



Mineral Process Control (MPC) Pty Ltd

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MATERIAL SAFETY DATA SHEET

Product: DTOX

SECTION 1 - IDENTIFICATION

Product Name:	DTOX
Other Names:	Sodium Polysulphide,
Recommended Use:	Waste Water Treatment, cyanide detoxification, heavy metal precipitation
Company:	Mineral Process Control Pty Ltd ABN 42 009 416 193
Address:	18 Casella Place KEWDALE WA 6105
Telephone Number:	(08) 9353 1513
Emergency Telephone Number:	(08) 9353 1513

SECTION 2 – HAZARDS IDENTIFICATION

Hazards classification:	Hazardous substance according to the criteria of the National Occupational Health and Safety Commission (NOHSC)
Risk Phrases:	R25: Toxic if swallowed. R31: Contact with acids liberates toxic gas. R34: Causes burns. R36/37/38: Irritating to eyes, respiratory system and skin. R50: Very toxic to aquatic organisms. S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S36/37/39: Wear suitable protective clothing, gloves and eye/face protection. S38: In case of insufficient ventilation, wear suitable respiratory equipment. S45: In case of accident or if you feel unwell, seek medical advice immediately (show label if possible). S61: Avoid release to the environment.
ADG:	Not Dangerous Goods
Poison Schedule:	Not scheduled

SECTION 3 – COMPOSITION

Ingredients

Chemical Entity	CAS number	Proportion
Sodium Polysulphide	1344-08-7	~39% w/w
Water	7732-1805	To 100%

SECTION 4 – FIRST AID MEASURES

Swallowed:	If swallowed contact a doctor or Poisons Information Centre (Phone Australia: 13 11 26). DO NOT GIVE ANYTHING BUT WATER
Skin:	Remove contaminated clothing. Wash contaminated skin with plenty of soap and water.
Eyes:	Hold eyes open and flood with large quantities of water for at least 15 minutes and seek medical assistance.
Inhaled:	Remove victim to fresh air, avoid any mist spraying equipment, have oxygen readily available. Apply CPR or artificial respiration if necessary.

Advice to Doctor

No specific advice. Treat symptomatically.

Hydrogen sulphide poisoning has been successfully treated by initial inhalation of amyl nitrite pearls for 15 – 30 seconds of each minute until 10mL of a 3% solution of sodium nitrate can be administered intravenously at 2.5mL per minute. The nitrate induced methoglobin is thought to bind the toxic hydrosulphide ion.

Symptoms of toxicity may include headache, nausea, vomiting, amnesia, tremors, depressed respiration, convulsions, cyanosis and death due to respiratory paralysis can result from decomposition in the digestive tract releasing hydrogen sulphide and sulphur.

Chemical skin burn (as for caustic soda) may produce systemic toxicity by skin absorption. Chemical eye burn (as for caustic soda) can produce severe membrane irritation with corneal damage.

SECTION 5 – FIRE FIGHTING MEASURES

Fire/Explosion Hazards

The product is non flammable, but if subject to intense heat or fire it decomposes giving off oxides of sulphur.

Dangerous decomposition or Combustion Products

The product is non flammable, but if subject to intense heat or fire it decomposes giving off oxides of sulphur. Explosion may occur if drums are heated. Releases toxic hydrogen sulphide on contact with acids.

Special Protective Precautions and equipment for Fire Fighters

Fire fighters should wear full protective clothing and self contained breathing apparatus. Contain runoff. Do not release contaminated water to the environment.

Extinguishing Media

Dry chemical.

HAZCHEM Code:

Non allocated

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Spills and Disposal

Contain spill. Absorb using sand or dry earth and place in to drums for disposal. (see Disposal below) Do not allow to enter dams, drains or sewers.

Disposal

(1) After intended use

Product is water soluble so containers may be washed thoroughly and re-used for storage of compatible products. Shred and bury empty containers in a local authority landfill. If no landfill is available, bury the packaging below 500mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty packaging and product should not be burnt. Collect washings for appropriate re-use or suitable disposal.

