Material Safety Data Sheet

1. IDENTIFICATION OF MATERIAL AND SUPPLIER

PRODUCT NAME: DRAIN-O-FLUSH

Synonyms: None

Recommended Use: Drain Opener

Supplier: Minehan Agencies Pty Ltd

Address: 29 Camuglia Street GARBUTT Townsville Queensland Australia 4814

Telephone: (07) 4774 4626

Facsimile: (07) 4774 4616

E-mail: inquiry@minehanagencies.com.au

Emergency telephone number: 0408 777 800 (24Hrs Australia)

2. HAZARDS IDENTIFICATION

This product is classified as :

Hazardous Substance according to criteria of the National Occupational Health and Safety Commission (NOHSC).

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

Approved Criteria Classification (Calculated).	**CORROSIVE R35, HARMFUL R20/21/22** **Safety Phrases S1/2, S36/37/39**
SUSDP Classification	**Poison S6** (material responsible for classification)
ADG Classification	**Class 8** (Sulphuric Acid.)
Un Number	**1830**

EMERGENCY OVERVIEW

COLOUR	Clear to Cloudy
PHYSICAL DESCRIPTION	LIQUID
ODOUR	Mild acrid
MAJOR HEALTH HAZARD	Severe burns, permanent eye damage Respiratory tract damage.

POTENTIAL HEALTH EFFECTS

Inhalation: Short term exposure. Corrosive, irritation, nausea, vomiting, difficulty breathing, headache, drowsiness, symptoms of drunkenness, lung congestion. **Long term Exposure**. Possible lung and respiratory tract damage , may trigger pre-existing respiratory complaints.

Skin Contact: Short term exposure. Severe burns, redness and irritation. **Long term exposure**. Permeant scaring. Prolonged exposure to a diluted form may cause irritation, redness and dermatitis.

Eye Contact: Short term exposure. Severe irritation, serious eye damage. **Long-term exposure**. Permeant damage to eyes including blindness.

Ingestion: **Short term exposure**. Severe burns to mouth, oesophagus and stomach. Headaches, nausea, and severe abdominal pain may result. **Long-term exposure**. Permeant Gastrointestinal damage.

Carcinogen Status

NOHSC	Not Classified
NTP	Suspected Human Carcinogen
IARC	Group I Carcinogen

3. COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL ENTITY	CAS No	PROPORTION W/W %
Sulphuric Acid	7664-93-9	95-100%
Other ingredients determined not to be hazardous		to 100%

4. FIRST AID MEASURES

Poison Information Centres in each State capital city can provide additional assistance for Scheduled Poisons: Phone (Australia 13 1126)

Inhalation: Remove victim from exposure. Remove contaminated clothing and loosen remaining clothing. Perform artificial respiration if needed. Allow patient to assume most comfortable position and keep warm. Seek URGENT medical attention.

Skin Contact : Remove contaminated clothing. Wash contaminated skin for at least 15-20mins with of water, or until no evidence of the chemical remains. If swelling, redness, blistering, or irritation occurs seek medical advice. Wash clothing before re-use

Eye Contact: Immediately irrigate with copious quantities of water for at least 15 minutes. Eyelids to be held open. If present, remove contact lenses. Seek medical attention. **Note to Physician**. Can cause corneal burns

Ingestion: Immediately rinse mouth with water. Do NOT induce vomiting. Seek VERY URGENT medical attention.

Notes to Physician: Treat symptomatically.

5. FIRE FIGHTING MEASURES

Flash Point: Not a Flammable or Combustible liquid

Fire and Explosion Hazard: Non-combustible material. Closed containers exposed to heat may explode.

Specific Hazards: Corrosive Liquid. May react violently with water producing enough heat to be an ignition source. May produce explosive, flammable gas when in contact with metals. Releases ammonia gas in contact with ammonium salts or ammonia solutions. Releases Chlorine gas in contact with hypochlorite solutions.

Fire Fighting: Move container from fire area if it can be done without risk. Do not scatter spilled material with high-pressure water streams. Dam for later disposal. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas. **Suitable Extinguishing Media:** Not combustible, however, if material is involved in a major fire use water fog to keep drums cool. Use foam, CO_2 or dry chemical powder to extinguish surrounding fire.

Hazardous Decomposition in Products: On burning may emit fumes including carbon monoxide, carbon dioxide, and partially burned hydrocarbons. Fire fighters to wear self-contained breathing apparatus if risk of exposure to vapour or products of combustion.

