

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name:

DSP 432

Recommended Use of the Chemical Mineral flotation collector. **and Restrictions on Use**

| Supplier: ABN: Street Address: | Ixom Operations Pty Ltd 51 600 546 512 Level 8, 1 Nicholson Street East Melbourne Victoria 3002 Australia |
|--------------------------------------|---|
| Telephone Number: | +61 3 9906 3000 |
| Emergency Telephone: | 1 800 033 111 (ALL HOURS) |

Please ensure you refer to the limitations of this Safety Data Sheet as set out in the "Other Information" section at the end of this Data Sheet.

2. HAZARDS IDENTIFICATION

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

This material is hazardous according to Safe Work Australia; HAZARDOUS CHEMICAL.

Classification of the chemical:

Flammable liquids - Category 3 Skin Corrosion - Sub-category 1B Skin Sensitisation - Category 1

SIGNAL WORD: DANGER



Hazard Statement(s): H226 Flammable liquid and vapour. H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction.

Precautionary Statement(s):

Prevention:

P210 Keep away from heat, sparks, open flames, hot surfaces. No smoking.

P233 Keep container tightly closed.

P240 Ground or bond container and receiving equipment.

P241 Use explosion-proof electrical, ventilating, lighting equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

P260 Do not breathe mist, vapours, spray.

P264 Wash hands thoroughly after handling.

P272 Contaminated work clothing should not be allowed out of the workplace.

P280 Wear protective gloves / protective clothing / eye protection / face protection.



P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P321 Specific treatment (see First Aid Measures on Safety Data Sheet).
P363 Wash contaminated clothing before re-use.
P304+P340 IF INHALED: Remove person to fresh air and keep 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 CENTER or doctor/physician.
P370+P378 In case of fire: Use extinguishing media as outlined in Section 5 of this Safety Data Sheet to extinguish.

P403+P235 Store in a well-ventilated place. Keep cool. P405 Store locked up.

Disposal:

P501 Dispose of contents and container in accordance with local, regional, national, international regulations.

Poisons Schedule (SUSMP): None allocated.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

| Components | CAS Number | Proportion | Hazard Codes |
|--------------------------------------|------------|------------|----------------------------------|
| Sodium mercaptobenzothiazole (NaMBT) | 2492-26-4 | 30-80% | H314 H317 H410 |
| Methyl isobutyl carbinol | 108-11-2 | 10-<30% | H226 H335 |
| O-Isopropyl ethyl thiocarbamate | 141-98-0 | <10% | H317 H412 |
| 1,3-Diethyl thiourea | 105-55-5 | <1% | H302 H317 H318 H351 H335 H412 |
| Non hazardous component(s) | - | to 100% | - |

4. FIRST AID MEASURES

For advice, contact a Poisons Information Centre (e.g. phone Australia 131 126; New Zealand 0800 764 766) or a doctor.

Inhalation:

Remove victim from area of exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If patient finds breathing difficult and develops a bluish discolouration of the skin (which suggests a lack of oxygen in the blood - cyanosis), ensure airways are clear of any obstruction and have a qualified person give oxygen through a face mask. Apply artificial respiration if patient is not breathing. Seek immediate medical advice.

Skin Contact:

If spilt on large areas of skin or hair, immediately drench with running water and remove clothing. Continue to wash skin and hair with plenty of water (and soap if material is insoluble) until advised to stop by the Poisons Information Centre or a doctor.

Eye Contact:

Immediately wash in and around the eye area with large amounts of water for at least 15 minutes. Eyelids to be held apart. Remove clothing if contaminated and wash skin. Urgently seek medical assistance. Transport promptly to hospital or medical centre.

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Immediately rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water. Seek immediate medical assistance.

Indication of immediate medical attention and special treatment needed:

Treat symptomatically. Can cause corneal burns.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media:

Alcohol resistant foam is the preferred firefighting medium but, if it is not available, normal protein foam can be used.