(2) After spill or accident

Absorb using sand or dry earth and place in to drums for disposal. (see Disposal below) Do not allow to enter dams, drains or sewers.

SECTION 7 - HANDLING AND STORAGE

Storage and Transport

This product is a not a scheduled Poison.

Store in tightly closed original container in a dry, cool, well-ventilated area, out of direct sunlight. Do not allow product to freeze.

This product is not a dangerous good.

SECTION 8 – EXPOSURE CONTROLS

Exposure Standards

A time weighted average (TWA) concentration for an 8 hour day, and 5 day week has not been established by the National Occupational Health & Safety Commission for any of the major ingredients in this product.

Engineering Control

In industrial situations, concentration values below the TWA value should be maintained. Values may be reduced by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. If you believe air borne concentrations of mists, dusts or vapours are high; you are advised to modify the process or environment to reduce the problem.

Personal Protective Measures

Avoid contact with eyes and skin. When preparing for use as spray, wear elbow length PVC gloves and face shield or goggles, a respirator. On completion of handling of product and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. Provide washing facilities including a safety shower and eyewash fountain in the workplace. Have oxygen available.

Flammability

Non flammable

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Form:	A clear aqueous liquid
Colour:	deep red - brown
Odour:	strong sulphureous smell
Melting Point (°C):	Not applicable
Boiling Point (°C):	greater than 100 degrees C
Specific gravity:	1.32 – 1.33
Vapour Pressure:	not applicable
Flashpoint:	non flammable
Solubility in Water (g/L):	miscible
pH:	10 – 13
Formula:	NaS _x

Other Properties

Chemical group: aqueous solution of ingredients

SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability:

Releases toxic hydrogen sulphide on contact with acids.
Polysulphide solutions can release some toxic H₂S even when they are not strongly acidic.
Stable for at least several years if stored according to storage directions. Extreme heat and fire will cause instability.

Conditions to Avoid:

Do not heat drums with welding equipment as explosion may occur.

Incompatible Materials:

Avoid contact with acids.

Hazardous Reactions:

Avoid contact with acids.

SECTION 11 – TOXICOLOGY INFORMATION

Health Effects (See also Section 4 - First Aid Measures.)

Acute:

Swallowed: Moderately toxic by oral route and may be harmful when swallowed, even in small doses. If swallowed, it could become a severe irritant and sensitising agent and may yield hydrogen sulphide by decomposition after ingestion.

Skin Contact: Moderately toxic, contact with skin may result in irritation and sensitisation and, chemically burns skin as from sodium hydroxide.

Eye Contact: Will cause eye damage, or chemically burn eye tissue and also corneal damage as from sodium hydroxide.

Inhaled: Symptoms are those of hydrogen sulphide. Will irritate mucous membranes of nose and mouth.

Chronic:

No data available

SECTION 12 – ECOLOGICAL INFORMATION

Ecotoxicity Data

No data available, however indications are that it is very toxic to aquatic organisms by rapidly absorbing dissolved oxygen from aqueous ecosystems.

Environmental Fate

No data available but will oxidise to sulphate.

SECTION 13 – DISPOSAL CONSIDERATIONS

Do not dispose of undiluted chemicals on site. Wash, crush and bury empty containers in a local authority landfill. If no landfill is available, bury the packaging below 500mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty packaging and product should not be burnt.

SECTION 14 – TRANSPORT INFORMATION

UN Number: None allocated
ADG: Not a dangerous good

SECTION 15 – REGULATORY INFORMATION

Hazards classification: Classified as hazardous according to the criteria of the National Occupational Health & Safety Commission (NOHSC).

SECTION 16 – OTHER INFORMATION

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 PRODUCT SOLD IS SUBJECT TO OUR STANDARD TERMS AND CONDITIONS, A COPY OF WHICH IS SENT TO OUR CUSTOMER AND IS ALSO AVAILABLE ON REQUEST.

Please read all labels carefully before using product.

Last updated July 2009.