

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

· Product details

· **Trade name:** Lo Chlor Multi Stain Remover

· **Application of the substance / the preparation** Stain remover for Pool & Spa surfaces.

· 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

· **Further information obtainable from:** Product safety department.

· **Information in case of emergency:** Tel: (0044) 1283 792600

2 Hazards identification

· Hazard description:



Xn Harmful

· Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

R 21/22 Harmful in contact with skin and if swallowed.

R 36/38 Irritating to eyes and skin.

R 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

· 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:** Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 5329-14-6 EINECS: 226-218-8	Sulphamic acid	 Xi; R 36/38-52/53	25-50%
CAS: 144-62-7 EINECS: 205-634-3	Oxalic acid	 Xn; R 21/22	25-50%
CAS: 77-92-9 EINECS: 201-069-1	Citric acid	 Xi; R 36	25-50%

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

4 First aid measures

· General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

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Immediately remove any clothing soiled by the product.

- **After inhalation:**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

In case of unconsciousness place patient stably in side position for transportation.

- **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 for a doctor immediately.

- **Information for doctor:**

Treat symptomatically and supportively.

Antidote for oxalic acid component: intravenous administration of calcium gluconate or calcium chloride may be required if hypocalcemia or hypocalcemic tetany occur.

5 Fire-fighting measures

- **Suitable extinguishing agents:**

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- **Special hazards caused by the substance, its products of combustion or resulting gases:**

Combustible under specific conditions. Gives off irritating or toxic fumes (or gases) in a fire.

- **Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

Do not inhale explosion gases or combustion gases.

6 Accidental release measures

- **Person-related safety precautions:**

Avoid formation of dust.

Ensure adequate ventilation

Wear protective clothing.

- **Measures for environmental protection:**

Do not allow to penetrate the ground/soil.

Do not allow product to reach sewage system or any water course.

- **Measures for cleaning/collecting:**

Pick up mechanically.

Send for recovery or disposal in suitable receptacles.

7 Handling and storage

- **Handling:**

- **Information for safe handling:**

Prevent formation of dust.

Ensure good ventilation/exhaustion at the workplace.

- **Information about fire - and explosion protection:**

Keep ignition sources away - Do not smoke.

Dust can combine with air to form an explosive mixture.

- **Storage:**

- **Requirements to be met by storerooms and receptacles:** Prevent any seepage into the ground.

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- **Information about storage in one common storage facility:**

Store away from foodstuffs.
Store away from metals.
Store away from oxidizing agents.

- **Further information about storage conditions:**

Protect from humidity and water.
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:**

144-62-7 Oxalic acid

WEL	Short-term value: 2 mg/m ³ Long-term value: 1 mg/m ³
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- **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:**

Do not eat, drink, smoke or sniff while working.
Do not breath dust
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
Storing food in the working area is prohibited.

- **Respiratory protection:** Not required.

- **Protection of hands:**



Protective gloves

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.

- **Penetration time of glove material**

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Tightly sealed goggles

- **Body protection:** Protective work clothing

9 Physical and chemical properties

- **General Information**

Form:	Powder
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Colour:	White
Odour:	Mild
· Change in condition Melting point/Melting range: Undetermined. Boiling point/Boiling range: Undetermined.	
· Flash point:	Not applicable.
· Ignition temperature:	>250°C
· Self-igniting:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/dust mixtures are possible.
· Density at 20°C:	1.8 g/cm ³
· Solubility in / Miscibility with water:	Soluble.
· pH-value (100 g/l) at 20°C:	1-2

10 Stability and reactivity

· Thermal decomposition / conditions to be avoided:

Combustible under specific conditions. Gives off irritating or toxic fumes (or gases) in a fire.

The substance decomposes on heating or on burning producing toxic and corrosive fumes including nitrogen oxides and sulfur oxides.

· Materials to be avoided:

Strong acids and oxidising agents

Strong bases.

Nitric acid, chlorine, mercury, hypochlorites, furfuryl alcohol, silver compounds.

· Dangerous reactions

Reacts with metals in the presence of water.

The solution in water is a strong acid, it reacts violently with bases and is corrosive.

The sulphamic acid component reacts violently with chlorine and fuming nitric acid causing explosion hazard. Reacts slowly with water to form ammonium bisulfate. Reacts violently with strong oxidising agents.

The oxalic acid component reacts with certain silver compounds to form explosive silver oxalate.

· Dangerous decomposition products:

Nitrogen oxides (NO_x)

Ammonia

Sulphur oxides (SO_x)

11 Toxicological information

· Acute toxicity:

· LD/LC50 values relevant for classification:

5329-14-6 Sulphamic acid

Oral	LD50	3160 mg/kg (rat)
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144-62-7 Oxalic acid

Oral	LD50	375 mg/kg (rat)
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Dermal	LD50	20000 mg/kg (rabbit)
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· Primary irritant effect:

· **on the skin:** Irritant to skin and mucous membranes.

· **on the eye:** Irritating effect.

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- **Sensitization:** No sensitizing effects known.

- **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Harmful

ROUTES OF EXPOSURE: The product can be absorbed into the body by inhalation of its aerosol and by ingestion.

Inhalation of sulfamic acid aerosols may cause lung oedema. The symptoms of lung oedema often do not become manifest until a few hours have passed and they are aggravated by physical effort. Rest and medical observation is therefore essential. Immediate administration of an appropriate inhalation therapy by a doctor or a person authorized by him/her, should be considered.

Inhalation of oxalic acid aerosols may cause lung oedema. The symptoms of lung oedema often do not become manifest until a few hours have passed and they are aggravated by physical effort. Rest and medical observation is therefore essential. Immediate administration of an appropriate inhalation therapy by a doctor or a person authorized by him/her, should be considered.

Oxalic acid may cause effects on the kidneys. Excessive exposure may result in death. Medical observation is indicated.

12 Ecological information

- **Behaviour in environmental systems:**

- **Mobility and bioaccumulation potential:** Product is not expected to bioaccumulate.

- **Ecotoxicological effects:**

- **Remark:** Harmful to fish

- **General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Harmful to aquatic organisms

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:** Container remains hazardous when empty. Continue to observe all precautions.

- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

14 Transport information

- **Land transport ADR/RID (cross-border)**

- **ADR/RID class:** 8 Corrosive substances.

- **UN-Number:** 3261

- **Packaging group:** III

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· **Description of goods:** 3261 CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S.

· **Maritime transport IMDG:**

· **IMDG Class:** 8

· **UN Number:** 3261

· **Packaging group:** III

· **Marine pollutant:** No

· **Proper shipping name:** CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S.

· **Air transport ICAO-TI and IATA-DGR:**

· **ICAO/IATA Class:** 8

· **UN/ID Number:** 3261

· **Packaging group:** III

· **Proper shipping name:** CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S.

15 Regulatory information

· **Labelling according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

· **Code letter and hazard designation of product:**

Xn Harmful

· **Hazard-determining components of labelling:**

Oxalic acid

· **Risk phrases:**

21/22 Harmful in contact with skin and if swallowed.

36/38 Irritating to eyes and skin.

52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

· **Safety phrases:**

2 Keep out of the reach of children.

24/25 Avoid contact with skin and eyes.

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

28 After contact with skin, wash immediately with plenty of soap and water.

46 If swallowed, seek medical advice immediately and show this container or label.

29 Do not empty into drains.

36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

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.

· **Relevant R-phrases**

21/22 Harmful in contact with skin and if swallowed.

36 Irritating to eyes.

36/38 Irritating to eyes and skin.

52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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

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