on available data the classification criteria are not met.

Respiratory sensitisation

Respiratory sensitisation Based on available data the classification criteria are not met.

Skin sensitisation

Skin sensitisation Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met.

Genotoxicity - in vivo Based on available data the classification criteria are not met.

Carcinogenicity

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

Reproductive toxicity

Reproductive toxicity - fertility Suspected of damaging fertility.

Reproductive toxicity - development May damage the unborn child.

Specific target organ toxicity - single exposure

STOT - single exposure No specific test data are available.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure No specific test data are available.

Aspiration hazard

Aspiration hazard Not anticipated to present an aspiration hazard, based on chemical structure.

SECTION 12: Ecological information

Ecotoxicity Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.

Ecological information on ingredients.

SODIUM CHLORIDE

Ecotoxicity Although not classified as environmentally hazardous, harmful effects cannot be excluded in the event of improper handling or disposal.

MAGNESIUM CHLORIDE HEXAHYDRATE

SYNTHETIC SEA WATER (ASTM D1141-98)

Ecotoxicity The product is not expected to be hazardous to the environment.

POTASSIUM CHLORIDE

Ecotoxicity Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.

SODIUM HYDROGEN CARBONATE

Ecotoxicity The product is not expected to be hazardous to the environment.

POTASSIUM BROMIDE

Ecotoxicity Although not classified as environmentally hazardous, harmful effects cannot be excluded in the event of improper handling or disposal.

BORIC ACID

Ecotoxicity The product is not expected to be hazardous to the environment.

12.1. Toxicity

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

Ecological information on ingredients.

SODIUM CHLORIDE

Acute aquatic toxicity

Acute toxicity - fish LC_{50}, 96 hours: 5840 mg/l, Lepomis macrochirus (Bluegill)

Acute toxicity - aquatic invertebrates LC_{50}, 48 hours: 874 mg/l, Daphnia magna

Chronic aquatic toxicity

Chronic toxicity - fish early life stage LOEC, 33 days: 352 mg/l, Pimephales promelas (Fat-head Minnow)

MAGNESIUM CHLORIDE HEXAHYDRATE

Acute aquatic toxicity

Acute toxicity - fish No specific test data are available.

Acute toxicity - aquatic invertebrates No specific test data are available.

Acute toxicity - aquatic plants Not determined.

POTASSIUM CHLORIDE

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

Acute aquatic toxicity

Acute toxicity - fish LC_{50}, 96 hours: 880 mg/l, Pimephales promelas (Fat-head Minnow)

Acute toxicity - aquatic invertebrates EC_{50}, 48 hours: >440 mg/l, Daphnia magna

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Acute toxicity - aquatic plants EC_{50}, 72 hours: 100 mg/l, Desmodesmus subspicatus

SODIUM HYDROGEN CARBONATE

Acute aquatic toxicity

Acute toxicity - fish NOEC, 96 hours: 5200 mg/l, Lepomis macrochirus (Bluegill)

Acute toxicity - aquatic invertebrates NOEC, 48 hours: 3100 mg/l, Daphnia magna
Mobility.

Chronic aquatic toxicity

Chronic toxicity - aquatic invertebrates NOEC, 21 days: >576 mg/l, Daphnia magna

BORIC ACID

Acute aquatic toxicity

Acute toxicity - fish LC_{50}, 96 hours: 279 mg/l, Freshwater fish

Acute toxicity - aquatic invertebrates EC_{50}, 48 hours: 133 mg/l, Daphnia magna

Acute toxicity - aquatic plants Not known.

12.2. Persistence and degradability

Persistence and degradability The product is not expected to be biodegradable.

Stability (hydrolysis) Not applicable.

Ecological information on ingredients.

SODIUM CHLORIDE

Stability (hydrolysis) Scientifically unjustified.

Biodegradation Technically not feasible.

MAGNESIUM CHLORIDE HEXAHYDRATE

Persistence and degradability There are no data on the degradability of this product.

POTASSIUM CHLORIDE

Persistence and degradability The product contains inorganic substances which are not biodegradable.

SODIUM HYDROGEN CARBONATE

Persistence and degradability The substance is inorganic and not susceptable to hydrolysis or degradability.

Phototransformation Technically not feasible.

Stability (hydrolysis) Scientifically unjustified.

BORIC ACID

SYNTHETIC SEA WATER (ASTM D1141-98)

Persistence and degradability There are no data on the degradability of this product.

