



Material Safety Data Sheet

SODIUM SULPHIDE

Infosafe™ No. JXF4M Issue Date January 2012 Status ISSUED by AJAXFC BS: 1.11.6

Classified as hazardous according to criteria of NOHSC

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name	SODIUM SULPHIDE											
Product Code	10502											
Company Name	Ajax Finechem (ABN 64 121 927 786)											
Address	17/21 Bay Road Taren Point NSW 2229											
Emergency Tel.	1800 638 556 (24 hr) Aust / (NZ): Phone 0800 154 666											
Telephone/Fax Number	Tel: 1300 884 078											
Recommended Use	Organic chemicals, dyes (sulfur), intermediates, viscose rayon (sulfur removal), leather (depilatory), paper pulp, hydrometallurgy of gold ores, sulfiding oxidised lead and copper ores preparatory to flotation, sheep dips, photographic reagent, engraving and lithography, analytical reagent.											
Other Names	<table border="0"> <thead> <tr> <th>Name</th> <th>Product Code</th> </tr> </thead> <tbody> <tr> <td>SODIUM SULPHIDE</td> <td>508</td> </tr> <tr> <td>SODIUM SULPHIDE</td> <td>658</td> </tr> <tr> <td>SODIUM SULPHIDE FLAKE</td> <td>706</td> </tr> <tr> <td>SODIUM SULPHIDE FLAKE</td> <td>10590</td> </tr> </tbody> </table>	Name	Product Code	SODIUM SULPHIDE	508	SODIUM SULPHIDE	658	SODIUM SULPHIDE FLAKE	706	SODIUM SULPHIDE FLAKE	10590	
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Other Information	NEW ZEALAND: Ajax Finechem (NZ) Ltd 150B Harris Road, East Tamaki, Auckland Phone (09) 273 4343 Fax (09) 273 4341 Emergency Advice (NZ): Phone 0800 154 666											

2. HAZARDS IDENTIFICATION

Hazard Classification	<p>Australia: Classified as Hazardous according to criteria of National Occupational Health & Safety Commission, Australia (NOHSC). Classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.</p> <p>New Zealand: Classified as Hazardous according to the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001, New Zealand. Classified as Dangerous Goods for transport according to the New Zealand Standard NZS 5433:2007 Transport of Dangerous Goods on Land.</p> <p>HSNO Classification: 6.1C - Substance that is acutely toxic (Oral) 8.2B - Substance that is corrosive to dermal tissue 8.3A - Substance that is corrosive to ocular tissue 9.1A - Substance that is very ecotoxic in the aquatic environment 9.3B - Substance that is ecotoxic to terrestrial vertebrates</p> <p>Hazard statement codes: H301 Toxic if swallowed. H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage. H400 Very toxic to aquatic life. H432 Toxic to terrestrial vertebrates.</p> <p>Precautionary statement codes - Prevention: P102 Keep out of reach of children. -This statement applies only where the substance is available to the general public. P103 Read label before use. -This statement applies only where the substance is available to the general public. P104 Read Safety Data Sheet before use. P260 Do not breathe dust/fume/gas/mist/vapours/spray. P264 Wash skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P273 Avoid release to the environment. -This statement does not apply where this is the intended use. P280 Wear protective gloves/protective clothing/eye protection/face protection.</p> <p>Precautionary statement codes - Response: P101 If medical advice is needed, have product container or label at hand. -This statement applies only where the substance is available to the general public. P310 Immediately call a POISON CENTER or doctor/physician. P330 Rinse mouth. P331 Do NOT induce vomiting.</p> <p>INHALATION: P304+P340 IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. P391 Collect spillage.</p> <p>INGESTION: P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.</p> <p>EYES: P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>SKIN: P363 Wash contaminated clothing before reuse. P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.</p> <p>Precautionary statement codes - Storage: P405 Store locked up.</p>
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Precautionary statement codes - Disposal:
P501 In the case of a substance that is in compliance with a HSNO approval other than a Part 6A (Group Standards) approval, a label must provide a description of one or more appropriate and achievable methods for the disposal of a substance in accordance with the Hazardous Substances Regulations 2001. This may also include any method of disposal that must be avoided. See Section 12 for disposal.

substances (Disposal) regulations 2001. This may also include any method of disposal that must be avoided. See Section 13 for disposal details.

