## Section 1 - Identification of The Material and Supplier

**International Quadratics Pty Ltd**
**12 Gatwood Close**
**Padstow, NSW 2211**
**Phone: 02 9774 5550**
**Fax: 02 9774 5552**
**www.interquad.com.au**

**Chemical nature:** Water solution of sulfuric acid.
**Trade Name:** **Granu-Cid Liquid Pool Acid**
**Product Use:** For lowering pH and total alkalinity in swimming pools.
**Creation Date:** **April, 2010**
**This version issued:** **March, 2015** and is valid for 5 years from this date.

## Section 2 - Hazards Identification

### Statement of Hazardous Nature

This product is classified as: C, Corrosive. Hazardous according to the criteria of SWA.

Dangerous according to the Australian Dangerous Goods (ADG) Code.

**Risk Phrases:** R35. Causes severe burns.
**Safety Phrases:** S20, S23, S26, S28, S30, S24/25, S36/37/39. When using, do not eat or drink. Do not breathe vapours or mists. In case of contact with eyes, rinse immediately with plenty of water and contact a doctor or Poisons Information Centre. After contact with skin, wash immediately with plenty of soap and water. Never add water to this product. Avoid contact with skin and eyes. Wear suitable protective clothing, gloves and eye/face protection.
**SUSMP Classification:** S6
**ADG Classification:** Class 8: Corrosive Substances.
**UN Number:** 2796, SULPHURIC ACID with not more than 51% acid or BATTERY FLUID, ACID

## Emergency Overview

**Physical Description & Colour**: Clear to slightly hazy, colourless liquid.
**Odour:** Mild but acidic odour.
**Major Health Hazards:** causes severe burns, respiratory tract irritant.

## Potential Health Effects

### Inhalation:

**Short Term Exposure:** Available data indicates that this product is corrosive to the respiratory tract. Symptoms will include extreme pain in nose and throat and copious secretion of mucous in the nose and throat. Other symptoms such as pulmonary oedema may also become evident, and may be life threatening if exposure is other than brief.
**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 very corrosive to the skin. Capable of causing severe burns with deep ulceration, and can penetrate to deeper layers of skin resulting in third degree burns. Corrosion will continue until product is removed or neutralised. Severity depends on concentration and duration of exposure. Burns may not be immediately painful; the onset of pain may be minutes to hours.
**Long Term Exposure:** No data for health effects associated with long term skin exposure.

### Eye Contact:

**Short Term Exposure:** This product is very corrosive to eyes. It will quickly cause severe pain, and corrosion of the eye and surrounding facial tissues. Unless exposure is immediately treated, permanent blindness and facial scarring will occur.
**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 very corrosive to the gastrointestinal tract. Capable of causing severe burns with deep ulceration, and can penetrate to deeper layers of skin resulting in third degree burns. Corrosion will continue until product is removed or neutralised. Severity depends on concentration and duration of exposure.
**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:** Sulfuric Acid is classified by NTP as reasonably anticipated to be carcinogenic to humans.
See the NTP website for further details. A web address has not been provided as addresses frequently change.
**IARC:** No significant ingredient is classified as carcinogenic by IARC.

## Section 3 - Composition/Information on Ingredients

| Ingredients | CAS No | Conc,% | TWA (mg/m$^3$) | STEL (mg/m$^3$) |
|---|---|---|---|---|
| Sulfuric acid | 7664-93-9 | 440g/L | 1 | 3 |
| Other non hazardous ingredients | secret | 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.

## Section 4 - First Aid Measures

### 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:** If inhalation occurs, contact a Poisons Information Centre, or call a doctor at once. Remove source of contamination or move victim to fresh air. If breathing is difficult, oxygen may be beneficial if administered by trained personnel, preferably on a doctor's advice. DO NOT allow victim to move about unnecessarily. Symptoms of pulmonary oedema can be delayed up to 48 hours after exposure.
**Skin Contact:** Seek urgent medical attention. Flush contaminated area with lukewarm, gently flowing water for at least 60 minutes, by the clock. DO NOT INTERRUPT FLUSHING. If necessary, keep emergency vehicle waiting (show paramedics this MSDS and take their advice). Under running water, remove contaminated clothing, shoes and leather goods (e.g. watchbands, belts).
**Eye Contact:** Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for at least 60 minutes, by the clock, while holding the eyelid(s) open. Neutral saline solution may be used as soon as it is available. DO NOT INTERRUPT FLUSHING. If necessary, keep emergency vehicle waiting (show paramedics this MSDS and take their advice). Take care not to rinse contaminated water into the unaffected eye or onto face. Call a Poisons Information Centre or a doctor urgently. Take special care if exposed person is wearing contact lenses.
**Ingestion:** If swallowed, do NOT induce vomiting; rinse mouth thoroughly with water and contact a Poisons Information Centre. Urgent hospital treatment is likely to be needed. Give activated charcoal if instructed.