Hazchem Code: 2P

6. ACCIDENTAL RELEASE MEASURES

Strong Acidic Liquid. Stop leak if possible without personal risk. Wear protective equipment to prevent personal injury (see section 8). **Small spills (< 5L)** Cover with an absorbent material (soil, sand or other inert material). Collect and seal in properly labelled containers for disposal. Hose down area with large amounts of water. Caution, Slip Hazard. **Large spills (>5L)** Prevent run off into drains and waterways. Dam material. Cover with absorbent material. Collect and seal in properly labelled containers for disposal. Neutralise residual material with a mild alkaline solution (1% Sodium Hydroxide) Hose down area with large amounts of water. Keep unnecessary people away, isolate hazard area and deny entry. If contamination of sewers or waterways has occurred, advise local emergency services.

7. HANDLING AND STORAGE

Store in a well-ventilated area. Store in a cool, dry place and out of direct sunlight. Store away from foodstuffs, hypochlorites, and alkaline materials. Store in original containers. Do not store in metal containers. Keep containers closed when not in use – check regularly for leaks. This material is a Scheduled Poison and a Class 8 Corrosive liquid and must be stored, maintained and used in accordance with the relevant regulations. Handle using good industrial hygiene practices (see section 8 on personal protection).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits: No value has been assigned for this specific product by NOHSC. However exposure limits for ingredients are shown below

Ingredient	TWA	STEL	Notices
Sulphuric Acid	1mg/m^3	3mg/m^3	

TWA – the Time-Weighted Average airborne concentrations over an eight hour working day, for a five day week over an entire working life.

STEL (Short Term Exposure Limit) – the average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight hour work day. According to current knowledge, these concentrations should neither impair the health of, nor cause undue discomfort to, nearly all workers.

Sk Notice – absorption through the skin may be a significant source of exposure. The exposure standard is invalidated if such contact should occur.

Sen Notice- Sensitiser. The substance can cause a specific immune response in some people. An affected individual may subsequently react to minute levels of that substance.

These exposure standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. Exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

Biological Limit Value: No biological limit allocated

Engineering Controls: Ensure ventilation is adequate to maintain air concentrations below Exposure Standards and prevent exposure to vapours, mists and fumes. Use in well ventilated area. Keep containers closed when not in use.

Personal Protection Equipment
Respirator Type (AS 1716): If inhalation risk exists, wear organic vapour respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

Eye Protection: Safety glasses with side shields or goggles should be worn as described in Australian Standard AS/NZS 1337 – Eye Protectors for Industrial Applications.

Glove Type: Impervious PVC or rubber gloves should be worn.

Clothing: Suitable protective clothing should be worn eg: cotton overalls buttoned at neck and wrist.

Work/Hygienic Practices: Avoid skin and eye contact. Always wash hands before smoking, eating, drinking or using the toilet.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid		Water Solubility	Soluble
Colour	Clear to Cloudy		Vapour Pressure	0.001mmHg
Odour	Faint Acrid		Vapour Density	Above 1 (air =1)
Boiling Point	290 ^{o}C		Evaporation Rate	Slower than butyl acetate
Melting Point	NA		% Volatiles	1%
Freezing Point	10 ^{o}C		Flash Point	Not Flammable
Specific Gravity	1.8g/ml (water =1)		Flammability Limits	NA
Ph (neat)	>1		Ignition Temperature	Not known

10. STABILITY AND REACTIVITY

Reactivity: Stable at normal temperatures and pressure.

Conditions to Avoid: Avoid contact with incompatible materials.

Incompatibilities: Strong Oxidising Agents, Strong Alkali, Metals, and Hypochlorites.
Explosive reactions may occur with strong oxidising agents.
If water is added to acid violent heat producing reactions may occur.
Violent heat producing reactions may occur with strong alkaline agents.
An explosive, flammable gas (Hydrogen gas) is produced when in contact with metals.

Hazardous Decomposition: Thermal decomposition products include, sulphur dioxide, carbon dioxide, and carbon monoxide.

Polymerisation: Will not polymerise.

11. TOXICOLOGICAL INFORMATION

Sulphuric Acid

Local Effects: Corrosive & Toxic: Inhalation, skin, eyes, and ingestion.
Target Organs: Eyes, skin, respiratory System, teeth.

Classification of Hazardous Ingredients

Ingredients	R Phrases
Sulphuric Acid	R35, R41, R20/21/22

Individual Ingredient Information

Sulphuric Acid

Irritation Data: In exposures of 5 to 15 minutes, some volunteers found 5mg/m^3 to be very objectionable.

