

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

- **Product details**
- **Trade name:** Lo-Chlor Concentrated Spa and Hot Tub Cleaner
- **Application of the substance / the preparation** Spa and Hot Tub system/pipe-work cleaner
- **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:**



C Corrosive

- **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 34 Causes burns.
- **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:** An aqueous solution of sulphuric and phosphoric acids with multifunctional additives.

· **Dangerous components:**

CAS: 7664-93-9 EINECS: 231-639-5	Sulphuric acid	C; R 35	2.5-10%
CAS: 7664-38-2 EINECS: 231-633-2	Phosphoric acid	C; R 34	2.5-10%

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

4 First aid measures

- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** 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.

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Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing:**

Wash mouth out with water

Drink plenty of water and provide fresh air. Call for a doctor immediately.

· **Information for doctor:** Treat symptomatically and supportively.

5 Fire-fighting measures

· **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.

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

Sulphur dioxide (SO₂)

· **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:**

Ensure adequate ventilation

Wear protective equipment. Keep unprotected persons away.

· **Measures for environmental protection:**

Do not allow to penetrate the ground/soil.

Do not allow to enter sewers/ surface or ground water.

· **Measures for cleaning/collecting:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Send for recovery or disposal in suitable receptacles.

7 Handling and storage

· **Handling:**

· **Information for safe handling:**

Prevent formation of aerosols.

Ensure good ventilation/exhaustion at the workplace.

Do not mix with other chemical formulations in their concentrated form.

· **Information about fire - and explosion protection:** No special measures required.

· **Storage:**

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

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

Store away from oxidizing agents.

Store away from metals.

· **Further information about storage conditions:** 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:**

7664-38-2 Phosphoric acid

WEL Short-term value: 2 mg/m³

Long-term value: 1 mg/m³

· **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.

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General protective and hygienic measures:

- Avoid close or long term contact with the skin.
- Do not eat, drink, smoke or sniff while working.
- 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.
- Do not inhale gases / fumes / aerosols.

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 through 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: Impervious protective clothing

9 Physical and chemical properties

General Information

Form:	Fluid
Colour:	Light brown
Odour:	Mild

Change in condition

Melting point/Melting range:	5°C
Boiling point/Boiling range:	110°C

Flash point:	Not applicable.
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Self-igniting:	Product is not selfigniting.
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Danger of explosion:	Product does not present an explosion hazard.
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Vapour pressure at 20°C:	23 hPa
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Density at 20°C:	1.02 g/cm³
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Solubility in / Miscibility with water:	Fully miscible.
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pH-value at 20°C:	1
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10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **Materials to be avoided:**
Strong bases.
Strong oxidising agents.
Do not mix with other chemical formulations in their concentrated form.
- **Dangerous reactions** No dangerous reactions known.
- **Dangerous decomposition products:**
Phosphorus oxides (e.g. P₂O₅)
Sulphur oxides (SO_x)

11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** Caustic effect on skin and mucous membranes.
- **on the eye:** Strong caustic effect.
- **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:
Corrosive
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

12 Ecological information

- **Behaviour in environmental systems:**
- **Mobility and bioaccumulation potential:** Product is not expected to bioaccumulate.
- **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.
Must not reach sewage water or drainage ditch undiluted or unneutralized.
Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

13 Disposal considerations

- **Product:**
- **Recommendation**
Contact waste processors for recycling information.
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
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.

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- **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:** 3264
- **Packaging group:** III
- **Description of goods:** 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Contains sulphuric acid)
- **Maritime transport IMDG:**
- **IMDG Class:** 8
- **UN Number:** 3264
- **Packaging group:** III
- **Marine pollutant:** No
- **Proper shipping name:** CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Contains sulphuric acid)
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** 8
- **UN/ID Number:** 3264
- **Packaging group:** III
- **Proper shipping name:** CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Contains sulphuric acid)

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:**
C Corrosive
- **Risk phrases:**
34 Causes burns.
- **Safety phrases:**
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.
27 Take off immediately all contaminated clothing.
2 Keep out of the reach of children.
36/37 Wear suitable protective clothing and gloves.
39 Wear eye/face protection.
45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

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**
34 Causes burns.
35 Causes severe burns.
- **Department issuing MSDS:** Product safety department.

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