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**SECTION 1 - IDENTIFICATION OF THE MATERIAL AND SUPPLIER**

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**Chemical nature:** Water solution of Sodium cyanurate and cyanuric acid.  
**Trade Name:** **Lo-Chlor Liquid Stabiliser**  
**Product Use:** Pool water conditioner.  
**Creation Date:** **May, 2015**  
**This version issued:** **May, 2015** and is valid for 5 years from this date.

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**SECTION 2 - HAZARDS IDENTIFICATION**

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**Statement of Hazardous Nature**

This product is classified as: Xi, Irritating. Hazardous according to the criteria of SWA.

Not a Dangerous Good according to the Australian Dangerous Goods (ADG) Code.

**Risk Phrases:** R36. Irritating to eyes.

**Safety Phrases:** S26, S45, S24/25, S29/35, S36/37/39. In case of contact with eyes, rinse immediately with plenty of water and contact a doctor or Poisons Information Centre. In case of accident or if you feel unwell, contact a doctor or Poisons Information Centre immediately (show this MSDS where possible). Avoid contact with skin and eyes. Do not empty into drains, dispose of this material and its container in a safe way. Wear suitable protective clothing, gloves and eye/face protection.

**SUSMP Classification:** None allocated.

**ADG Classification:** None allocated. Not a Dangerous Good under the ADG Code.

**UN Number:** None allocated

**GHS Signal word: WARNING.****HAZARD STATEMENT:**

H320: Causes eye irritation.

**PREVENTION**

P102: Keep out of reach of children.

P262: Do not get in eyes, on skin, or on clothing.

P264: Wash contacted areas thoroughly after handling.

P280: Wear protective gloves, protective clothing and eye or face protection.

P281: Use personal protective equipment as required.

**RESPONSE**

P337: If eye irritation persists: seek medical attention.

P353: Rinse skin or shower with water.

P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313: If eye irritation persists: Get medical advice.

P370+P378: Not combustible. Use extinguishing media suited to burning materials.

**STORAGE**

P402+P404: Store in a dry place. Store in a closed container.

**DISPOSAL**

P501: If product can not be recycled, contact a specialist waste disposal company (see Section 13 of this SDS).

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**EMERGENCY OVERVIEW**

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**Physical Description & colour:** Thick white liquid slurry.

**Odour:** Characteristic odour.

**Major Health Hazards:** Irritating to eyes.

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**POTENTIAL HEALTH EFFECTS**

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**Inhalation:**

**Short term exposure:** Available data indicates that this product is not harmful. In addition product is unlikely to cause any discomfort or irritation.

**Long Term exposure:** No data for health effects associated with long term inhalation.

**Skin Contact:**

**Short term exposure:** Available data indicates that this product is not harmful. It should present no hazards in normal use. However product may be mildly irritating, but is unlikely to cause anything more than mild discomfort which should disappear once contact ceases.

**Long Term exposure:** No data for health effects associated with long term skin exposure.

**Eye Contact:**

**Short Term Exposure:** This product is an eye irritant. Symptoms may include stinging and reddening of eyes and watering which may become copious. Other symptoms may also become evident. If exposure is brief, symptoms should disappear once exposure has ceased. However, lengthy exposure or delayed treatment may cause permanent damage.

**Long Term exposure:** No data for health effects associated with long term eye exposure.

**Ingestion:**

**Short term exposure:** Significant oral exposure is considered to be unlikely. However, this product is believed to be mildly irritating to mucous membranes but is unlikely to cause anything more than mild transient discomfort.

**Long Term exposure:** No data for health effects associated with long term ingestion.

**Carcinogen Status:**

**SWA:** No significant ingredient is classified as carcinogenic by SWA.

**NTP:** No significant ingredient is classified as carcinogenic by NTP.

**IARC:** No significant ingredient is classified as carcinogenic by IARC.

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**SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS**

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Ingredients	CAS No	Conc, %	TWA (mg/m3)	STEL (mg/m3)
Sodium cyanurate	2624-17-1	35-42	not set	not set
Cyanuric acid	108-80-5	1-2	not set	not set
Water	7732-18-5	to 100	not set	not set

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non hazardous ingredients are also possible.

