

Section 1 - Identification of The Material and Supplier

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Chemical nature: Concentrated mineral acid.
Trade Name: Mo-Flo
Product Use: Liquid drain solvent - drain unblocker.
Creation Date: March, 2003
This version issued: November, 2016 and is valid for 5 years from this date.

Section 2 - Hazards Identification

Statement of Hazardous Nature

This product is classified as: Hazardous according to the criteria of SWA Australia.
Dangerous according to Australian Dangerous Goods (ADG) Code, IATA and IMSBC criteria.

SUSMP Classification: S6

ADG Classification: Class 8: Corrosive Substances.

UN Number: 1830, SULPHURIC ACID with more than 51% acid



GHS Signal word: DANGER

Corrosive to metals Category 1
Skin Corrosion /Irritation Category 1
Acute Toxicity Inhalation Category 1/2
Specific Target Organ Toxicity - Single Exposure Category 3
Hazardous to aquatic environment Short term/Acute Category 2

HAZARD STATEMENT:

H290: Corrosive to metals.
H314: Causes severe skin burns and eye damage.
H330: Fatal if inhaled.
H335: May cause respiratory irritation.
H401: Toxic to aquatic life.

PREVENTION

P202: Do not handle until all safety precautions have been read and understood.
P234: Keep only in original container.
P260: Do not breathe fumes, mists, vapours or spray.
P264: Wash contacted areas thoroughly after handling.
P271: Use only outdoors or in a well ventilated area.
P280: Wear protective gloves, protective clothing and eye or face protection.

RESPONSE

P363: Wash contaminated clothing before reuse.
P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor.
P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353: IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water.
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P390: Absorb spillage to prevent material damage.
P391: Collect spillage.

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P370+P378: Not combustible. Use extinguishing media suited to burning materials. Water fog or fine spray is the preferred medium for large fires.

STORAGE

P405: Store locked up.

P406: Store in corrosive resistant container with a resistant inner liner.

P420: Store away from other materials.

P403+P233: Store in a well-ventilated place. Keep container tightly closed.

DISPOSAL

P501: Dispose of contents and containers to landfill.

Emergency Overview

Physical Description & colour: Dark viscous liquid.

Odour: No odour.

Major Health Hazards: causes severe burns, may cause serious damage to eyes, respiratory tract irritant.

Under some circumstances, addition of concentrated acids to drains may cause generation of hydrogen sulfide which is an extremely toxic gas. If this occurs, immediately flush drain if possible and ventilate area to remove gas.

Section 3 - Composition/Information on Ingredients

Ingredients	CAS No	Conc, %	TWA (mg/m ³)	STEL (mg/m ³)
Sulfuric acid	7664-93-9	>98	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 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 should not be exceeded for more than 15 minutes and should not be repeated for 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 SDS with you when you call.

If this product is present on victim, take care not to get it on your skin unless under running water. If possible get victim to a shower, and remove clothing while shower is running. Soap will help neutralise this product.

Inhalation: If irritation occurs, contact a Poisons Information Centre, or call a doctor. 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. In severe cases, symptoms of pulmonary oedema can be delayed up to 48 hours after exposure.

Skin Contact: Seek urgent medical attention. Quickly and gently, blot or brush away excess chemical. Remove contaminated clothing, shoes and leather goods (e.g. watchbands, belts), preferably while under a running shower stream. 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.

Eye Contact: Call a Poisons Information Centre or a doctor urgently. Quickly and gently, blot or brush away chemical. Immediately flush the contaminated eye(s) with lukewarm, gently flowing water while holding the eyelid(s) open for at least 15 minutes or until advised to cease by trained medical attendant. Neutral saline solution may be used as soon as it is available. DO NOT INTERRUPT FLUSHING. Take care not to rinse contaminated water into the unaffected eye or onto face.

Ingestion: If swallowed, 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. Firefighters should take care and appropriate precautions. Violent steam generation or eruption may occur upon application of direct water stream on this product. Also, this product, in contact with metals may release hydrogen gas which forms explosive mixtures in air.

Fire decomposition products from this product may be toxic if inhaled. Take appropriate protective measures.