12.3. Bioaccumulative potential

Bioaccumulative potential Bioaccumulation is unlikely.

Partition coefficient Not determined.

Ecological information on ingredients.

SODIUM CHLORIDE

Bioaccumulative potential Not relevant.

MAGNESIUM CHLORIDE HEXAHYDRATE

Bioaccumulative potential No specific test data are available.

Partition coefficient Not determined.

POTASSIUM CHLORIDE

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient No specific test data are available.

SODIUM HYDROGEN CARBONATE

Bioaccumulative potential The product is not bioaccumulating.

BORIC ACID

Bioaccumulative potential Boron has a low bioaccumulation potential.

Partition coefficient Not determined.

12.4. Mobility in soil

Mobility The product is miscible with water and may spread in water systems. The product is non-volatile.

Adsorption/desorption coefficient Not determined.

Ecological information on ingredients.

SODIUM CHLORIDE

Adsorption/desorption coefficient Not relevant.

MAGNESIUM CHLORIDE HEXAHYDRATE

Mobility The product is soluble in water.

POTASSIUM CHLORIDE

Mobility The product is water-soluble and may spread in water systems.

SYNTHETIC SEA WATER (ASTM D1141-98)

SODIUM HYDROGEN CARBONATE

Mobility Sodium bicarbonate is ionised in water, the sodium ion will be adsorbed onto the soil surface and the bicarbonate will remain in solution.

Adsorption/desorption coefficient Scientifically unjustified.

BORIC ACID

Mobility The product is soluble in water.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

Ecological information on ingredients.

SODIUM CHLORIDE

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

MAGNESIUM CHLORIDE HEXAHYDRATE

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

POTASSIUM CHLORIDE

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

SODIUM HYDROGEN CARBONATE

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

BORIC ACID

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects None known.

Ecological information on ingredients.

SODIUM CHLORIDE

Other adverse effects None known.

MAGNESIUM CHLORIDE HEXAHYDRATE

Other adverse effects None known.

POTASSIUM CHLORIDE

SYNTHETIC SEA WATER (ASTM D1141-98)

Other adverse effects None known.

SODIUM HYDROGEN CARBONATE

Other adverse effects Will affect drinking water supplies.

BORIC ACID

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information The generation of waste should be minimised or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements.

Disposal methods Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste packaging should be collected for reuse or recycling. Incineration or landfill should only be considered when recycling is not feasible. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of the local water authority.

SECTION 14: Transport information

14.1. UN number

Not classified.

14.2. UN proper shipping name

Not classified.

14.3. Transport hazard class(es)

Not classified.

14.4. Packing group

Not classified.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7. 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 Not applicable.

SECTION 15: Regulatory information

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

SYNTHETIC SEA WATER (ASTM D1141-98)

National regulations

Health and Safety at Work etc. Act 1974 (as amended).
Control of Substances Hazardous to Health Regulations 2002 (as amended).
EH40/2005 Workplace exposure limits.
GB Mandatory Classification and Labelling List (GB MCL)
UK REACH and UK CLP Regulations.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

Inventories

EU - EINECS/ELINCS

None of the ingredients are listed or exempt.

SECTION 16: Other information

Abbreviations and acronyms 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.
RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
IATA: International Air Transport Association.
ICAO: Technical Instructions for the Safe Transport of Dangerous Goods by Air.
IMDG: International Maritime Dangerous Goods.
CAS: Chemical Abstracts Service.
ATE: Acute Toxicity Estimate.
LC_{50}: Lethal Concentration to 50 % of a test population.
LD_{50}: Lethal Dose to 50% of a test population (Median Lethal Dose).
EC_{50}: 50% of maximal Effective Concentration.
PBT: Persistent, Bioaccumulative and Toxic substance.
vPvB: Very Persistent and Very Bioaccumulative.

General information

This datasheet is not intended to be a replacement for a full risk assessment, these should always be carried out by competent persons.

Key literature references and sources for data

Source: European Chemicals Agency, http://echa.europa.eu/ GB Mandatory Classification and Labelling List (GB MCL)

Training advice

Only trained personnel should use this material.

Revision comments

Full revision

Revision date

07/05/2024

Revision

4

Supersedes date

20/02/2020

SDS number

11739

Hazard statements in full

H301 Toxic if swallowed.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H360FD May damage fertility. May damage the unborn child.