

Granudos Acid

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

1.1 Product Identifier Sulphuric Acid / pH Minus Liquid / Granudos Acid

1.2 Relevant Identified uses of the substance or mixture and uses advised against

Uses: See table in front of appendix for a complete overview of identified uses.

1.3 Details of the supplier of the safety data sheet

Company: Complete Pool Controls Ltd
 Unit 2, The Park
 Stoke Orchard
 Bishops Cleeve
 Gloucestershire GL52 7RS

Telephone: +44 (0) 8712 229081 Fax: +44 (0) 8712 229083
 E-mail: sales@cpc-chemicals.co.uk

1.4 Emergency Telephone

Tel: +44 (0) 8712 229081 (office hours) +44 (0) 1242 300271 (outside of office hours)

2. Hazard Identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Hazard Class	Hazard Category	Hazard Statements
Corrosive to Metals	Category 1	H290
Skin Corrosion	Category 1A	H314

For the full text of the H statements mentioned in this section see Section 16.

Most important adverse effects

Human Health:	See section 11 for toxicological information.
Physical & Chemical Hazards:	See section 9 for toxicological information.
Potential environmental effects:	See section 12 for toxicological information.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

Hazard symbols:



Signal word: Danger

Hazard statements: H290 May be corrosive to metals
 H314 Causes severe skin burns and eye damage

Precautionary statements:

Prevention	P280	Wear protective gloves/protective clothing/eye protection/ face protection
	P260	Do not breath dust/fume/gas/mist/vapours/spray
	P301+P330+P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
	P303+P361+P353	IF ON SKIN (or hair) :Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
	P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P310	Immediately call a poison centre / doctor
	P405	Store locked up.

Hazardous components which must be listed on the label sulphuric acid

2.3 Other Hazards For Results of PBT and vPvB assessment see section 12.5.

3. Composition/information on ingredients**3.1 Substances**

Chemical nature: Aqueous solution

Hazardous components

Sulphuric acid

Index-No. 016-020-00-8

CAS-No. 7664-93-9

EC-No. 231-639-5

Registration 01-2119458838-20-xxxx

C & L No 02-2119752444-38-0000

Amount %

>=15 - < 50

Hazard

Skin Corr.1A

H314

4. First Aid measures**4.1 Description of first aid measures**

General Advice: Take off all contaminated clothing immediately.

If inhaled: In case of accident by inhalation: remove casualty to fresh air and keep at rest. If breathing is irregular or stopped, administer artificial respiration. Call a physician immediately.

In case of skin contact: First swab the concentrated acid with dry pulp or textile; because the acid reacts vigorously with water and the strong evolution of heat. Wash off with plenty of water. Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.

In case of eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Consult an eye specialist immediately. Go to an ophthalmic hospital if necessary.

If swallowed: Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

Symptom & effects: See Section 11 for more detailed information on health effects and symptoms

4.3 Indication of immediate medical attention and special treatment needed

Treatment: Treat Symptomatically.

5. Fire fighting measures**5.1 Extinguishing media:**

Suitable extinguishing media: Use extinguishing measures that are appropriate and local circumstances and the surrounding environment. This product itself does not burn

Unsuitable extinguishing media: Water

5.2 Special hazards arising from the substance or mixture

Specific Hazards during fire fighting: May decompose in a fire giving off toxic fumes, Hazardous decomposition products, Sulphur oxides, Reacts exothermic with water.

5.3 Advice for fire-fighters

Special protective equipment for fire-fighters: In the event of fire, wear self-contained breathing apparatus. Wear appropriate body protection (full protective suit).

Further Information: Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Cool closed containers exposed to fire with water

6. Accidental release Measures**6.1 Personal precautions, protective equipment and emergency procedures**

Personal Precautions: Use personal protective equipment. Provide adequate ventilation. Avoid contact with skin and eyes. Do not breath vapours or spray mist. For personal protection see section 8.

6.2 Environmental precautions

Environmental precautions: Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration. If the product contaminates rivers and lakes or drains inform respective authorities. Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and materials for containment and cleaning up

Containment and cleaning up Neutralize with soda and flush with plenty of water. Taking into account local regulations the product may be disposed of as waste water after neutralisation.
Clean-up methods - small spillage: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders) Keep in suitable, closed containers for disposal.

Further information Treat recovered material as described in the section "Disposal considerations"

6.4 Reference to other sections

See Section 1 for emergency contact information.
See Section 8 for information on personal protective equipment.
See Section 13 for waste treatment information

7. Handling and storage**7.1 Precautions for safe handling**

Advice on safe handling: Keep container tightly closed. Use personal protective equipment. Avoid contact with the skin and the eyes. Do not breathe vapours or spray mist. Emergency eye wash fountains should be available in the immediate vicinity.
When diluting, always add the product to water. Never add water to the product

Hygiene measures: Smoking, eating and drinking should be prohibited in the application area. Wash hands before breaks and at the end of workday. Take off all contaminated clothing immediately.

