

SAFETY DATA SHEET

Shogun Terragrow

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

1.1. Product identifier

Trade name

Shogun Terragrow

Unique formula identifier (UFI)

DS00-V0W2-N007-0DNH

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

Relevant identified uses of the substance or mixture

None known.

Uses advised against

None known.

1.3. Details of the supplier of the safety data sheet

Company and address

Aqualabs Ltd

Unit 3A

Parkway One

Parkway Drive

S9 4WU Sheffield

United Kingdom

+44 (0) 114 244 3592

Contact person

Simon Spinks

E-mail

simon.spinks@aqualabs-uk.com

Revision

10/10/2024

SDS Version

1.0

1.4. Emergency telephone number

Healthcare professionals: Dial 0344 892 0111 to reach The National Poisons Information Service (NPIS) (24 hour service)

General public:

England - Dial 111 to reach NHS 111 (24 hour service)

Scotland - Dial 112 to reach NHS 24 (24 hour service)

Wales - Dial 111 or 0845 4647 to reach NHS Direct (24 hour service)

See section 4 "First aid measures".

SECTION 2: Hazards identification

Classified according to Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

2.1. Classification of the substance or mixture

Skin Sens. 1; H317, May cause an allergic skin reaction.

Eye Irrit. 2; H319, Causes serious eye irritation.

2.2. Label elements

Hazard pictogram(s)



Signal word

Warning

Hazard statement(s)

May cause an allergic skin reaction. (H317)

Causes serious eye irritation. (H319)

Precautionary statement(s)

General

If medical advice is needed, have product container or label at hand. (P101)

Keep out of reach of children. (P102)

Prevention

Avoid breathing mist/vapour. (P261)

Wash hands thoroughly after handling. (P264)

Wear protective gloves/protective clothing/eye protection/face protection. (P280)

Response

IF ON SKIN: Wash with plenty of water and soap. (P302+P352)

If skin irritation or rash occurs: Get medical advice/attention. (P333+P313)

Storage

-

Disposal

Dispose of contents/container in accordance with local regulation (P501)

Hazardous substances

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

Additional labelling

UFI: DS00-V0W2-N007-0DNH

2.3. Other hazards

Additional warnings

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

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) 2023/707.

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
Ammonium nitrate	CAS No.: 6484-52-2 EC No.: 229-347-8 UK-REACH: Index No.:	10-15%	Ox. Sol. 3, H272 Eye Irrit. 2, H319	[3]
Potassium nitrate	CAS No.: 7757-79-1 EC No.: 231-818-8 UK-REACH: 01-2119488224-35 Index No.:	3-5%	Ox. Sol. 3, H272	
Potassium dihydrogenorthophosphate	CAS No.: 7778-77-0 EC No.: 231-913-4 UK-REACH: Index No.:	1-3%		
Magnesium nitrate	CAS No.: 10377-60-3 EC No.: 233-826-7 UK-REACH: 01- 2119491164-38 Index No.:	1-3%	Ox. Sol. 3, H272 Eye Irrit. 2, H319	
Potassium sulfate	CAS No.: 7778-80-5 EC No.: 231-915-5	1-3%		

	UK-REACH: Index No.:		
Sodium nitrate	CAS No.: 7631-99-4 EC No.: 231-554-3 UK-REACH: 01-2119488221-41 Index No.:	1-3%	Ox. Sol. 3, H272 Eye Irrit. 2, H319
phosphoric acid ... %, orthophosphoric acid ... %	CAS No.: 7664-38-2 EC No.: 231-633-2 UK-REACH: 01-2119485924-24 Index No.: 015-011-00-6	<1%	Skin Corr. 1B, H314 (SCL: 25.00 %) [1] Skin Irrit. 2, H315 (SCL: 10.00 %) Eye Irrit. 2, H319 (SCL: 10.00 %)
bronopol (INN);2-bromo-2-nitropropane-1,3-diol	CAS No.: 52-51-7 EC No.: 200-143-0 UK-REACH: 01-2119980938-15-XXXX Index No.: 603-085-00-8	<0.1%	Acute Tox. 4, H302 (ATE: 324.00 mg/kg) Acute Tox. 4, H312 (ATE: 1600.00 mg/kg) Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Acute 1, H400 (M=10)
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	CAS No.: 55965-84-9 EC No.: 611-341-5 UK-REACH: 01-2120764691-48 Index No.: 613-167-00-5	<0.01%	EUH071 Acute Tox. 3, H301 (ATE: 66.00 mg/kg) Acute Tox. 2, H310 (ATE: 141.00 mg/kg) Skin Corr. 1C, H314 (SCL: 0.60 %) Skin Irrit. 2, H315 (SCL: 0.06 %) Skin Sens. 1A, H317 (SCL: 0.0015 %) Eye Dam. 1, H318 (SCL: 0.60 %) Eye Irrit. 2, H319 (SCL: 0.06 %) Acute Tox. 2, H330 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410 (M=100)

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

Other information

[1] European occupational exposure limit.