Hazchem or Emergency Action Code: • 3W

Specific hazards arising from the chemical:

Flammable liquid.

Special protective equipment and precautions for fire-fighters:

On burning will emit toxic fumes, including those of oxides of carbon, oxides of nitrogen, and oxides of sulfur. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or products of combustion.

6. ACCIDENTAL RELEASE MEASURES

Emergency procedures/Environmental precautions:

Shut off all possible sources of ignition. Clear area of all unprotected personnel. If contamination of sewers or waterways has occurred advise local emergency services.

Personal precautions/Protective equipment/Methods and materials for containment and cleaning up:

Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contact and breathing in vapours. Work up wind or increase ventilation. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Collect and seal in properly labelled containers or drums for disposal. Neutralise residues with dilute acid.

7. HANDLING AND STORAGE

Precautions for safe handling:

Avoid skin and eye contact and breathing in vapour, mists and aerosols. Wash hands thoroughly after handling.

Conditions for safe storage, including any incompatibilities:

Store in a cool, dry, well ventilated place. Store away from sources of heat or ignition. Store away from incompatible materials described in Section 10. Keep containers closed when not in use - check regularly for leaks.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters: No value assigned for this specific material by Safe Work Australia. However, Workplace Exposure Standard(s) for constituent(s):

Methyl isobutyl carbinol: 8hr TWA = 104 mg/m³ (25 ppm), 15 min STEL = 167 mg/m³ (40 ppm), Sk

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As published by Safe Work Australia Workplace Exposure Standards for Airborne Contaminants.

TWA - The time-weighted average airborne concentration of a particular substance when calculated over an eight-hour working day, for a five-day working week.

STEL (Short Term Exposure Limit) - the airborne concentration of a particular substance calculated as a time-weighted average over 15 minutes, which should not be exceeded at any time during a normal eight hour work day. According to current knowledge this concentration should neither impair the health of, nor cause undue discomfort to, nearly all workers.

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

These Workplace 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. These workplace 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.

Appropriate engineering controls:

Ensure ventilation is adequate and that air concentrations of components are controlled below quoted Workplace Exposure Standards. Keep containers closed when not in use.

If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.

Individual protection measures, such as Personal Protective Equipment (PPE):

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, CHEMICAL GOGGLES, RUBBER BOOTS, AIR MASK, GLOVES (Long), APRON. * Not required if wearing air supplied mask.



Wear overalls, chemical goggles, full face shield, elbow-length impervious gloves, splash apron or equivalent chemical impervious outer garment, and rubber boots. Use with adequate ventilation. If determined by a risk assessment an inhalation risk exists, wear an air-supplied mask meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Colour: Odour: Solubility: Clear Liquid Amber Pungent Miscible in water.

Product Name: DSP 432 Substance No: 000000019080 Issued: 12/02/2020 Version: 6



Specific Gravity: ca. 1.12 Relative Vapour Density (air=1): >1 Vapour Pressure (20 °C): Flash Point (°C): Flammability Limits (%): Autoignition Temperature (°C): Not available Boiling Point/Range (°C): >103 ca. 11-13.5 pH:

Not available 42.4 (MIBC) Not available

10. STABILITY AND REACTIVITY

| Reactivity: | No information available. |
|--------------------------------------|--|
| Chemical stability: | Stable under normal conditions of use. |
| Possibility of hazardous reactions: | None known. |
| Conditions to avoid: | Avoid exposure to heat, sources of ignition, and open flame. |
| Incompatible materials: | Incompatible with acids , oxidising agents . |
| Hazardous decomposition products: | Oxides of carbon. Oxides of nitrogen. Oxides of sulfur. |

