



# Chemifloc Ltd.

## SAFETY DATA SHEET Septiox/Ferriox Solution

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II

### 1: Identification of the substance/preparation and of the company/undertaking

#### Identification of the substance or preparation

**Product Name:** Septiox/Ferriox.

**Chemical Name:** Mixture of Calcium or Sodium Nitrate solution with Ferric Nitrate solution.

**Use of the preparation:**

Used as a chemical for the treatment of wastewater as a septicity control agent.

#### Company/Undertaking identification

**Manufacturer/Supplier:** Chemifloc Ltd  
Smithstown, Shannon,  
Co. Clare,  
Rep. of Ireland.  
Tel: 00353 61 708699  
Fax: 00353 61 708698  
e-mail: [info@chemifloc.ie](mailto:info@chemifloc.ie)

**Emergency Telephone Number: 00353 61 708699**

### 2: Hazards Identification

Hazard Class: **Xi: Irritant**

Risk Phrase: R22: Harmful if swallowed.

### 3: Composition/Information on Ingredients

Mixture: The material is formed by the mixture of Calcium or Sodium Nitrate solution with Ferric Nitrate solution.

Ingredient Name	CAS Number	%	EC Number	Classification	Risk Phrases
Ferric Nitrate Solution	10421-48-4	10 - 75	233-899-5	C	R22
Calcium Nitrate Solution	10124-37-5	0 - 90	233-332-1	Xi	R22
Sodium Nitrate Solution	7631-99-4	0 - 90	231-554-3	Xi	R22

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in section 8.

### 4: First Aid Measures

**Eye contact:** Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

**Skin contact:** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.

**Inhalation:** Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention

**Ingestion:** Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

**Note to Doctor:** In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

## 5: Fire-Fighting Measures

**Flammability of the product:** May be combustible at high temperature.

**Extinguishing media Suitable:** Use an extinguishing agent suitable for the surrounding fire.

**Products of combustion:** These products are nitrogen oxides, metal oxide/oxides.

**Fire-fighting media and Instructions:** Use an extinguishing agent suitable for the surrounding fire.

**Special protective equipment for fire-fighters:**

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## 6: Accidental, Release Measures

**Personal precautions:**

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

**Environmental precautions:**

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

**Methods for cleaning up:**

**Small spill:**

Stop leak if without risk. Material free from contamination can be used for its original purpose. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**Large spill:**

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. 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 (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

## 7: Handling and Storage

Transport:	Delivered in 20/24 tonne, stainless-steel tankers, or plastic IBC's.
Storage:	Store in vessels suitable for solutions of low pH such as rubber-lined, stainless steel, plastic, or glass reinforced plastic.
Handling:	Handle with care as an acid. Avoid contact with skin and eyes. Wear appropriate acid-resistant protective clothing.

## 8: Exposure Controls/Personal Protection

EH40/2005 listing under soluble iron salts – WEL 8 hour exposure 1 mg/m<sup>3</sup>.

### Engineering measures:

Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

### Hygiene measures:

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure eyewash facilities are located close to the working environment.

### Personal protection:

<b>Eyes:</b>	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. Recommended: splash goggles .
<b>Skin:</b>	Personal protective equipment for the body should be selected based on the task being performed and the risks involved.
<b>Respiratory:</b>	Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
<b>Hands:</b>	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. >8 hours (breakthrough time): butyl rubber, natural rubber (latex), nitrile rubber .

## 9: Physical and Chemical Properties

### General information

Appearance	Clear Liquid
Colour	Reddish
Odour	Odourless
Molecular Formula	Ca(NO <sub>3</sub> ) <sub>2</sub> or NaNO <sub>3</sub> + Fe(NO <sub>3</sub> ) <sub>3</sub> n H <sub>2</sub> O
Important health, safety and environmental information	
pH	1 – 3
Boiling point	105°C
Freezing point	-4°C
Vapour pressure @ 20 °C	Not known
Density g/cm <sup>3</sup>	1.33 (20 °C)
Solubility	Miscible in water. Diluted solutions hydrolyse to precipitate Fe(OH) <sub>3</sub> .

## 10: Stability and Reactivity

### **Chemical Stability:**

Product is stable under normal conditions of use, storage and temperature.

### **Conditions to Avoid:**

Avoid excessive heat, direct sunlight, moisture, freezing, static charges and high temperatures.

### **Incompatible Materials;**

Reactive or incompatible with the following materials: combustible materials, acids and alkalis.

### **Hazardous Decomposition Products:**

Decomposes on heating and may produce acrid smoke, toxic and corrosive fumes including those of carbon monoxide, nitrogen oxides, nitric acid and metal oxides. Reacts with metals producing flammable/explosive hydrogen gas.

## 11: Toxicological Information

### **Potential acute health effects:**

**Inhalation:** Slightly irritating to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

**Ingestion:** Harmful if swallowed.

**Skin contact:** Slightly irritating to the skin.

**Eye contact:** Slightly irritating to the eyes.

## 12: Ecological Information

Septiox is acidic, and so will cause damage to flora and fauna.

The material should not be allowed to spill into controlled waters in large amounts, as sufficient quantities will affect aquatic life forms. In such cases the Environment Protection Agency or Local Authority should be contacted.

Once diluted and neutralised no lasting effects will occur. Material is not bio-accumulative.

## 13: Disposal Considerations

Do not dispose directly into rivers or drains.

Small spills may be neutralised with sodium carbonate, lime, or calcium carbonate, and flushed to sewer.

Large amounts of Septiox should be contained, and then be neutralised with a weak alkali solution.

The resulting suspension (mainly metal hydroxide) may be regarded as neutral waste and disposal should be in accordance with local or state or national legislation.

## 14: Transport Information

Septiox is not listed under a UN number.

Septiox is not classified as a dangerous product for road, rail, sea and air transportation.

## 15: Regulatory Information

Septiox Solution is classed as **Irritant** for supply, and packaging will carry the following information:

EU Regulations:

Hazard Symbol or symbols: Xi : Irritant

Risk Phrase: R 22: Harmful if swallowed.

Safety Phrases: . S 26 : In case of contact with eyes, rinse immediately with plenty of water and seek medical advice  
S 36/37/39: Wear suitable protective clothing, gloves and eye/face protection.

Contains EINECS number: 231-554-3

## 16: Other Information

References: European Chemical Bureau, Annex 1 EU Directive 67/548/EEC  
EH40/2005 listing under soluble iron salts – WEL 8 hour exposure 1 mg/m<sup>3</sup>.

History: This data sheet was prepared in accordance with EC Regulation No. 1907/2006 concerning REACH.  
This version replaces Version 2, Jan 2009.

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Revision: 3.

Notice to reader

To the best of our knowledge, the information provided in this Safety Data Sheet is accurate as at the date of its issue. The information it contains is being given for safety guidance purposes and relates only to the specific material and uses described in it. This information does not necessarily apply to that material when combined with other material(s) or when used otherwise than as described herein. Final determination of the suitability of any material is the sole responsibility of the user. All materials may represent unknown hazards and should be used with caution. Chemifloc Ltd disclaims any liability for loss or damage resulting from the use of any data, information or recommendations set out in this Safety Data Sheet.