Risk Phrase(s)	R22 Harmful if swallowed. R24 Toxic in contact with skin. R31 Contact with acids liberates toxic gas. R34 Causes burns. R50 Very toxic to aquatic organisms.
Safety Phrase(s)	S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S27 Take off immediately all contaminated clothing. S28 After contact with skin, wash immediately with plenty of water S45 In case of accident or if you feel unwell seek medical advice immediately S46 If swallowed, seek medical advice immediately and show this container or label. S60 This material and its container must be disposed of as hazardous waste. S61 Avoid release to the environment. Refer to special instructions/safety data sheet. S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	Name	CAS	Proportion
	Sodium sulphide	1313-82-2	100 %

4. FIRST AID MEASURES

Inhalation	If inhaled, remove affected person from contaminated area. Apply artificial respiration if not breathing. Seek medical attention.
Ingestion	Do not induce vomiting. Wash out mouth thoroughly with water. Seek immediate medical attention.
Skin	Remove all contaminated clothing. Wash gently and thoroughly with water and non-abrasive soap for 15 minutes. Ensure contaminated clothing is washed before re-use or discard. Seek medical attention.
Eye	If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. Seek immediate medical attention.
First Aid Facilities	Eye wash fountain, safety shower and normal washroom facilities.
Advice to Doctor	Treat symptomatically.
Other Information	For advice in an emergency, contact a Poisons Information Centre (Phone eg Australia 13 1126; New Zealand 0800 POISON / 0800 764 766) or a doctor (at once).

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media	Foam, dry chemical powder, carbon dioxide, water fog or water spray.
Hazards from Combustion Products	Under fire conditions this product may emit toxic and corrosive fumes and gases including hydrogen sulphide, sulphur dioxide and other sulphur oxides.
Specific Hazards	Explosive when dry (ie. without water of crystallisation). Rapid heating may cause an explosion. An exothermic reaction occurs with strong acids and oxidising agents. Material is stable at normal conditions, but is sensitive to air. Contact with acids and oxidising agents liberates toxic gases of hydrogen sulphide, sulphur dioxide and other sulphur oxides. Avoid contact with acids, oxidising agents, aluminium and zinc. Vapours are heavier than air and will 'travel' to low-level areas e.g. sumps, drains, etc. Precautions should be taken to eliminate the build up of explosive mixtures.
Hazchem Code	2X
Precautions in connection with Fire	Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA) operated in positive pressure mode. In case of fire the product may be violently or explosively reactive. Use water spray to disperse vapours. This product should be prevented from entering drains and watercourses.

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures	Remove sources of ignition. Evacuate all unprotected personnel. Do not allow contact with skin and eyes. Do not breathe dust. It is essential to wear self-contained breathing apparatus (S.C.B.A) and full personal protective equipment and clothing to prevent exposure. Avoid exposure to spillage by sweeping up material avoiding dust generation - dampen spilled material with water if suitable to avoid airborne dust, OR where possible use dustless methods such as vacuum to collect the material; then transfer material in to suitable labelled containers for subsequent recycling or disposal. Use absorbent paper dampened with water to pick up remaining material. Wash surfaces well with soap and water. Dispose of waste according to applicable local and national regulations. If contamination of sewers or waterways occurs inform the local water and waste management authorities in accordance with local regulations.
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7. HANDLING AND STORAGE

Precautions for Safe Handling	Toxic and corrosive and combustible solid. Attacks skin and eyes. Causes burns. Avoid exposure. Exposure without protection must be prevented. Wear appropriate personal protective equipment and clothing to prevent exposure. Use in designated areas with local exhaust ventilation. DO NOT store or use in confined spaces. Build up of dust/solid in the atmosphere must be prevented. Do not use near ignition sources. Do not pressurise, cut, heat or weld containers as they may contain hazardous residues. Maintain high standards of personal hygiene i.e. Washing hands prior to eating, drinking, smoking or using toilet facilities.
Conditions for Safe Storage	Corrosive and combustible solid for storage and handling purposes. This material is Toxic and must be stored, handled and maintained according to the appropriate Commonwealth Regulations. Limit quantity of material in storage. Restrict access to storage area. Post appropriate warning signs. Consider leak detection and alarm systems, as required. Store in a well ventilated area away from heat and sources of ignition, out of direct sunlight and moisture. Keep tightly closed in a dry, cool, well-ventilated area, out of direct sunlight. Take precautions against static electricity discharges. Use proper grounding procedures. Store away from incompatible materials such as materials that support combustion (oxidising materials). Store in suitable, labelled containers. Inspect periodically for deficiencies such as damage or leaks. Have appropriate fire extinguishers available in and near the storage area For information on the design of the store-room reference should be made to AS/NZS 4745.2004 - 'Code of Practice for Handling Combustible Dusts' and AS 3780-2008 The storage and handling of corrosive substances. Reference should also be made to all Local, State and Federal regulations.
Corrosiveness	Corrosive