7.2 Conditions for safe storage, including any incompatibilities.

Storage Areas Keep in an area equipped with acid resistant flooring.
Containers Store in original container
Fire and explosion: The product is not flammable. Normal measures for preventive fire protection. Gives off hydrogen by reaction with metals. Risk of explosion

Further information Keep tightly closed in a dry and cool place. Keep in a well ventilated place. Product is hygroscopic

Common storage: Keep away from food, drink and animal feeding stuffs. Keep away from combustible material.

7.3 Specific end uses

No information is available.

8. Exposure control/personal protection**8.1 Control parameters**

Components with critical values that require monitoring at the workplace: Observe all workplace limits for dust.

Sulphuric Acid	7664-93-9
Derived No Effect Level (DNEL)/Derived Minimal Effect Level (DMEL)	
Workers, Acute - Local effects, Inhalation	0.1 mg/m ³
Workers, Long Term - Local effects, Inhalation	0.05 mg/m ³

8. Exposure control/personal protection

Predicted No Effect Concentration (PNEC)		
Fresh water		0.0025 mg/l
Marine sediment		0.0025 mg/l
Fresh water sediment		0.002 mg/kg
Marine sediment		0.002 mg/kg
Sewage Treatment Plant (STP)		8.8 mg/l
Other Occupational Exposure Limit Values		
EU ELV, Time Weighted Average (TWA);, Mist.	Indicative	0.05 mg/m ³
EH40 WEL, Time Weighted Average (TWA):	Mist. Thoracic fraction.	0.05 mg/m ³
ELV (IE), Time Weighted Average (TWA);, Mist.	Indicative OELV	0.05 mg/m ³

8.2 Exposure controls

Engineering measures

Refer to protective measures listed in sections 7 and 8.

Personal protective equipment

Respiratory protection Required if vapours or aerosol are released.

Recommended Filter type: Combination filter: E-P2

Hand protection Wear protective gloves. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and standard EN 374.

Hand protection The following materials are suitable

Material:	Gloves:	Glove thickness:
Fluorinated rubber.	>= 8 h	0.5 mm
butyl-rubber	>= 2 h	0.5 mm

Eye protection Tightly fitting safety goggles approved to standard EN 166. Provide eye station

Skin and body protection Acid resistant protective clothing.

Environmental exposure controls

General advice: Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration
If the product contaminates rivers and lakes or drains inform respective authorities
Local authorities should be advised if significant spillages cannot be contained

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form:	Liquid
Colour:	colourless or slight coloured
Odour:	odourless
pH @ 20°C:	ca. 1 (5 g/l; 20 °C)
Solidification point	ca. -40°C
Boiling point/boiling range:	ca. 120°C
Flash point:	Not applicable
Flammability (solid, gas)	The product is not flammable.
Upper explosion limit:	Not applicable
Lower explosion limit:	Not applicable
Relative vapour density:	3.4
Density @ 20°C:	ca. 1.3 g/cm ³
Water solubility:	completely miscible.
Ignition temperature:	Not applicable
Thermal decomposition:	Decomposes on heating.
Explosive properties:	Product is not explosive.

9.2 Other Information

Molecular weight	98.1 g/mol
Corrosion to metals	Corrosive to metals

10. Stability and reactivity

10.1 Reactivity

Reactivity Stable under recommended storage conditions.

10.2 Chemical stability

Chemical stability Stable under normal conditions

10.3 Possibility of hazardous reactions

Hazardous reactions Gives off hydrogen by reaction with metals. Reacts exothermic with water.

10.4 Conditions to avoid

Conditions to avoid No information available.

10.5 Incompatible materials

Materials to avoid Organic materials, Bases, Reducing agents, Metals

10.6 Hazardous decomposition products

Haz. Decomp. products: Sulphur oxides

11. Toxicological Information

11.1 Information on toxicological effects

Acute Toxicity

Oral: The substance or mixture is not classified
 Inhalation: The substance or mixture is not classified
 Dermal: The substance or mixture is not classified

Irritation

Skin: Very corrosive (rabbit)
 Eyes: Very corrosive (rabbit) Risk of serious damage to eyes

Sensitisation:

Did not cause sensitisation on laboratory animals

CMR Properties

Carcinogenicity No data available
 Mutagenicity No data available
 Teratogenicity Did not show teratogenic effects in animal experiments
 Reproductive toxicity Animal testing did not show any effects on fertility.

Specific Target Organ Toxicity

Single exposure The substance or mixture is not classified as specific target organ toxicant, single exposure.
 Repeated Exposure The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration Hazard

No aspiration toxicity classification

Further information

If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.

