

SAFETY DATA SHEET



Revision date: 21-Mar-2024

Revision Number 1

Section 1: Identification

Product identifier

Product Name DSP 026
Product Code(s) 000000054613

Other means of identification

UN number or ID number 1719
Pure substance/mixture Mixture

Recommended use of the chemical and restrictions on use

Recommended use Mineral flotation collector.
Uses advised against No information available.

Details of manufacturer or importer

Supplier

Ixom Operations Pty Ltd
ABN: 51 600 546 512
Level 8, 1 Nicholson Street
Melbourne 3000
Australia

Telephone Number: +61 3 9906 3000

Emergency telephone number

Emergency telephone number **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.

Section 2: Hazard identification

Classified as a hazardous substance in accordance with the criteria of Safe Work Australia - Globally Harmonized System (GHS).
Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

GHS Classification

Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1
Carcinogenicity	Category 2
Acute aquatic toxicity	Category 3
Chronic aquatic toxicity	Category 3

Label elements

Corrosion

Health hazard
Exclamation mark



Signal word
DANGER

Hazard statements

H314 - Causes severe skin burns and eye damage
H317 - May cause an allergic skin reaction
H351 - Suspected of causing cancer
H412 - Harmful to aquatic life with long lasting effects

Precautionary Statements - Prevention

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe mist, vapours, spray.
Wash face, hands and any exposed skin thoroughly after handling.
Wear protective gloves/clothing and eye/face protection.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves/eye protection/face protection.
In case of inadequate ventilation wear respiratory protection.
Use personal protective equipment as required.
Avoid release to the environment.

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention.
Specific treatment (see First aid on this SDS).
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER or doctor/physician.
IF ON SKIN: Wash with plenty of soap and water.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
Wash contaminated clothing before reuse.
If skin irritation or rash occurs: Get medical advice/attention.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Immediately call a POISON CENTER or doctor/physician.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Precautionary Statements - Storage

Store locked up.

Precautionary Statements - Disposal

Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable.

Other hazards which do not result in classification

Contact with acids liberates toxic gas.

Section 3: Composition and information on ingredients

Chemical name	CAS No.	Weight-%
O-Isopropyl ethyl thiocarbamate	141-98-0	>60
Phosphorodithioic acid, O,O-bis(2-methylpropyl)ester, sodium salt	53378-51-1	10-<30
Isopropyl alcohol	67-63-0	<2
1,3-Diethyl-2-thiourea	105-55-5	<2
Other component(s)	-	to 100

Section 4: First aid measures

Description of first aid measures

General advice	For advice, contact a Poisons Information Centre (e.g. phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.
Inhalation	Remove to fresh air. If breathing is difficult, (trained personnel should) give oxygen. If breathing has stopped, give artificial respiration. Get medical attention immediately.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician.
Ingestion	Rinse mouth thoroughly with water. Do NOT induce vomiting. Drink 1 or 2 glasses of water. Get immediate medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms	Irritation/Corrosion. May cause redness and tearing of the eyes. Erythema (skin redness). Burning. May cause allergic skin reaction. Hives. Rashes.
Effects of Exposure	No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically. Can cause corneal burns.
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Section 5: Firefighting measures

Suitable Extinguishing Media

Suitable extinguishing media	Dry chemical, CO2, water spray or regular foam.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.

Specific hazards arising from the chemical

Specific hazards arising from the chemical	Corrosive hazard. Wear protective gloves/clothing and eye/face protection. Environmentally hazardous.
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Special protective actions for fire-fighters

Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
Hazchem code	2R

Section 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Do not breathe vapor or mist. Ensure adequate ventilation. Evacuate personnel to safe areas. Do not touch or walk through spilled material. Use personal protective equipment as required. Wash thoroughly after handling.

For emergency responders Use personal protection recommended in Section 8.

Environmental precautions

Environmental precautions Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.

Section 7: Handling and storage

Precautions for safe handling

Advice on safe handling Avoid breathing vapors or mists. Avoid contact with skin and eyes. Do not eat, drink or smoke when using this product. KEEP OUT OF REACH OF CHILDREN AND PETS. Take precautionary measures against static discharges.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Store away from foodstuffs and sources of heat or ignition. Keep container closed when not in use.

Classified as a C2 (COMBUSTIBLE LIQUID) for the purpose of storage and handling, in accordance with the requirements of AS 1940. Refer to State Regulations for storage and transport requirements.

This material is a Scheduled Poison and must be stored, maintained and used in accordance with the relevant regulations.

Incompatible materials Acids. Mineral acids. Strong oxidizing agents. Copper. Brass.