[3] According to UK REACH, Annex XVII, the substance is subject to restrictions.

SECTION 4: First aid measures

4.1. Description 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

IF ON SKIN: Wash with plenty of water and soap.

Remove contaminated clothing and shoes. Ensure to wash exposed skin thoroughly with water and soap. DO NOT use solvents or thinners.

If skin irritation occurs: Get medical advice/attention.

Eye contact

If in eyes: Flush eyes immediately with plenty of water or isotonic water (20-30 °C) for at least 5 minutes and continue until irritation stops. Remove contact lenses. Make sure to flush under upper and lower eyelids. If irritation continues, contact a doctor. 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

Headache, Methaemoglobinaemia (Ammonium nitrate)

Sensitisation: This product contains substances, which may trigger allergic reaction upon dermal contact.

Manifestation of allergic reactions typically takes place within 12-72 hours after exposure.

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

If skin irritation or rash occurs: Get medical advice/attention.

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:

Sulphur oxides

Nitrogen oxides (NO_x)

Some metal oxides

Ammonia (NH₃)

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact

The National Poisons Information Service (dial 111, 24 h service) in order to obtain further advice.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid direct contact with spilled substances.

Ensure adequate ventilation, especially in confined areas.

Contaminated areas may be slippery.

6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc. In the event of leakage to the surroundings, contact local environmental authorities.

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 conditions

Dry, cool and well ventilated

Incompatible materials

Reducing agents
Strong acids
Strong bases
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

phosphoric acid ... %, orthophosphoric acid ... %

Long term exposure limit (8 hours) (mg/m³): 1

Short term exposure limit (15 minutes) (mg/m³): 2

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

phosphoric acid ... %, orthophosphoric acid ... %

Duration:	Route of exposure:	DNEL:
Long term – Local effects - General population	Inhalation	0.36 mg/m ³
Long term – Local effects - Workers	Inhalation	1 mg/m ³
Long term – Systemic effects - Workers	Inhalation	10.7 mg/m ³
Short term – Local effects - Workers	Inhalation	2 mg/m ³
Long term – Systemic effects - General population	Oral	4.57 mg/kg bw/day

PNEC

Ammonium nitrate

Route of exposure:	Duration of Exposure:	PNEC:
Sewage treatment plant		18 mg/L

Magnesium nitrate

Route of exposure:	Duration of Exposure:	PNEC:
Sewage treatment plant		18 mg/L

Potassium nitrate

Route of exposure:	Duration of Exposure:	PNEC:
Sewage treatment plant		18 mg/L

Sodium nitrate

Route of exposure:	Duration of Exposure:	PNEC:
Sewage treatment plant		18 mg/L

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.

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. Wear a protective suit in the event of prolonged periods of work with the product.	-	-




Hand protection

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards
Gloves	-	-	EN374



Eye protection

Type	Standards
Safety glasses	EN ISO 16321-1



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state

Liquid

Colour

No relevant or available data due to the nature of the product.

Odour / Odour threshold

No relevant or available data due to the nature of the product.

pH

2.2

Density (g/cm³)

1.13

Kinematic viscosity

No relevant or available data due to the nature of the product.

Particle characteristics

Does not apply to liquids.

Phase changes

Melting point/Freezing point (°C)

No relevant or available data due to the nature of the product.

Softening point/range (°C)

Does not apply to liquids.

Boiling point (°C)

No relevant or available data due to the nature of the product.

Vapour pressure

No relevant or available data due to the nature of the product.

Relative vapour density

No relevant or available data due to the nature of the product.

Decomposition temperature (°C)

No relevant or available data due to the nature of the product.

Data on fire and explosion hazards

Flash point (°C)

No relevant or available data due to the nature of the product.

Flammability (°C)

No relevant or available data due to the nature of the product.

Auto-ignition temperature (°C)

No relevant or available data due to the nature of the product.

