



SAFETY DATA SHEET

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier

Product name DTOX
Synonyms MPC DTOX • SODIUM POLYSULFIDE SOLUTION

1.2 Uses and uses advised against

Uses DESTRUCTION OF CYANIDE • MINING, LABORATORY AND ELECTROPLATING INDUSTRIES •
PRECIPITATION OF HEAVY METALS FROM SOLUTION • WASTE WATER TREATMENT

1.3 Details of the supplier of the product

Supplier name MINERAL PROCESS CONTROL (MPC) PTY LTD
Address Unit 3, 30 Furniss Road, Landsdale, WA, 6065, AUSTRALIA
Telephone (08) 9303 2334
Email info@mpcwa.com
Website www.mpcwa.com

1.4 Emergency telephone numbers

Emergency (Australia) 13 11 26

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

Physical Hazards

Not classified as a Physical Hazard

Health Hazards

Acute Toxicity: Oral: Category 3
Skin Corrosion/Irritation: Category 1B
Contact with acids liberates toxic gas.

Environmental Hazards

Aquatic Toxicity (Acute): Category 1

2.2 GHS Label elements

Signal word DANGER

Pictograms



Hazard statements

AUH031 Contact with acids liberates toxic gas.
H301 Toxic if swallowed.
H314 Causes severe skin burns and eye damage.
H400 Very toxic to aquatic life.

PRODUCT NAME DTOX

Prevention statements

| | |
|------|--|
| P260 | Do not breathe dust/fume/gas/mist/vapours/spray. |
| P264 | Wash thoroughly after handling. |
| P270 | Do not eat, drink or smoke when using this product. |
| P273 | Avoid release to the environment. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |

Response statements

| | |
|--------------------|--|
| 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. |
| P304 + P340 | IF INHALED: Remove 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. |
| P310 | Immediately call a POISON CENTRE or doctor/physician. |
| P321 | Specific treatment is advised - see first aid instructions. |
| P363 | Wash contaminated clothing before reuse. |
| P391 | Collect spillage. |

Storage statements

| | |
|------|------------------|
| P405 | Store locked up. |
|------|------------------|

Disposal statements

| | |
|------|--|
| P501 | Dispose of contents/container in accordance with relevant regulations. |
|------|--|

2.3 Other hazards

No information provided.

3. COMPOSITION/ INFORMATION ON INGREDIENTS

3.1 Substances / Mixtures

| Ingredient | CAS Number | EC Number | Content |
|---------------------|------------|-----------|-----------|
| SODIUM POLYSULPHIDE | 1344-08-7 | 215-686-9 | 39% |
| WATER | 7732-18-5 | 231-791-2 | Remainder |

4. FIRST AID MEASURES

4.1 Description of first aid measures

| | |
|-----------------------------|--|
| Eye | If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes. |
| Inhalation | If inhaled, remove from contaminated area. To protect rescuer, use an Air-line respirator where an inhalation risk exists. Apply artificial respiration if not breathing. |
| Skin | If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. Continue flushing with water until advised to stop by a Poisons Information Centre or a doctor. |
| Ingestion | For advice, contact a Poisons Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). Urgent hospital treatment is likely to be needed. If swallowed, do not induce vomiting. |
| First aid facilities | Eye wash facilities and safety shower should be available. |

4.2 Most important symptoms and effects, both acute and delayed

Causes skin and eye burns.

4.3 Immediate medical attention and special treatment needed

Treat symptomatically.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Use an extinguishing agent suitable for the surrounding fire.

5.2 Special hazards arising from the substance or mixture

Non flammable liquid - highly flammable hydrogen sulphide vapour produced in contact with acids. Hydrogen sulphide has an explosive range between 4% and 44% with an autoignition temperature of 260°C. May evolve sulphur oxides when heated to decomposition.

5.3 Advice for firefighters

Evacuate area and contact emergency services. Toxic gases may be evolved in a fire situation. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Use waterfog to cool intact containers and nearby storage areas.

5.4 Hazchem code

- 2X
- 2 Fine Water Spray.
- X Wear liquid-tight chemical protective clothing and breathing apparatus. Contain spill and run-off.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear Personal Protective Equipment (PPE) as detailed in section 8 of the SDS. Clear area of all unprotected personnel. Ventilate area where possible. Contact emergency services where appropriate.

6.2 Environmental precautions

Prevent product from entering drains and waterways.