## Section 5 - Fire Fighting Measures

**Fire and Explosion Hazards**: There is little risk of an explosion from this product if commercial quantities are involved in a fire.
No fire decomposition products are expected from this product at temperatures normally achieved in a fire.
Fire decomposition products from this product are not expected to be hazardous or harmful.
**Extinguishing Media:** Water fog or fine spray is the preferred medium for large fires. Aim to dilute the material with large quantities of water. If practical, contain diluted material and prevent from entering drains and water courses.
**Fire Fighting:** If a significant quantity of this product is involved in a fire, call the fire brigade. There is little danger of a violent reaction or explosion if significant quantities of this product are involved in a fire. Recommended personal protective equipment is liquid-tight chemical protective clothing and breathing apparatus.

| | |
|---|---|
| **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. |

## Section 6 - Accidental Release Measures

**Accidental release:** In the event of a major spill, prevent spillage from entering drains or water courses. Evacuate the spill area and deny entry to unnecessary and unprotected personnel. Wear full protective chemically resistant

clothing including eye/face protection, gauntlets and self contained breathing apparatus. See below under Personal Protection regarding Australian Standards relating to personal protective equipment. Suitable materials for protective clothing include rubber, butyl rubber, neoprene, Teflon, polyethylene. Eye/face protective equipment should comprise as a minimum, protective 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. Because of the corrosiveness of this product, special personal care should be taken in any cleanup operation. 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.
Contaminated area may be neutralised by washing with weak or dilute alkali. Baking soda, washing soda and limestone are suitable. 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.

## Section 7 - Handling and Storage

**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:** This product is a Scheduled Poison. Observe all relevant regulations regarding sale, transport and storage of this schedule of poison. Store in a cool, well ventilated area. Check containers periodically for corrosion and leaks. Containers should be kept closed in order to minimise contamination. Make sure that the product does not come into contact with substances listed under "Incompatibilities" in Section 10. If you keep more than 2500kg or L of Dangerous Goods of Packaging Group II, you may be required to license the premises or notify your Dangerous Goods authority. If you have any doubts, we suggest you contact your Dangerous Goods authority in order to clarify your obligations. Check packaging - there may be further storage instructions on the label.

## Section 8 - Exposure Controls and Personal Protection

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$^3$) | STEL (mg/m$^3$) |
|---|---|---|
| Sulfuric acid | 1 | 3 |

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:** Your eyes must be completely protected from this product by splash resistant goggles with face shield. All surrounding skin areas must be covered. Emergency eye wash facilities must also be available in an area close to where this product is being used.
**Skin Protection:** Because of the dangerous nature of this product, make sure that all skin areas are completely covered by impermeable gloves, overalls, hair covering, apron and face shield. See below for suitable material types.
**Protective Material Types:** We suggest that protective clothing be made from the following materials: rubber, butyl rubber, neoprene, Teflon, polyethylene.
**Respirator:** Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned above.
Safety deluge showers should, if practical, be provided near to where this product is being used.