Lower and upper explosion limit (% v/v)

No relevant or available data due to the nature of the product.

Solubility

Solubility in water

No relevant or available data due to the nature of the product.

n-octanol/water coefficient (LogKow)

No relevant or available data due to the nature of the product.

Solubility in fat (g/L)

No relevant or available data due to the nature of the product.

9.2. Other information

Oxidizing properties

No relevant or available data 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

Extremes of temperature

10.5. Incompatible materials

Reducing agents

Strong acids

Strong bases

Strong oxidizing 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 hazard classes as defined in Regulation (EC) No 1272/2008 as retained and amended in UK law

Acute toxicity

Product/substance Ammonium nitrate
 Test method: OECD 401
 Species: Rat
 Route of exposure: Oral
 Test: LC50
 Result: 2950 mg/kg

Product/substance Ammonium nitrate
 Test method: OECD 402
 Species: Rat
 Route of exposure: Dermal
 Test: LD50
 Result: >5,000 mg/kg

Product/substance Potassium nitrate
 Species: Rat
 Route of exposure: Oral
 Test: LD50
 Result: 2000 mg/kg

Product/substance Potassium nitrate
 Species: Rat
 Route of exposure: Dermal
 Test: LD50
 Result: > 5,000 mg/kg

Product/substance Magnesium nitrate
 Test method: OECD 402
 Species: Rat
 Route of exposure: Dermal
 Test: LD50
 Result: >5,000 mg/kg

Product/substance Magnesium nitrate
 Test method: OECD 401
 Species: Rat
 Route of exposure: Oral
 Test: LD50
 Result: >5,000 mg/L

Product/substance Sodium nitrate
 Species: Rat
 Route of exposure: Oral
 Result: > 2000 mg/kg

Product/substance Sodium nitrate
 Species: Rat
 Route of exposure: Dermal
 Result: > 5000 mg/kg bw

Product/substance phosphoric acid ... %, orthophosphoric acid ... %
 Test method: OECD 423
 Species: Rat
 Route of exposure: Oral
 Result: Oral LD50 300 <LD50 ≤2000 mg/kg

Skin corrosion/irritation

Product/substance Potassium nitrate
 Test method: OECD 404
 Species: Rabbit
 Result: No adverse effect observed (Not irritating)

Serious eye damage/irritation

Product/substance Ammonium nitrate
 Test method: OECD 405

Species: Rabbit
Description: Irritant

Product/substance: Magnesium nitrate
Test method: OECD 405
Species: Rabbit
Description: Irritant

Causes serious eye irritation.

Respiratory sensitisation

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

Skin sensitisation

Product/substance: Ammonium nitrate
Test method: OECD 429
Species: Mouse
Description: Not sensitising.
Result: No adverse effect observed (not sensitising)

Product/substance: bronopol (INN);2-bromo-2-nitropropane-1,3-diol
Test method: OECD 429
Species: Mouse
Description: Not sensitising.
Result: No adverse effect observed (not sensitising)

Product/substance: reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)
Test method: OECD 406
Species: Guinea pig
Description: sensitising - S 171 (b)
Result: Adverse effect observed (sensitising)

Germ cell mutagenicity

Product/substance: Ammonium nitrate
Test method: OECD 473
Conclusion: No adverse effect observed

Product/substance: Ammonium nitrate
Test method: OECD 474
Conclusion: No adverse effect observed

Product/substance: Ammonium nitrate
Test method: OECD 475
Conclusion: No adverse effect observed

Product/substance: Ammonium nitrate
Test method: OECD 471
Conclusion: No adverse effect observed

Carcinogenicity

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

Reproductive toxicity

Product/substance: Ammonium nitrate
Test method: OECD 422
Species: Rat
Duration: 28 days
Test: NOAEL
Result: >1500 mg/kg bw/day
Conclusion: No adverse effect observed

Product/substance: Magnesium nitrate
Test method: OECD 422
Species: Rat
Duration: 28 days
Result: > 1500 mg/kg bw/day
Conclusion: No adverse effect observed

Product/substance	phosphoric acid ... %, orthophosphoric acid ... %
Test method:	OECD 422
Species:	Rat
Test:	NOAEL
Result:	≥500 mg/kg bw/day
Conclusion:	No adverse effect observed

Product/substance	phosphoric acid ... %, orthophosphoric acid ... %
Test method:	OECD 426
Species:	Rat
Test:	NOAEL
Result:	≥410 mg/kg bw/day
Conclusion:	No adverse effect observed