The SWA TWA exposure value is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. The STEL (Short Term Exposure Limit) is an exposure value that may be equalled (but should not be exceeded) for no longer than 15 minutes and should not be repeated more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The term "peak" is used when the TWA limit, because of the rapid action of the substance, should never be exceeded, even briefly.

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**SECTION 4 - FIRST AID MEASURES**

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**General Information:**

You should call The Poisons Information Centre if you feel that you may have been poisoned, burned or irritated by this product. The number is 13 1126 from anywhere in Australia (0800 764 766 in New Zealand) and is available at all times. Have this MSDS with you when you call.

**Inhalation:** First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

**Skin Contact:** Irritation is unlikely. However, if irritation does occur, flush with lukewarm, gently flowing water for 5 minutes or until chemical is removed.

**Eye Contact:** Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 20 minutes or until the product is removed, while holding the eyelid(s) open. Take care not to rinse contaminated water into the

unaffected eye or onto the face. Obtain medical attention immediately. Take special care if exposed person is wearing contact lenses.

**Ingestion:** If product is swallowed or gets in mouth, do NOT induce vomiting; wash mouth with water and give some water to drink. If symptoms develop, or if in doubt contact a Poisons Information Centre or a doctor.

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## SECTION 5 - FIRE FIGHTING MEASURES

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**Fire and Explosion Hazards:** The major hazard in fires is usually inhalation of heated and toxic or oxygen deficient (or both), fire gases. There is no risk of an explosion from this product under normal circumstances if it is involved in a fire.

Only small quantities of decomposition products are expected from this product at temperatures normally achieved in a fire. This will only occur after heating to dryness.

Fire decomposition products from this product are likely to be irritating if inhaled.

**Extinguishing Media:** Not combustible. Use extinguishing media suited to burning materials.

**Fire Fighting:** If a significant quantity of this product is involved in a fire, call the fire brigade.

**Flash point:** Does not burn.

**Upper Flammability Limit:** Does not burn.

**Lower Flammability Limit:** Does not burn.

**Autoignition temperature:** Not applicable - does not burn.

**Flammability Class:** Does not burn.

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## SECTION 6 - ACCIDENTAL RELEASE MEASURES

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**Accidental release:** Minor spills do not normally need any special cleanup measures. In the event of a major spill, prevent spillage from entering drains or water courses. As a minimum, wear overalls, goggles and gloves. Suitable materials for protective clothing include rubber, PVC. Eye/face protective equipment should comprise as a minimum, protective glasses and, preferably, goggles. If there is a significant chance that vapours or mists are likely to build up in the cleanup area, we recommend that you use a respirator. Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned below (section 8).

Stop leak if safe to do so, and contain spill. Absorb onto sand, vermiculite or other suitable absorbent material. If spill is too large or if absorbent material is not available, try to create a dike to stop material spreading or going into drains or waterways. Sweep up and shovel or collect recoverable product into labelled containers for recycling or salvage, and dispose of promptly. Recycle containers wherever possible after careful cleaning. After spills, wash area preventing runoff from entering drains. If a significant quantity of material enters drains, advise emergency services. This material may be suitable for approved landfill. Ensure legality of disposal by consulting regulations prior to disposal. Thoroughly launder protective clothing before storage or re-use. Advise laundry of nature of contamination when sending contaminated clothing to laundry.

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## SECTION 7 - HANDLING AND STORAGE

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**Handling:** Keep exposure to this product to a minimum, and minimise the quantities kept in work areas. Check Section 8 of this MSDS for details of personal protective measures, and make sure that those measures are followed. The measures detailed below under "Storage" should be followed during handling in order to minimise risks to persons using the product in the workplace. Also, avoid contact or contamination of product with incompatible materials listed in Section 10.

**Storage:** Store packages of this product in a cool place. Make sure that the product does not come into contact with substances listed under "Incompatibilities" in Section 10. Some liquid preparations settle or separate on standing and may require stirring before use. Check packaging - there may be further storage instructions on the label.

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## SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

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The following Australian Standards will provide general advice regarding safety clothing and equipment:

Respiratory equipment: **AS/NZS 1715**, Protective Gloves: **AS 2161**, Occupational Protective Clothing: AS/NZS 4501 set 2008, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**.