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

National Exposure Standards	No exposure standards have been established for the mixture by the Australian National Occupational Health & Safety Commission (NOHSC) or the Occupational Safety and Health Service (OSH) of the New Zealand Department of Labour. However, over-exposure to some industrial chemicals may result in enhancement of pre-existing adverse medical conditions and/or allergic reactions and should be kept to the least possible levels.
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The exposure limits for dust not otherwise specified are as follows:
 Australian National Occupational Health And Safety Commission (NOHSC) exposure standards:
 Dust TWA 10 mg/m³ (inspirable fraction)
 New Zealand Workplace Exposure Standards (OSH):
 Particulates TWA 10 mg/m³ (inhalable) TWA 3 mg/m³ (respirable)
 TWA (Time Weighted Average): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day week.

Biological Limit Values	No biological limit allocated.
Engineering Controls	Provide sufficient ventilation to keep airborne levels below the exposure limits. Where vapours or mists are generated, particularly in enclosed areas, and natural ventilation is inadequate, a local exhaust ventilation system is required.
Respiratory Protection	If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable dust/particulate filter should be used. Reference should be made to Australian/New Zealand Standards AS/NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.
Eye Protection	Safety glasses with side shields, goggles or full-face shield as appropriate should be used. Final choice of appropriate eye/face protection will vary according to individual circumstances i.e. methods of handling or engineering controls and according to risk assessments undertaken. Eye protection should conform with Australian/New Zealand Standard AS/NZS 1337 - Eye Protectors for Industrial Applications.
Hand Protection	Wear gloves of impervious material. Final choice of appropriate gloves will vary according to individual circumstances i.e. methods of handling or according to risk assessments undertaken. Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.
Body Protection	Suitable protective work wear, e.g. cotton overalls buttoned at neck and wrist is recommended. Chemical resistant apron is recommended where large quantities are handled.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Yellowish chips or flakes
Odour	Rotten-egg like odour
Melting Point	85°C
Boiling Point	>160°C
Solubility in Water	Soluble
Specific Gravity	1.50
pH Value	13 (10 g/L aqueous solution)
Vapour Pressure	Not available
Flash Point	Not available
Flammability	Combustible
Auto-Ignition Temperature	480°C
Flammable Limits - Lower	Not applicable
Flammable Limits - Upper	Not applicable

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions of storage and handling.
Conditions to Avoid	Heat, flames and other sources of ignition.
Incompatible Materials	Strong oxidising agents and strong acids.
Hazardous Decomposition Products	Thermal decomposition may result in the release of toxic and/or irritating fumes and gases including hydrogen sulphide, sulphur dioxide and other sulphur oxides.
Hazardous Reactions	Contact with acids liberates toxic gas.
Hazardous Polymerization	Will not occur.

11. TOXICOLOGICAL INFORMATION

Inhalation	Dust generated will cause irritation with possible burns to the mucous membrane and upper airways. Symptoms may include coughing, lesions of the nasal septum, severe pain and may lead to permanent tissue scarring.
Ingestion	Harmful if swallowed. Ingestion of this product can cause irritation to the mouth, throat, oesophagus and stomach with symptoms of diarrhoea. Ingestion of this product will cause nausea, vomiting, abdominal pain and chemical burns to the mouth, throat and stomach. Damage to oesophagus and stomach may be fatal. The hydrogen sulphide formation in the stomach will have severe toxic effects.
Skin	Toxic in contact with skin. Product can be absorbed through skin with resultant toxic systemic effects. Causes burns. Corrosive to the skin. Skin contact can cause redness, itching, irritation, severe pain and chemical burns with resultant tissue destruction.
Eye	Corrosive to eyes - contact can cause corneal burns. Contamination of eyes can result in permanent injury. Eye contact with vapour or liquid will cause stinging, blurring tearing, severe pain and possible permanent eye damage and blindness.
Chronic Effects	Not available
Acute Toxicity - Oral	LD50 (Oral, Rat): 208 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity	Very toxic to aquatic organisms.
Persistence / Degradability	Not available
Mobility	Not available
Bioaccumulative Potential	Not available
Environment Protection	Do not allow product to enter drains, waterways or sewers.