Acute Toxicity

Sulphuric Acid				
Route	Species	Test	Value	Units
Oral	Rat	LD50	2140	mg/kg

12. Ecological Information

12.1 Toxicity

Component: Sulphuric Acid CAS No: 7664-93-9

Species	Test	Value	Time	Units
Gambusia affinis	LC50	42	96 h	mg / l
Daphnia magna	EC50	29	24 h	mg / l
activated sludge	EC50	58	120 h	mg / l

12. Ecological Information**12.2 Persistence and degradability**

Persistence and degradability The methods for determining the biological degradability are not applicable for inorganic substances.

12.3 Bioaccumulative potential

Bioaccumulative potential No data available

12.4 Mobility in soil

Mobility in soil No data available

12.5 Results of PBT and PvB assessment

Results of PBT and PvB Not applicable

12.6 Other adverse effects

Remarks: All numerical values for etoxicity effects are calculated on the pure substances
Harmful effects to aquatic organisms due to pH shift
Neutralization is normally necessary before waste water is discharged into water treatment plants.
Do not flush into surface water or sanitary sewer system

13. Disposal Considerations**13.1 Waste treatment methods**

Disposal should be in accordance with local, state or national legislation
Do not reuse empty containers without commercial cleaning or reconditioning
Do not discharge into drains or the environment, dispose to an authorised waste collection point

Classification

Waste Codes in accordance with the European Waste catalogue (EWC) are origin-defined. Since this product is used in several industries, no Waste Code can be provided by the supplier. The Waste Code should be determined in arrangement with your waste disposal partner or the responsible authority

14. Transport Information

14.1 UN Number 2796

14.2 UN proper shipping name SULPHURIC ACID

14.3 Transport hazard class(es)

Class	8
Classification Code	C1
Hazard label	8
Transport Category	80
Tunnel Code	E
EMS	F-A, S-B

14.4 Packaging Group II

14.5 Environmental hazards

Classified as environmentally hazardous: ADR	No
Labeling according to 5.2.1.8 RID	No
Labeling according to 5.2.1.6.3 IMDG	No
Classification as environmentally hazardous according to 2.9.3 IMDG	No
Classified as "P" according to 2.10 IMDG	No

14.6 Special precautions for user

Note: Not applicable

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

IMDG: Not applicable

15. Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for this substance or mixture.****Sulphuric acid:**

Regulatory List	Notification	Notification No
AICS	YES	
DSL	YES	
INV (CN)	YES	
ENCS (JP)	YES	(1) - 430
ISHL (JP)	YES	(1) - 430
TSCA	YES	
EINECS	YES	231-639-5
KECI (KR)	YES	97-1-405
KECI (KR)	YES	KE-32570
PICCS (PH)	YES	

15.2 Chemical Safety Assessment

A Chemical Safety Assessment has been carried out for this substance

16. Other information

Full text of H-statements referred to under sections 2 and 3

H290 May be corrosive to metals

H314 Causes severe skin burns and eye damage

Further information

Restricted to professional users. Attention - Avoid exposure- obtain special instructions before use

This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty or merchantability, or fitness for any particular use, or any other warranty, express or implied, with respect to this information, and we assume no liability resulting from use of this information. Users should make their own investigations to determine the suitability of the information for their particular needs and uses.

• Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR Dangerous goods Regulations by the 'International Air Transport Association' (IATA)

ICAO: International Civil Aviation Organization

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS European Inventory of Existing Commercial Chemical Substances.

CAS: Chemicals Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

█ Indicates updated section

No.	Short title	Main User Group (SU)	Sector of Use (SU)	Product Category (PC)	Process Category (PROC)	Environmental Release Category (ERC)	Specified
1	Use as an intermediate	3	4, 6b, 8, 9, 14	19	1, 2, 3, 4, 8a, 8b, 9	6a	ES679
2	Formulation & (re)packing of substances and mixtures	3	10	NA	1, 3, 5, 8a, 8b, 9	2	ES689
3	Use in laboratories	22	NA	21	15	8a, 8b	ES906
4	Use for extractions and processing of minerals, ores	3	2a, 14	20, 40	2, 3, 4	4, 6b	ES784
5	Use as processing aid	3	4, 5, 6b, 8, 9, 11, 23	20	1, 2, 3, 4, 8a, 8b, 9, 13	6b	ES782
6	Use in electrolytic processes	3	14, 15, 17	14, 20	1, 2, 8b, 9, 13	5, 6b	ES788
7	Use in the process of surface treatments, purification and etching	3	2a, 14, 15, 16	14, 15	1, 2, 3, 4, 8a, 8b, 9, 13	6b	ES786
8	Use in gas treatment	3	8	20	1, 2, 8b	7	ES790
9	Use in production of sulphuric acid contained batteries	3	NA	NA	2, 3, 4, 9	2, 5	ES792
10	Use in recycling of sulphuric acid contained batteries	3	NA	NA	2, 4, 5, 8a	1	ES794
11	Use in maintenance of sulphuric acid contained batteries	22	NA	NA	19	8b, 9b	ES798

For exposure scenarios and further information please contact Complete Pool Controls