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.

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

Never add water to this product as it will heat up considerably and may erupt.

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 face mask, face shield, gauntlets and self contained breathing apparatus. See above under Personal Protection regarding Australian Standards relating to personal protective equipment. Suitable materials for protective clothing include rubber, PVC, Viton. 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 SDS 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.

When handling, always add product slowly to water; never add water to this product. Keep head away from drains as there is a chance it may erupt, spraying sulfuric acid into space above the drain.

Storage: This product is a Scheduled Poison. Observe all relevant regulations regarding sale, transport and storage of this class 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 "Materials to avoid" 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/m³)

STEL (mg/m³)

Sulfuric acid

1

3

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, PVC, Viton.

Respirator: If there is a significant chance that vapours or mists are likely to build up in the area where this product is being used, we recommend that you use a respirator. It should be fitted with a type E cartridge, suitable for sulfur dioxide.

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

Section 9 - Physical and Chemical Properties:

Physical Description & colour:	Dark viscous liquid.
Odour:	No odour.
Boiling Point:	Decomposes before boiling at 100kPa.
Freezing/Melting Point:	Melts in a range about 10°C.
Volatiles:	No specific data. Expected to be low at 100°C.
Vapour Pressure:	Negligible at normal ambient temperatures.
Vapour Density:	>1
Specific Gravity:	1.84
Water Solubility:	Completely soluble.
pH:	Very corrosive
Volatility:	No data.
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: This product reacts violently with strongly alkaline materials such as sodium and potassium hydroxides generating much heat. It also reacts with many metals liberating explosive hydrogen gas. Reacts with and dissolves many organic materials often liberating considerable heat. There is an extensive list of other materials that will react with this product including potassium chlorate, potassium perchlorate, potassium permanganate, sodium, lithium, bases, organic material, halogens, metal acetylides, oxides and hydrides, strong oxidizing and reducing agents and many other reactive substances.

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

Incompatibilities: bases, strong oxidising agents, strong reducing agents, zinc, tin, aluminium and their alloys. Contact with water will cause the product to generate much heat, possibly leading to an eruption.

Fire Decomposition: May release oxides of sulfur during a fire.

Polymerisation: This product is unlikely to undergo polymerisation processes.

Section 11 - Toxicological Information

Local Effects:

Target Organs: There is no data to hand indicating any particular target organs. Will quickly corrode all tissues it contacts.

Classification of Hazardous Ingredients

Ingredient	Risk Phrases
Sulfuric Acid	Conc ≥15%: C; R35

Potential Health Effects

Inhalation

Short term exposure: Product is an inhalation irritant. Symptoms may include headache, irritation of nose and throat and increased secretion of mucous in the nose and throat. Other symptoms may also become evident, but they should disappear after exposure has ceased. If liquid is inhaled, will cause severe burns.

Long Term exposure: Long-term exposure to mist or vapours may cause damage to teeth.

Skin Contact:

Short term exposure: 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.

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Eye Contact:

Short term exposure: 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: 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: No significant ingredient is classified as carcinogenic by NTP.

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

Section 12 - Ecological Information

This product does not degrade naturally. It will not cause long term ecological problems because it does not enter biological systems. However, toxic to aquatic organisms until diluted due to extreme acidity.

Section 13 - Disposal Considerations

Disposal: Containers should be emptied as completely as practical before disposal. If possible, recycle containers either in-house or send to recycle company. If this is not practical, send to a commercial waste disposal site. Please do NOT dispose into sewers or waterways.

Section 14 - Transport Information

ADG Code: 1830, SULPHURIC ACID with more than 51% acid

Hazchem Code: 2P

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 product are compliant with NICNAS regulations.

Section 16 - Other Information

This SDS 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
CAS number	Chemical Abstracts Service Registry Number
Hazchem Number	Emergency action code of numbers and letters that provide information to emergency services especially firefighters
IARC	International Agency for Research on Cancer
SWA	Safe Work Australia, formerly ASCC and NOHSC
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

SAFETY DATA SHEET

THIS SDS 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 SDS 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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