6.3 Methods of cleaning up

Contain spillage, then cover / absorb spill with non-combustible absorbent material (vermiculite, sand, or similar), collect and place in suitable containers for disposal. Only trained personnel should undertake clean up.

6.4 Reference to other sections

See Sections 8 and 13 for exposure controls and disposal.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool, dry, well ventilated area, preferably flammables store, removed from incompatible substances, heat or ignition sources and foodstuffs. Ensure containers are adequately labelled, protected from physical damage and sealed when not in use. Check regularly for leaks or spills. Large storage areas should be banded and have appropriate fire protection and ventilation systems.

7.3 Specific end uses

No information provided.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Exposure standards

No exposure standards have been entered for this product.

Biological limits

No biological limit values have been entered for this product.

8.2 Exposure controls

Engineering controls Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical explosion proof extraction ventilation is recommended.

PPE

| | |
|--------------------|---|
| Eye / Face | Wear a faceshield and splash-proof goggles. |
| Hands | Wear PVC or nitrile gloves. |
| Body | Wear coveralls. |
| Respiratory | Where an inhalation risk exists, wear an Air-line respirator. |

**9. PHYSICAL AND CHEMICAL PROPERTIES****9.1 Information on basic physical and chemical properties**

| | |
|----------------------------------|-------------------------|
| Appearance | CLEAR RED/BROWN LIQUID |
| Odour | STRONG SULPHUROUS ODOUR |
| Flammability | NON FLAMMABLE |
| Flash point | NOT RELEVANT |
| Boiling point | > 100°C |
| Melting point | < 0°C |
| Evaporation rate | AS FOR WATER |
| pH | 10 to 13 |
| Vapour density | NOT AVAILABLE |
| Relative density | 1.32 to 1.33 |
| Solubility (water) | SOLUBLE |
| Vapour pressure | 18 mm Hg @ 20°C |
| Upper explosion limit | NOT RELEVANT |
| Lower explosion limit | NOT RELEVANT |
| Partition coefficient | NOT AVAILABLE |
| Autoignition temperature | NOT AVAILABLE |
| Decomposition temperature | NOT AVAILABLE |
| Viscosity | NOT AVAILABLE |
| Explosive properties | NOT AVAILABLE |
| Oxidising properties | NOT AVAILABLE |
| Odour threshold | NOT AVAILABLE |

9.2 Other information

| | |
|--------------------|----------------|
| % Volatiles | > 60 % (Water) |
|--------------------|----------------|

10. STABILITY AND REACTIVITY**10.1 Reactivity**

Carefully review all information provided in sections 10.2 to 10.6.

10.2 Chemical stability

Stable under recommended conditions of storage.

10.3 Possibility of hazardous reactions

Polymerization is not expected to occur.

10.4 Conditions to avoid

Avoid heat, sparks, open flames and other ignition sources.

10.5 Incompatible materials

Incompatible with acids (evolving hydrogen sulphide), oxidising agents (evolving sulphur dioxide) and severely corrodes zinc, copper and their alloys.

10.6 Hazardous decomposition products

May evolve sulphur oxides when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

| | |
|---------------------------------|---|
| Acute toxicity | Ingestion may result in burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach. Toxic if swallowed. May evolve toxic/flammable hydrogen sulphide gas as a contaminant, and inhalation of high levels may be fatal. |
| Skin | Causes burns. Contact may result in irritation, redness, pain, rash, dermatitis and possible burns. |
| Eye | Causes burns. Contact may result in irritation, lacrimation, pain, redness and corneal burns with possible permanent eye damage. |
| Sensitisation | Not classified as causing skin or respiratory sensitisation. |
| Mutagenicity | Not classified as a mutagen. |
| Carcinogenicity | Not classified as a carcinogen. |
| Reproductive | Not classified as a reproductive toxin. |
| STOT - single exposure | Over exposure may result in mucous membrane irritation of the respiratory tract, with coughing. May evolve highly toxic and irritating hydrogen sulphide gas. Over exposure to hydrogen sulphide may result in breathing difficulties (with asthma-like symptoms), pulmonary oedema, unconsciousness and death. |
| STOT - repeated exposure | May evolve highly toxic and irritating hydrogen sulphide gas. Repeated exposure to hydrogen sulphide may result in nerve paralysis/damage, heart damage and neurological effects. |
| Aspiration | Not classified as causing aspiration. |

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Very toxic to aquatic life.