Toxicity Data: Inhalation mouse LC50 320mg/m^3/2H; Oral rat LD50, 510mg/kg

Local Effects: Irritation eyes , skin, nose, throat; pulmonary oedema, bronchitis; conjunctivitis; stomatis; dental erosion; eye, skin burns; dermatitis
Acute Toxicity Level; Lethal oral dose for humans has been reported to be 135mg/Kg. (Note this lethal oral dose is equivalent to 6mls of Drain-O-Flush or exposure to 6300mg/m^3 for 30mins)

Target Organs: Eyes skin, respiratory system, teeth

Carcinogenicity: ACGIH:A2-Suspected Human Carcinogen; IARC: Group I carcinogen.

Epidemiology: Workers exposed to industrial sulphuric acid mist showed a statistical increase in laryngeal cancer. This data suggests a possible relationship between carcinogenesis and inhalation of sulphuric acid mist.

Teratogenicity: No data available
Neurotoxicity: No data available
Mutagenic Data: No data available
Reproduction Effects Data: No data available

12. ECOLOGICAL INFORMATION

General Statement: Do not allow large quantities (>20L) of this product to enter the waterways. Strong acid effect will be detrimental to aquatic life.

Ecotoxicity: Hazardous to the environment due to the high acid content (pH effect). The effect of Sulphuric Acid on an organism depends on the buffer capacity of the aquatic or terrestrial ecosystem. LC50 values of acute toxicity tests with aquatic organisms ranged between 30 and 200 mg/L.

Persistence and Degradability: No specific information available for this product

Mobility: Very mobile in soil and very soluble in water. No transport to air

13. DISPOSAL CONSIDERATIONS

Refer to State/Territory Land Waste Management Authority for disposal, show this MSDS for their consideration. Empty containers not to be recycled or used for any other purpose. Dispose in accordance with local regulations.

14. TRANSPORTATION INFORMATION

UN No	1830
Proper Shipping Name	Sulphuric Acid.
ADG Code	Class 8
Sub Risk	Class 6.1
Packing Group	II
Special Precautions	None
Hazchem Code	2R
EPG	8A1 & 6A6
Segregations	Yes

15. REGULATORY INFORMATION

SUSDP: Poison S6

AICS: All of the constituents of this material are listed on the ACIS.

16. OTHER INFORMATION

Issue Date: May 2009
Reason(s) For Issue: Updated format to comply with NOHSC: 2011(2003).

Labelling Details
First line of Label must read: POISON
Other statements to include

R35 Cause severe burns
R41 Risk of serious damage to eyes
R20/21/22 Harmful by inhalation, in contact with skin, and if swallowed
S1/2 Keep locked up and out of reach of children.
S26 In case of contact with eye/s, do NOT rub eyes as this may scratch the cornea, rinse immediately with plenty of water and seek medical advice.
S36/37/39 Wear Suitable protective clothing, gloves and eye/face protection
S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label wherever possible).

Abbreviations & Acronyms

SUSPD: Standard for the Uniform Scheduling of Drugs and Poisons
ADG: Australian Code for the Transport of Dangerous Goods by Road and rail
N.O.S. Not Otherwise Specified
CAS No: Chemical Abstracts Service Registry Number
UN No: United Nations Number
R-Phrases: Risk Phrases
S-Phrases: Safety Phrases
HAZCHEM Code: Hazardous Chemical emergency action code
NOHSC: National Occupational Health and Safety Commission
IARC: International Agency for Research into Cancer
ACIS: Australian Inventory of Chemical Substances
NTP: National Toxicology Program (USA)

Literary references:

Approved Criteria for Classifying Hazardous Substances [NOHSC:1008(41999)]
National Code of Practice for the Preparation of Material Safety Data Sheets 2nd Edition [NOHSC:2011(2003)]
Exposure Standards for Atmospheric Contaminants in the Occupational Environment
Guidance Note [NOHSC:3008(1995)] National Exposure Standards [NOHSC:10005(1999)]
List of Designated Hazardous Substances [NOHSC:10005(1999)]
Standard for the Uniform Scheduling of Drugs and Poison No. 17
The Australian Code for the Transport of Dangerous Goods by Road and Rail EDITION 6

Disclaimer

This MSDS summarises at the date of issue our best knowledge of the health and safety hazard information of the product and in particular how to safely handle and use the product in the workplace.
Since Minehan Agencies Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, review this MSDS in the context of how the user intends to handle and use the product in the workplace i.e. a risk analysis.
If clarification or further information is needed to ensure that an appropriate assessment can be made, the user should contact Minehan Agencies Pty Ltd.