13. DISPOSAL CONSIDERATIONS

Disposal Considerations

Product Disposal:

Product wastes are controlled wastes and should be disposed of in accordance with all applicable local and national regulations. This product can be disposed through a licensed commercial waste collection service. The product should be rendered non-hazardous before being sent to a licensed landfill facility. Alternatively, as the product is combustible, it can be sent to an approved high temperature incineration plant for disposal.

Personal protective clothing and equipment as specified in Section 8 of this SDS must be worn during handling and disposal of this product. The ventilation requirements as specified in the same section must also be followed, and the precautions given in Section 7 of this SDS regarding handling must also be followed.

Do not dispose into the sewerage system. Do not discharge into drains or watercourses or dispose where ground or surface waters may be affected.

In New Zealand, the disposal agency or contractor must comply with the New Zealand Hazardous Substances (Disposal) Regulations 2001. Further details regarding disposal can be obtained on the EPA New Zealand website under specific group standards.

Container Disposal:

The container or packaging must be cleaned and rendered incapable of holding any substance. It can then be disposed of in a manner consistent with that of the substance it contained. In this instance the packaging can be disposed through a commercial waste collection service.

Alternatively, the container or packaging can be recycled if the hazardous residues have been thoroughly cleaned or rendered non-hazardous. In New Zealand, the packaging (that may or may not hold any residual substance) that is lawfully disposed of by householders or other consumers through a public or commercial waste collection service is a means of compliance with regulations.

14. TRANSPORT INFORMATION

Transport Information

Australia:

This material is classified as a Class 8 (Corrosive Substances) Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail (7th edition).

Class 8 Dangerous Goods are incompatible in a placard load with any of the following:

- Class 1, Explosives
 - Division 4.3, Dangerous When Wet Substances
 - Division 5.1, Oxidising Agents
 - Division 5.2, Organic Peroxides
 - Class 6, Toxic or Infectious Substances, if the Class 6 dangerous goods are cyanides and the Class 8 dangerous goods are acids
 - Class 7, Radioactive Substances
- and are incompatible with food and food packaging in any quantity.

Strong acids must not be loaded in the same freight container or on the same vehicle with strong alkalis. Packing Group I and II acids and alkalis should be considered as strong.

New Zealand:

This material is classified as a Class 8 Corrosive Substance according to NZS 5433:2007 Transport of Dangerous Goods on Land.

Must not be loaded in the same freight container or on the same vehicle with:

- Class 1, Explosives
- Division 5.1, Oxidising substances
- Division 5.2, Organic peroxides
- Class 7, Radioactive materials unless specifically exempted

And are incompatible with food and food packaging in any quantity.

Note 1: Cyanides (Division 6.1) must not be loaded in the same freight container or on the same vehicle with acids (Class 8).

Note 2: Strong acids must not be loaded in the same freight container or on the same vehicle with strong alkalis. Packing Group I and II acids and alkalis should be considered as strong.

Must not be loaded with in the same freight container; and on the same vehicle must be separated horizontally by at least 3 metres unless all but one are packed in separate freight containers with:

- Division 4.3, Dangerous when wet substances
- Division 5.1, Oxidising substances
- Division 5.2, Organic peroxides

And are incompatible with food and food packaging in any quantity.

U.N. Number

1849

Proper Shipping Name

SODIUM SULFIDE, HYDRATED

DG Class

8

Hazchem Code

2X

Packaging Method

3.8.8

Packing Group

II

EPG Number

8A1

IERG Number

38

15. REGULATORY INFORMATION

Regulatory Information

Australia:

Classified as Hazardous according to criteria of National Occupational Health & Safety Commission (NOHSC), Australia.
Not classified as a Scheduled Poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Poisons Schedule

Not Scheduled

National and or International
Regulatory Information

New Zealand:

Classified as Hazardous according to the New Zealand Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001.
All components of this product are listed on the New Zealand Inventory of Chemicals (NZIoC) or exempted.
HSNO (CCID) Name: Sodium sulphide, hydrated with not less than 30% water

HSNO Approval Number

HSR006980

Hazard Category

Toxic, Corrosive, Dangerous for the environment

AICS (Australia)

All constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS).

16. OTHER INFORMATION

Date of preparation or last
revision of MSDS

MSDS Reviewed: January 2012
Supersedes: February 2007

Contact Person/Point

For further information contact the Compliance Manager on (02) 9524 0757 during business hours. In emergencies Australia 1800 638 556

IMPORTANT ADVICE: This MSDS summarizes 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 should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including its use in conjunction with other products. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact Ajax Finechem Pty Ltd. 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.

End of MSDS

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