12.2 Persistence and degradability

No information provided.

12.3 Bioaccumulative potential

Not expected to bioaccumulate.

12.4 Mobility in soil

No information provided.

12.5 Other adverse effects

No information provided.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

| | |
|-----------------------|---|
| Waste disposal | Eliminate all sources of ignition. Add iron (III) chloride (FeCl ₃) solution. Stir until iron sulphide formation is complete. Add slight excess of soda ash (sodium carbonate). For small amounts, flush to sewer with excess water or alternatively, absorb with sand or similar and dispose of to an approved landfill site, OR absorb with vermiculite or sodium bicarbonate, scoop into clean container, remove to outside, add FeCl ₃ solution and treat as above using slight excess sodium bicarbonate. |
| Legislation | Dispose of in accordance with relevant local legislation. |

14. TRANSPORT INFORMATION

CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE



PRODUCT NAME DTOX

| | LAND TRANSPORT (ADG) | SEA TRANSPORT (IMDG / IMO) | AIR TRANSPORT (IATA / ICAO) |
|------------------------------------|--|--|--|
| 14.1 UN Number | 3266 | 3266 | 3266 |
| 14.2 Proper Shipping Name | CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. | CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. | CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. |
| 14.3 Transport hazard class | 8 | 8 | 8 |
| 14.4 Packing Group | II | II | II |

14.5 Environmental hazards

Marine Pollutant.

14.6 Special precautions for user

| | |
|---------------------|----------|
| Hazchem code | 2X |
| GTEPG | 8A1 |
| EmS | F-A, S-B |

15. REGULATORY INFORMATION**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

| | |
|---------------------------|---|
| Poison schedule | A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP). |
| Classifications | Safework Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals. |
| Inventory listings | AUSTRALIA: AIIC (Australian Inventory of Industrial Chemicals) All components are listed on AIIC, or are exempt. |

16. OTHER INFORMATION

Additional information EXPOSURE STANDARDS - TIME WEIGHTED AVERAGES: Exposure standards are established on the premise of an 8 hour work period of normal intensity, under normal climatic conditions and where a 16 hour break between shifts exists to enable the body to eliminate absorbed contaminants. In the following circumstances, exposure standards must be reduced: Strenuous work conditions; hot, humid climates; high altitude conditions; extended shifts (which increase the exposure period and shorten the period of recuperation).

RESPIRATORS: In general the use of respirators should be limited and engineering controls employed to avoid exposure. If respiratory equipment must be worn ensure correct respirator selection and training is undertaken. Remember that some respirators may be extremely uncomfortable when used for long periods. The use of air powered or air supplied respirators should be considered where prolonged or repeated use is necessary.

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:

The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as form of product, method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

HEALTH EFFECTS FROM EXPOSURE:

It should be noted that the effects from exposure to this product will depend on several factors including: form of product; frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

PRODUCT NAME DTOX**Abbreviations**

| | |
|-------------------|---|
| ACGIH | American Conference of Governmental Industrial Hygienists |
| CAS # | Chemical Abstract Service number - used to uniquely identify chemical compounds |
| CNS | Central Nervous System |
| EC No. | EC No - European Community Number |
| EMS | Emergency Schedules (Emergency Procedures for Ships Carrying Dangerous Goods) |
| GHS | Globally Harmonized System |
| GTEPG | Group Text Emergency Procedure Guide |
| IARC | International Agency for Research on Cancer |
| LC50 | Lethal Concentration, 50% / Median Lethal Concentration |
| LD50 | Lethal Dose, 50% / Median Lethal Dose |
| mg/m ³ | Milligrams per Cubic Metre |
| OEL | Occupational Exposure Limit |
| pH | relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline). |
| ppm | Parts Per Million |
| STEL | Short-Term Exposure Limit |
| STOT-RE | Specific target organ toxicity (repeated exposure) |
| STOT-SE | Specific target organ toxicity (single exposure) |
| SUSMP | Standard for the Uniform Scheduling of Medicines and Poisons |
| SWA | Safe Work Australia |
| TLV | Threshold Limit Value |
| TWA | Time Weighted Average |

Report status

This document has been compiled by RMT on behalf of the manufacturer, importer or supplier of the product and serves as their Safety Data Sheet ('SDS').

It is based on information concerning the product which has been provided to RMT by the manufacturer, importer or supplier or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer, importer or supplier.

While RMT has taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, RMT accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS.

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