**SWA Exposure Limits**

**TWA (mg/m<sup>3</sup>)**

**STEL (mg/m<sup>3</sup>)**

Exposure limits have not been established by SWA for any of the significant ingredients in this product.

The ADI for Sodium cyanurate is set at 0.5mg/kg/day. The corresponding NOEL is set at 50mg/kg/day. ADI means Acceptable Daily Intake; NOEL means No-observable-effect-level. Data from Australian ADI List, Sept 2011.

No special equipment is usually needed when occasionally handling small quantities. The following instructions are for bulk handling or where regular exposure in an occupational setting occurs without proper containment systems.

**Ventilation:** This product should only be used in a well ventilated area. If natural ventilation is inadequate, use of a fan is suggested.

**Eye Protection:** Protective glasses or goggles should be worn when this product is being used. Failure to protect your eyes may cause them harm. Emergency eye wash facilities are also recommended in an area close to where this product is being used.

**Skin Protection:** The information at hand indicates that this product is not harmful and that normally no special skin protection is necessary. However, we suggest that you routinely avoid contact with all chemical products and that you wear suitable gloves (preferably elbow-length) when skin contact is likely.

**Protective Material Types:** We suggest that protective clothing be made from the following materials: rubber, PVC.

**Respirator:** Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned above.

Eyebaths or eyewash stations and safety deluge showers should be provided near to where this product is being handled commercially.

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## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES:

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<b>Physical Description &amp; colour:</b>	Thick white liquid slurry.
<b>Odour:</b>	Characteristic odour.
<b>Boiling Point:</b>	Approximately 100°C at 100kPa.
<b>Freezing/Melting Point:</b>	Approximately 0°C.
<b>Volatiles:</b>	Water component.
<b>Vapour Pressure:</b>	2.37 kPa at 20°C (water vapour pressure).
<b>Vapour Density:</b>	As for water.
<b>Specific Gravity:</b>	1.25
<b>Water Solubility:</b>	Miscible but solubility at about 2% at 25°C
<b>pH:</b>	7.0-8.5
<b>Volatility:</b>	No data.
<b>Odour Threshold:</b>	No data.
<b>Evaporation Rate:</b>	As for water.
<b>Coeff Oil/water distribution:</b>	No data
<b>Autoignition temp:</b>	Not applicable - does not burn.

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## SECTION 10 - STABILITY AND REACTIVITY

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**Reactivity:** This product is unlikely to react or decompose under normal storage conditions. However, if you have any doubts, contact the supplier for advice on shelf life properties.

**Conditions to Avoid:** This product should be kept in a cool place, preferably below 30°C.

**Incompatibilities:** acids, oxidising agents.

**Fire Decomposition:** Only small quantities of decomposition products are expected from this product at temperatures normally achieved in a fire. This will only occur after heating to dryness. Combustion forms carbon dioxide, and if incomplete, carbon monoxide. Water is also formed. May form nitrogen and its compounds, and under some circumstances, oxides of nitrogen. Occasionally hydrogen cyanide gas in reducing atmospheres. Sodium compounds. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death.

**Polymerisation:** This product will not undergo polymerisation reactions.

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## SECTION 11 - TOXICOLOGICAL INFORMATION

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**Local Effects:**

**Target Organs:** There is no data to hand indicating any particular target organs.

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**CLASSIFICATION OF HAZARDOUS INGREDIENTS**

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**Ingredient****Risk Phrases**

No ingredient mentioned in the HSIS Database is present in this product at hazardous concentrations.

Sodium cyanurate has been shown to cause no injury to rabbit eyes when 0.1 mL of aqueous suspensions containing 0.8% to 8% were applied daily 5 days/wk for 3 months. Renal effects and deaths were observed in female and male rats fed high doses (8%) monosodium cyanurate for 20 wk in diet.