11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

| Ingestion: | Swallowing can result in nausea, vomiting, diarrhoea, abdominal pain and chemical burns to the gastrointestinal tract. |
|---|--|
| Eye contact: | A severe eye irritant. Corrosive to eyes; contact can cause corneal burns. Contamination of eyes can result in permanent injury. |
| Skin contact: | Contact with skin will result in severe irritation. Corrosive to skin - may cause skin burns. A skin sensitiser. Repeated or prolonged skin contact may lead to allergic contact dermatitis. |
| Inhalation: | Breathing in vapour may produce respiratory irritation. |
| Acute toxicity: No LD50 data available for the product. | |
| Skin corrosion/irritation: | Corrosive. The product has not been tested; the classification is based on the components of the mixture. |
| Serious eye damage/irritation: | Corrosive. The product has not been tested; the classification is based on the components of the mixture. |
| Respiratory or skin sensitisation: | A skin sensitiser. The product has not been tested; the classification is based on the components of the mixture. |

Chronic effects: No information available for the product. 1,3-diethylthiourea is an IARC Group 3 carcinogen (not classifiable as to human carcinogenicity).

Aspiration hazard:

No information available.



12. ECOLOGICAL INFORMATION

| Ecotoxicity | Avoid contaminating waterways. |
|----------------------------|---|
| Persistence/degradability: | No information available. |
| Bioaccumulative potential: | No information available. |
| Mobility in soil: | No information available. |
| Aquatic toxicity: | Toxic to aquatic organisms. May cause long lasting harmful effects to aquatic life. |

13. DISPOSAL CONSIDERATIONS

Disposal methods:

Refer to Waste Management Authority. Dispose of contents and container in accordance with local, regional, national, international regulations.

14. TRANSPORT INFORMATION

Road and Rail Transport

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.



| UN No: | 2920 |
|-----------------------------|--|
| Transport Hazard Class: | 8 Corrosive |
| Subrisk 1: | 3 Flammable Liquid |
| Packing Group: | II |
| Proper Shipping Name or | CORROSIVE LIQUID, FLAMMABLE, N.O.S. (CONTAINS |
| Technical Name: | 2-MERCAPTOBENZOTHIAZOLE, SODIUM SALT AND METHYL ISOBUTYL |
| | CARBINOL) |
| Hazebom or Emergency Action | . 3\W |

Hazchem or Emergency Action 3W Code:

Marine Transport

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

| UN No: Transport Hazard Class: Subrisk 1: Packing Group: Proper Shipping Name or Technical Name: | 2920 8 Corrosive 3 Flammable liquid II CORROSIVE LIQUID, FLAMMABLE, N.O.S. (CONTAINS 2-MERCAPTOBENZOTHIAZOLE, SODIUM SALT AND METHYL ISOBUTYL CARBINOL) |
|---|---|
| IMDG EMS Fire: | F-E |
| IMDG EMS Spill: | S-C |



Air Transport

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

UN No: Transport Hazard Class: Subrisk 1: Packing Group: Proper Shipping Name or Technical Name: 2920 8 Corrosive 3 Flammable Liquid II CORROSIVE LIQUID, FLAMMABLE, N.O.S. (CONTAINS 2-MERCAPTOBENZOTHIAZOLE, SODIUM SALT AND METHYL ISOBUTYL CARBINOL)

15. REGULATORY INFORMATION

Classification:

This material is hazardous according to Safe Work Australia; HAZARDOUS CHEMICAL.

Classification of the chemical:

Flammable liquids - Category 3 Skin Corrosion - Sub-category 1B Skin Sensitisation - Category 1

Hazard Statement(s):

H226 Flammable liquid and vapour. H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction.

Poisons Schedule (SUSMP): None allocated.

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

16. OTHER INFORMATION

This safety data sheet has been prepared by Ixom Operations Pty Ltd (Toxicology & SDS Services).

Reason(s) for Issue:

5 Yearly Revised Primary SDS

This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Ixom Operations Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

If clarification or further information is needed, the user should contact their Ixom representative or Ixom Operations Pty Ltd at the contact details on page 1.

Ixom Operations Pty Ltd's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.