## Section 9 - Physical and Chemical Properties:

| | |
|---|---|
| **Physical Description & colour**: | Clear to slightly hazy, colourless liquid. |
| **Odour:** | Mild but acidic odour. |
| **Boiling Point:** | 100°C at 100kPa |
| **Freezing/Melting Point:** | No specific data. Liquid at normal temperatures. |
| **Volatiles:** | Water component. |
| **Vapour Pressure:** | As for water. |

| | |
|---|---|
| **Vapour Density:** | No data. |
| **Specific Gravity:** | 1.3 |
| **Water Solubility:** | Completely soluble. |
| **pH:** | Extremely acidic; pH <1 |
| **Volatility:** | As for water. |
| **Odour Threshold:** | No data. |
| **Evaporation Rate:** | No data. |
| **Coeff Oil/water Distribution**: | No data |
| **Autoignition temp:** | Not applicable - does not burn. |

## Section 10 - Stability and Reactivity

**Reactivity:** Inorganic acids react with inorganic and organic bases such as amines to form salts. They also react with many metals liberating hydrogen gas. These reactions are often rapid and typically liberate much heat. They can also decompose many organic materials such as esters, in a reaction called hydrolysis.
**Conditions to Avoid:** This product should be kept in a cool place, preferably below 30°C. Keep containers tightly closed. Keep containers and surrounding areas well ventilated. Under no circumstances should the container be sealed. Keep isolated from combustible materials.
**Incompatibilities:** bases, zinc, tin, aluminium and their alloys, other materials reactive with extremely acidic solutions.
**Fire Decomposition:** No significant quantities of decomposition products are expected at temperatures normally achieved in a fire.
**Polymerisation:** This product will not undergo polymerisation reactions.

## Section 11 - Toxicological Information

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

## Classification of Hazardous Ingredients

| Ingredient | Risk Phrases |
|---|---|
| Sulfuric Acid | Conc>=15%: C; R35 |

## Section 12 - Ecological Information

This product is unlikely to adversely effect the environment in the long term. Salts, acids and bases are typically diluted and neutralised when released to the environment in small quantities. However, until diluted or neutralised it will kill all aquatic organisms it contacts due to extreme pH.

## Section 13 - Disposal Considerations

**Disposal:** Special help is available for the disposal of Agricultural Chemicals. The product label will give general advice regarding disposal of small quantities, and how to cleanse containers. However, for help with the collection of unwanted rural chemicals, contact ChemClear 1800 008 182 http://www.chemclear.com.au/ and for help with the disposal of empty drums, contact DrumMuster http://www.drummuster.com.au/ where you will find contact details for your area.

## Section 14 - Transport Information

**ADG Code:** 2796, SULPHURIC ACID with not more than 51% acid or BATTERY FLUID, ACID
**Hazchem Code:** 2R
**Special Provisions:** None allocated
**Limited quantities:** ADG 7 specifies a Limited Quantity value of 1 L for this class of product.
**Dangerous Goods Class:** Class 8: Corrosive Substances.
**Packaging Group:** II
**Packaging Method:** P001, IBC02

Class 8 Corrosive Substances shall not be loaded in the same vehicle or packed in the same freight container with Classes 1 (Explosives), 4.3 (Dangerous When Wet Substances), 5.1 (Oxidising Agents), 5.2 (Organic Peroxides), 6 (Toxic Substances where the Toxic Substances are cyanides and the Corrosives are acids), 7 (Radioactive Substances), Foodstuffs and foodstuff empties. They may however be loaded in the same vehicle or packed in the

same freight container with Classes 2.1 (Flammable Gases), 2.2 (Non-Flammable, Non-Toxic Gases), 2.3 (Poisonous Gases), 3 (Flammable liquids), 4.1 (Flammable Solids), 4.2 (Spontaneously Combustible Substances), 6 (Toxic Substances except where the Toxic Substances are cyanides and the Corrosives are acids) and 9 (Miscellaneous Dangerous Goods).

## Section 15 - Regulatory Information

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

## Section 16 - Other Information

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

### Acronyms:

| | |
|---|---|
| **ADG Code** | Australian Code for the Transport of Dangerous Goods by Road and Rail (7th edition) |
| **AICS** | Australian Inventory of Chemical Substances |
| **SWA** | Safe Work Australia, formerly ASCC and NOHSC |
| **CAS number** | Chemical Abstracts Service Registry Number |
| **Hazchem Code** | Emergency action code of numbers and letters that provide information to emergency services especially firefighters |
| **IARC** | International Agency for Research on Cancer |
| **NOS** | Not otherwise specified |
| **NTP** | National Toxicology Program (USA) |
| **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 MSDS is prepared in accord with the SWA document “National Code of Practice for the Preparation of Material Safety Data Sheets” 2nd Edition [NOHSC:2011(2003)]

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http://www.kilford.com.au/ Phone (02)9251 4532