STOT-single exposure

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

STOT-repeated exposure

Product/substance	phosphoric acid ... %, orthophosphoric acid ... %
Species:	Rat
Route of exposure:	Oral
Test:	NOAEL
Result:	250 mg/kg bw/day
Conclusion:	No adverse effect observed

Aspiration hazard

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

11.2. Information on other hazards

Long term effects

Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs.
Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

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	Ammonium nitrate
Species:	Fish
Compartment:	Freshwater
Duration:	48 hours
Test:	LC50
Result:	447 mg/L

Product/substance	Ammonium nitrate
Species:	Daphnia
Compartment:	Freshwater
Duration:	48 hours
Test:	EC50
Result:	490 mg/L

Product/substance	Ammonium nitrate
Species:	Algae
Compartment:	Marine water
Duration:	10 days
Test:	EC50

Product/substance	Potassium nitrate
Test method:	OECD 203
Species:	Fish
Compartment:	Freshwater

Duration: 96 hours
 Test: LC50
 Result: > 100 mg/L

Product/substance Potassium nitrate
 Species: Daphnia
 Compartment: Freshwater
 Duration: 48 hours
 Test: EC50
 Result: 490 mg/L

Product/substance Potassium nitrate
 Species: Algae
 Compartment: Marine water
 Duration: 10 days
 Result: > 1.700 mg/L

Product/substance Magnesium nitrate
 Test method: OECD 203
 Species: Fish
 Compartment: Freshwater
 Duration: 96 hours
 Test: LC50
 Result: > 100 mg/L

Product/substance Magnesium nitrate
 Species: Daphnia
 Compartment: Freshwater
 Duration: 48 hours
 Result: 490 mg/L

Product/substance Sodium nitrate
 Species: Fish
 Compartment: Freshwater
 Test: LC50
 Result: 1354 mg/L

Product/substance Sodium nitrate
 Species: Fish
 Compartment: Marine water
 Test: LC50
 Result: 4400 mg/L

Product/substance Sodium nitrate
 Species: Daphnia, Daphnia magna
 Duration: 24 hours
 Test: EC50
 Result: 8600 mg/L

Product/substance Sodium nitrate
 Species: Algae
 Duration: 96 hours
 Test: EC50
 Result: > 1700 mg/L

Product/substance Sodium nitrate
 Species: Algae
 Duration: 10 days
 Test: EC50
 Result: > 1700 mg/L

Product/substance phosphoric acid ... %, orthophosphoric acid ... %
 Test method: OECD 202
 Species: Daphnia, Daphnia magna

Compartment:	Freshwater
Duration:	48 hours
Test:	EC50
Result:	> 100 mg/L
Product/substance	phosphoric acid ... %, orthophosphoric acid ... %
Test method:	OECD 201
Species:	Algae
Compartment:	Freshwater
Duration:	72 hours
Test:	EC50
Result:	> 100 mg/kg bw/day
Product/substance	phosphoric acid ... %, orthophosphoric acid ... %
Species:	Fish, <i>Lepomis macrochirus</i>
Result:	median lethal pH 96h : 3-3.25 (Bluegill fish) fish mortality is caused by low pH values
Product/substance	bronopol (INN);2-bromo-2-nitropropane-1,3-diol
Test method:	OECD 201
Species:	Algae
Duration:	72 hours
Test:	EC50
Result:	0.068 mg/L
Product/substance	bronopol (INN);2-bromo-2-nitropropane-1,3-diol
Test method:	OECD 202
Species:	Daphnia
Duration:	48 hours
Test:	EC50
Result:	1.04 mg/L
Product/substance	bronopol (INN);2-bromo-2-nitropropane-1,3-diol
Test method:	OECD 203
Species:	Fish, <i>Lepomis macrochirus</i>
Duration:	96 hours
Test:	LC50
Result:	11 mg/L
Product/substance	bronopol (INN);2-bromo-2-nitropropane-1,3-diol
Test method:	OECD 211
Species:	Daphnia
Duration:	21 days
Test:	NOEC
Result:	0.06 mg/L
Product/substance	bronopol (INN);2-bromo-2-nitropropane-1,3-diol
Test method:	OECD 201
Species:	Fish, <i>Oncorhynchus mykiss</i>
Duration:	28 days
Test:	NOEC
Result:	0.0025 mg/L
Product/substance	bronopol (INN);2-bromo-2-nitropropane-1,3-diol
Test method:	OECD 201
Species:	Algae
Duration:	72 hours
Test:	NOEC
Result:	0.0025 mg/L
Product/substance	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)
Test method:	OECD 201
Species:	Algae, <i>Pseudokirchneriella subcapitata</i>
Duration:	72 hours
Test:	EC50

