

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

- **Product details**
- **Trade name:** Lo-Chlor Ultra Kleer 4 in 1 Plus
- **Application of the substance / the preparation** Water clarifier and flocculant suitable for spas.
- **Manufacturer/Supplier:**  
Total Water Products  
Alrewas House  
Main Street  
Alrewas  
Burton on Trent  
Staffordshire  
DE13 7ED  
UK  
  
Tel: (0044) 1283 792600  
Fax No: (0044) 1283 792041  
e-mail: [technical@totalwaterproducts.co.uk](mailto:technical@totalwaterproducts.co.uk)
- **Further information obtainable from:** Product safety department.
- **Information in case of emergency:** Tel: (0044) 1283 792600

## 2 Hazards identification

- **Hazard description:** Not applicable.
- **Information concerning particular hazards for human and environment:**  
The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **Classification system:**  
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

## 3 Composition/information on ingredients

- **Chemical characterization**
- **Description:** Chitosan acetate
- **Dangerous components:** Void
- **Additional information:** For the wording of the listed risk phrases refer to section 16.

## 4 First aid measures

- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**  
Immediately rinse with water.  
If skin irritation continues, consult a doctor.
- **After eye contact:**  
Check for and remove any contact lenses.  
Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**  
Rinse out mouth and then drink plenty of water.  
Call a doctor immediately.
- **Information for doctor:** Treat symptomatically and supportively.

# Safety Data Sheet

## according to 1907/2006/EC, Article 31

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### 5 Fire-fighting measures

- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Protective equipment:**  
Wear fully protective suit.  
Do not inhale explosion gases or combustion gases.  
Wear self-contained respiratory protective device.

### 6 Accidental release measures

- **Person-related safety precautions:** Ensure adequate ventilation
- **Measures for environmental protection:** No special measures required.
- **Measures for cleaning/collecting:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Send for recovery or disposal in suitable receptacles.
- **Additional information:** No dangerous substances are released.

### 7 Handling and storage

- **Handling:**
- **Information for safe handling:** Ensure good ventilation/exhaustion at the workplace.
- **Information about fire - and explosion protection:** No special measures required.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Store away from oxidizing agents.
- **Further information about storage conditions:**  
Protect from frost.  
Store in cool, dry conditions in well sealed receptacles.

### 8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Ingredients with limit values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists valid during the making were used as basis.
- **Personal protective equipment:**  
Select PPE appropriate for the operations taking place taking into account the product properties.
- **General protective and hygienic measures:**  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes.  
Avoid close or long term contact with the skin.  
Do not eat, drink, smoke or sniff while working.
- **Respiratory protection:** Not required.
- **Protection of hands:**  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**  
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

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- **Penetration time of glove material**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**  
Safety glasses  
Goggles recommended during refilling
- **Body protection:** Protective work clothing

### 9 Physical and chemical properties

#### · General Information

<b>Form:</b>	Liquid
<b>Colour:</b>	Yellow
<b>Odour:</b>	Acidic

#### · Change in condition

**Melting point/Melting range:** Undetermined.  
**Boiling point/Boiling range:** approx. 100 °C

· **Flash point:** > 100°C

· **Ignition temperature:** >250°C

· **Self-igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Density at 20°C:** 1.1 g/cm<sup>3</sup>

· **Solubility in / Miscibility with water:** Fully miscible.

· **pH-value at 20°C:** 3.0-4.5

### 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Materials to be avoided:** Strong acids and oxidising agents
- **Dangerous reactions:** No dangerous reactions known.
- **Dangerous decomposition products:** Carbon monoxide and carbon dioxide

### 11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.  
When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

### 12 Ecological information

- **Information about elimination (persistence and degradability):** biodegradable

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- **Behaviour in environmental systems:**
- **Mobility and bioaccumulation potential:** Product is not expected to bioaccumulate.
- **General notes:** Generally not hazardous for water

### 13 Disposal considerations

- **Product:**
- **Recommendation**  
Contact waste processors for recycling information.  
Used, degraded or contaminated product may be classified as hazardous waste. Anyone classifying hazardous waste and determining its fate must be qualified in accordance with state and international legislation.
- **European waste catalogue**  
Waste key numbers in accordance with the European Waste catalogue (EWC) are origin-referred defined. Since this product is used in several industries, no waste key can be provided by the supplier. The waste key number should be determined in arrangement with your waste disposal partner or the responsible authority.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

### 14 Transport information

- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** -
- **Maritime transport IMDG:**
- **IMDG Class:** -
- **Marine pollutant:** No
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** -
- **Transport/Additional information:** Not dangerous according to the above specifications.

### 15 Regulatory information

- **Labelling according to EU guidelines:**  
Observe the general safety regulations when handling chemicals.  
The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (German GefStoffV).

### 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing MSDS:** Product safety department.

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