Histological changes in kidney related to diuretic effect of cyanuric acid were noted. No effects were noted at 0.8%. Dogs fed high doses (8%) monosodium cyanurate for 2 years showed kidney fibrosis and death. Dogs fed 0.8% monosodium cyanurate in diet showed no changes after 6 months. Monosodium cyanurate was evaluated for gene mutation and was negative at all dose levels tested. Cyanuric acid: >10 gm/kg oral-rat LD<sub>50</sub>; 7.7 gm/kg oral-rat LD<sub>50</sub>; 20 mg/24 hour(s) eyes-rabbit slight irritation; 500 mg/24 hour(s) eyes-rabbit marked irritation; non-irritating to rabbit skin. This material is believed to be non-toxic by inhalation, dermal exposure and ingestion. This material may cause irritation of the eyes. Long-term feeding studies in rats and dogs did not produce any adverse effects. Based on animal studies, cyanuric acid did not affect reproduction success in rats. No teratogenic effects were noted in studies with rats or rabbits.

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**SECTION 12 - ECOLOGICAL INFORMATION**

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This product is biodegradable. It will not accumulate in the soil or water or cause long term problems.

**BIODEGRADATION:**

Cyanuric acid biodegrades readily under a wide variety of natural conditions, and particularly well in systems of either low or zero dissolved-oxygen levels.

**PERSISTENCE:** This material is believed not to persist in the environment. Cyanuric acid has an estimated Henry's Law Constant of  $1.36 \times 10^{-18}$  atm m<sup>3</sup>/mol.

**BIOCONCENTRATION:** Aquatic bioconcentration and adsorption are not expected to be important fate processes for cyanuric acid. The BCF for cyanuric acid is <0.5 at 1 mg/L for a 6-week duration.

Atmosphere half-life is estimated to be 102 days. Cyanuric acid will have a high soil mobility based on KOC values ranging from 66 to 124.

**OTHER ECOLOGICAL INFORMATION:** Cyanuric acid is toxic to certain plants including barley and radishes.

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**SECTION 13 - DISPOSAL CONSIDERATIONS**

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**Disposal:** This product may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. If neither of these options is suitable, consider controlled incineration, or landfill.

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**SECTION 14 - TRANSPORT INFORMATION**

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**ADG Code:** This product is not classified as a Dangerous Good. No special transport conditions are necessary unless required by other regulations.

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**SECTION 15 - REGULATORY INFORMATION**

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**AICS:** All of the significant ingredients in this formulation are compliant with NICNAS regulations. The following ingredient: Cyanuric acid, is mentioned in the SUSMP.

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**SECTION 16 - OTHER INFORMATION**

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See our web site at [www.lo-chlor.com](http://www.lo-chlor.com)

This MSDS contains only safety-related information. For other data see product literature.

**Acronyms:**

<b>ADG Code</b>	Australian Code for the Transport of Dangerous Goods by Road and Rail (7 <sup>th</sup> edition)
<b>AICS</b>	Australian Inventory of Chemical Substances
<b>SWA</b>	Safe Work Australia, formerly ASCC and NOHSC
<b>CAS number</b>	Chemical Abstracts Service Registry Number
<b>IARC</b>	International Agency for Research on Cancer
<b>NTP</b>	National Toxicology Program (USA)



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This Revision Dated: May, 2015

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R-Phrase

Risk Phrase

SUSMP

Standard for the Uniform Scheduling of Medicines & Poisons

UN Number

United Nations Number

THIS MSDS SUMMARISES OUR BEST KNOWLEDGE OF THE HEALTH AND SAFETY HAZARD INFORMATION OF THE PRODUCT AND HOW TO SAFELY HANDLE AND USE THE PRODUCT IN THE WORKPLACE. EACH USER MUST REVIEW THIS MSDS IN THE CONTEXT OF HOW THE PRODUCT WILL BE HANDLED AND USED IN THE WORKPLACE.

IF CLARIFICATION OR FURTHER INFORMATION IS NEEDED TO ENSURE THAT AN APPROPRIATE RISK ASSESSMENT CAN BE MADE, THE USER SHOULD CONTACT THIS COMPANY SO WE CAN ATTEMPT TO OBTAIN ADDITIONAL INFORMATION FROM OUR SUPPLIERS. OUR RESPONSIBILITY FOR PRODUCTS SOLD IS SUBJECT TO OUR STANDARD TERMS AND CONDITIONS, A COPY OF WHICH IS SENT TO OUR CUSTOMERS AND IS ALSO AVAILABLE ON REQUEST.

Please read all labels carefully before using product.

This SDS is prepared in accord with the SWA document "Preparation of Safety Data Sheets for Hazardous Chemicals - Code of Practice" (December 2011)  
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