Result:	0.048 mg/L
Product/substance	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)
Test method:	OECD 202
Species:	Daphnia
Duration:	48 hours
Test:	EC50
Result:	0.1 mg/L
Product/substance	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)
Test method:	OECD 203
Species:	Fish, <i>Oncorhynchus mykiss</i>
Duration:	96 hours
Test:	LC50
Result:	0.22 mg/L
Product/substance	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)
Test method:	OECD 201
Species:	Algae, <i>Skeletonema costatum</i>
Duration:	48 hours
Test:	EC50
Result:	0.0052 mg/L
Product/substance	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)
Test method:	OECD 211
Species:	Daphnia
Duration:	21 days
Test:	NOEC
Result:	0.004 mg/L
Product/substance	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)
Test method:	OECD 215
Species:	Fish, <i>Oncorhynchus mykiss</i>
Duration:	28 days
Test:	NOEC
Result:	0.098 mg/L
Product/substance	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)
Test method:	OECD 201
Species:	Algae, <i>Pseudokirchneriella subcapitata</i>
Duration:	72 hours
Test:	NOEC
Result:	0.0012 mg/L
Product/substance	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)
Test method:	OECD 209
Compartment:	Activated Sludge Plant
Duration:	3 hours
Test:	EC50
Result:	7.92 mg/L
Product/substance	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)
Test method:	OECD 209
Compartment:	Activated Sludge Plant
Duration:	3 hours
Test:	EC20
Result:	0.97 mg/L

12.2. Persistence and degradability

Product/substance	Ammonium nitrate
Conclusion:	Readily biodegradable
Product/substance	Potassium nitrate
Conclusion:	Readily biodegradable

Product/substance	phosphoric acid ... %, orthophosphoric acid ... %
Result:	Phosphoric acid dissociates in water into H_3O^+ , $H_2PO_4^-$, HPO_4^{2-} ions, which cannot be further degraded.
Conclusion:	The substance is inorganic. Biodegradation studies are not applicable.

Product/substance	bronopol (INN);2-bromo-2-nitropropane-1,3-diol
Compartment:	Activated Sludge Plant
Duration:	3 hours
Result:	>70 %
Conclusion:	Not biodegradable
Test:	OECD 301 B

12.3. Bioaccumulative potential

Product/substance	Ammonium nitrate
Conclusion:	No potential for bioaccumulation

Product/substance	Sodium nitrate
LogKow:	-3.8
Conclusion:	Potential for bioaccumulation is low

Product/substance	phosphoric acid ... %, orthophosphoric acid ... %
Conclusion:	No potential for bioaccumulation

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.

Dispose of contents/container to an approved waste disposal plant.

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

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

No data available.

SECTION 15: Regulatory information

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

Restrictions for application

People under the age of 18 shall not be exposed to this product.

Demands for specific education

No specific requirements.

Control of Major Accident Hazards (COMAH) - Categories / dangerous substances

Ammonium nitrate

Potassium nitrate

Regulation on explosives precursors

Ammonium nitrate (Annex I)

Potassium nitrate (Annex II)

Sodium nitrate (Annex II)

UK-REACH, Annex XVII

Ammonium nitrate is subject to restrictions, UK-REACH annex XVII (entry 58).

Additional information

Not applicable.

Sources

The Management of Health and Safety at Work Regulations 1999.

Control of Major Accident Hazards (COMAH) Regulations 2015.

Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

Council Regulation (EC) No 2019/1148 on explosives precursors 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

H302, Harmful if swallowed.

H303, May intensify fire; oxidiser.

H304, Toxic if swallowed.

H305, Harmful if swallowed.

H310, Fatal in contact with skin.

H312, Harmful in contact with skin.

H314, Causes severe skin burns and eye damage.

H315, Causes skin irritation.

H317, May cause an allergic skin reaction.

H318, Causes serious eye damage.

H319, Causes serious eye irritation.

H330, Fatal if inhaled.

H335, May cause respiratory irritation.

H400, Very toxic to aquatic life.

H410, Very toxic to aquatic life with long lasting effects.

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

The classification of the substance/mixture in regard of health hazards are in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

The safety data sheet is validated by

NHP

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.

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