

## SAFETY DATA SHEET

## Shogun CalMag

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

## 1.1. Product identifier

## Trade name

Shogun CalMag

## Unique formula identifier (UFI)

9X00-W08V-8007-A2TN

## 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

Eye Dam. 1; H318, Causes serious eye damage.

## 2.2. Label elements

## Hazard pictogram(s)



## Signal word

Danger

#### Hazard statement(s)

Causes serious eye damage. (H318)

#### 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

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

##### Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing. (P305+P351+P338)

Immediately call a POISON CENTER/doctor. (P310)

##### Storage

-

##### Disposal

-

#### Hazardous substances

Nitric acid, ammonium calcium salt

#### Additional labelling

UFI: 9X00-W08V-8007-A2TN

### 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
Magnesium nitrate	CAS No.: 10377-60-3 EC No.: 233-826-7 UK-REACH: 01- 2119491164-38 Index No.:	10-15%	Ox. Sol. 3, H272 Eye Irrit. 2, H319	
Nitric acid, ammonium calcium salt	CAS No.: 15245-12-2 EC No.: 239-289-5 UK-REACH: 01-2119493947-16 Index No.:	5-10%	Acute Tox. 4, H302 Eye Dam. 1, H318	[3]
calcium chloride	CAS No.: 10043-52-4 EC No.: 233-140-8 UK-REACH: Index No.: 017-013-00-2	5-10%	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

[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

Upon irritation: rinse with water. In the event of continued irritation, seek medical assistance.

### Eye contact

If in eyes: Flush eyes with plenty of water or salt water (20-30 °C) for at least 30 minutes and continue until irritation stops. Remove contact lenses. Make sure you flush under the upper and lower eyelids. Seek medical assistance immediately 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

The product contains substances that cause serious eye damage. Contact with these substances can cause irreversible effects on the eye / serious eye damage.

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

IF exposed or concerned:

Get immediate 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

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.

Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

### 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:

Halogenated compounds

Nitrogen oxides (NO<sub>x</sub>)

Some metal oxides

### 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.

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

Avoid direct contact with the product.

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 oxidizing agents

Strong acids

Strong bases

#### 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

No substances are listed in the national list of substances with an occupational exposure limit.

##### DNEL

calcium chloride

Duration:	Route of exposure:	DNEL:
Long term – Local effects - Workers	Inhalation	5 mg/m <sup>3</sup>
Short term – Local effects - Workers	Inhalation	10 mg/m <sup>3</sup>

Nitric acid, ammonium calcium salt

Duration:	Route of exposure:	DNEL:
Short term – Systemic effects	Oral	10 mg/kg bw/day

##### PNEC

Magnesium nitrate

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

Nitric acid, ammonium calcium salt

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

#### 8.2. Exposure controls

Apply general control to prevent unnecessary exposure

##### 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

Occupational exposure limits have not been defined for the substances in this product.

##### Appropriate technical measures

Ensure that eyewash stations and safety showers are located within easy reach.

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

6

#### Density (g/cm<sup>3</sup>)

1.158

#### 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

None known.

### 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	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: Nitric acid, ammonium calcium salt  
 Test method: OECD 423  
 Species: Rat  
 Route of exposure: Oral  
 Test: LC50  
 Result: 500 mg/kg

Product/substance: Nitric acid, ammonium calcium salt  
 Test method: OECD 402  
 Species: Rat  
 Route of exposure: Dermal  
 Test: LC50  
 Result: 2000 mg/kg

Product/substance: calcium chloride  
 Test method: OECD 401  
 Species: Rat  
 Route of exposure: Oral  
 Test: LD50  
 Result: 2,301 mg/kg

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

#### Skin corrosion/irritation

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

#### Serious eye damage/irritation

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

Product/substance: Nitric acid, ammonium calcium salt  
 Test method: OECD 405  
 Species: Rabbit  
 Description: Causes serious eye damage.  
 Duration: 72 hours

Product/substance: calcium chloride  
 Test method: OECD 405  
 Species: Rabbit  
 Description: Irritant  
 Result: Adverse effect observed (Highly irritating)

Causes serious eye damage.

#### Respiratory sensitisation

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

#### Skin sensitisation

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

#### Germ cell mutagenicity

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

#### Carcinogenicity

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

#### Reproductive toxicity

Product/substance	Magnesium nitrate
Test method:	OECD 422
Species:	Rat
Duration:	28 days
Result:	> 1500 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

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

#### Aspiration hazard

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

### 11.2. Information on other hazards

#### Long term effects

The product contains substances that cause serious eye damage. Contact with these substances can cause irreversible effects on the eye / serious eye damage.

#### 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	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	Nitric acid, ammonium calcium salt
Species:	Fish
Compartment:	Freshwater
Duration:	48 hours
Test:	LC50
Result:	447 mg/L

Product/substance	Nitric acid, ammonium calcium salt
Test method:	OECD 202
Species:	Daphnia
Compartment:	Freshwater
Duration:	48 hours
Test:	EC50
Result:	>100 mg/L

Product/substance	Nitric acid, ammonium calcium salt
Test method:	OECD 201
Species:	Algae
Compartment:	Freshwater
Duration:	72 hours
Test:	LC50



Result: >100 mg/L

Product/substance Nitric acid, ammonium calcium salt  
 Test method: OECD 209  
 Compartment: Activated Sludge Plant  
 Duration: 3 hours  
 Test: EC50  
 Result: >1,000 mg/L

Product/substance calcium chloride  
 Species: Fish  
 Duration: 96 hours  
 Test: LC50  
 Result: 4,630 mg/L

Product/substance calcium chloride  
 Test method: OECD 202  
 Species: Daphnia  
 Duration: 48 hours  
 Test: LC50  
 Result: 2,400 mg/L

## 12.2. Persistence and degradability

Product/substance Nitric acid, ammonium calcium salt  
 Conclusion: Readily biodegradable

## 12.3. Bioaccumulative potential

Product/substance Nitric acid, ammonium calcium salt  
 Conclusion: Bioaccumulation is not expected

## 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

Product/substance Nitric acid, ammonium calcium salt  
 Conclusion: No adverse effect observed

## 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

	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**

No special.

**Demands for specific education**

No specific requirements.

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

Not applicable.

**Regulation on explosives precursors**

Nitric acid, ammonium calcium salt (Annex II)

**UK-REACH, Annex XVII**

Nitric acid, ammonium calcium salt is subject to restrictions, UK-REACH annex XVII (entry 65).

**Additional information**

Not applicable.

**Sources**

The Management of Health and Safety at Work Regulations 1999.

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

H272, May intensify fire; oxidiser.

H302, Harmful if swallowed.

H318, Causes serious eye damage.

H319, Causes serious eye irritation.

### 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.

Country-language: GB-en