Section 8: Exposure controls and personal protection

Control parameters

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

Chemical name	Australia	New Zealand	ACGIH TLV
Isopropyl alcohol 67-63-0	TWA: 400 ppm TWA: 983 mg/m ³ STEL: 500 ppm STEL: 1230 mg/m ³	TWA: 400 ppm TWA: 983 mg/m ³ STEL: 500 ppm STEL: 1230 mg/m ³	TWA: 200 ppm STEL: 400 ppm

Chemical name	European Union	United Kingdom	Germany DFG
Isopropyl alcohol 67-63-0	-	TWA: 400 ppm TWA: 999 mg/m ³ STEL: 500 ppm STEL: 1250 mg/m ³	TWA: 200 ppm TWA: 500 mg/m ³ Peak: 400 ppm Peak: 1000 mg/m ³

Biological occupational exposure limits

Chemical name	Australia	ACGIH	European Union
Isopropyl alcohol 67-63-0	-	40 mg/L	-

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.

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.

As published by the American Conference of Governmental Industrial Hygienists (ACGIH).

Appropriate engineering controls**Engineering controls**

Ensure that eyewash stations and safety showers are close to the workstation location. Apply technical measures to comply with the occupational exposure limits.

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

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, FACE SHIELD, GLOVES (Long), APRON, RUBBER BOOTS.

**Eye/face protection**

Tight sealing safety goggles. If splashes are likely to occur: Face protection shield.

Skin and body protection

Wear suitable protective clothing. Apron. Overalls. Rubber boots.

Hand protection

Elbow-length impervious gloves.

Respiratory protection

If determined by a risk assessment an inhalation risk exists, wear a suitable mist respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

When handling this product in bulk quantities, and/or in Intermediate Bulk Containers (IBC's), wear overalls, safety shoes, impervious gloves, chemical goggles, and a face shield. If determined by a risk assessment an inhalation risk exists, wear appropriate respiratory protection as mentioned above.

Environmental exposure controls No information available.

Thermal hazards No information available.

Section 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state Liquid
Appearance No information available
Color Yellow to Dark brown
Odor Slight Pungent
Odor threshold No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	None known
pH (as aqueous solution)	No data available	None known
Melting point / freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
Flash point	>94°C (estimated)	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	1.04	None known
Water solubility	Miscible in water	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

Other information

Section 10: Stability and reactivity

Reactivity

Reactivity Contact with acids liberates toxic gas.

Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None.
Sensitivity to static discharge None.

Possibility of hazardous reactions

Possibility of hazardous reactions Can react with mineral acids evolving flammable and toxic hydrogen sulphide gas. Can

react with acids evolving flammable and toxic hydrogen sulphide gas.

Conditions to avoid

Conditions to avoid Do not contaminate food or feed stuffs. Static discharge (electrostatic discharge).

Incompatible materials

Incompatible materials Acids. Mineral acids. Strong oxidizing agents. Copper. Brass.

Hazardous decomposition products

Hazardous decomposition products Carbon oxides. Nitrogen oxides. Phosphorus oxides. Oxides of sulfur. Hydrogen sulfide.

Section 11: Toxicological information**Information on likely routes of exposure**

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

Inhalation May cause irritation.

Eye contact Causes serious eye damage. May cause irreversible damage to eyes.

Skin contact Contact causes severe skin irritation and possible burns. May cause sensitization by skin contact.

Ingestion Can burn mouth, throat, and stomach.

Symptoms Irritation/Corrosion. May cause redness and tearing of the eyes. Erythema (skin redness). Burning. May cause allergic skin reaction. Rashes. Hives.

Acute toxicity**Numerical measures of toxicity - Product Information**

No information available

Numerical measures of toxicity - Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
O-Isopropyl ethyl thiocarbamate	-	> 2000 mg/kg (Rabbit)	-
Phosphorodithioic acid, O,O-bis(2-methylpropyl)ester, sodium salt	= 3 g/kg (Rat)	-	-
Isopropyl alcohol	= 1870 mg/kg (Rat)	= 4059 mg/kg (Rabbit)	> 10000 ppm (Rat) 6 h
1,3-Diethyl-2-thiourea	= 316 mg/kg (Rat)	= 2000 mg/kg (Rat)	-

See section 16 for terms and abbreviations

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Causes severe burns. Classification is based on mixture calculation methods based on component data.

Serious eye damage/eye irritation	Causes serious eye damage. Classification is based on mixture calculation methods based on component data.
Respiratory or skin sensitization	A skin sensitizer. (guinea pig). Classification is based on mixture calculation methods based on component data.
Germ cell mutagenicity	No information available.
Carcinogenicity	Suspected of causing cancer. Classification is based on mixture calculation methods based on component data.

Chemical name	Australia	European Union	IARC
Isopropyl alcohol - 67-63-0	-	-	Group 3
1,3-Diethyl-2-thiourea - 105-55-5	-	-	Group 3

IARC (International Agency for Research on Cancer)
Group 3 - Not Classifiable as to Carcinogenicity in Humans

Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Aspiration hazard	No information available.
Chronic effects:	This product may liberate carbon disulphide on contact with moist skin. Chronic exposure to carbon disulphide may produce central and peripheral nervous system, cardiovascular, gastrointestinal, kidney, eye disorders.

Section 12: Ecological information

Ecotoxicity

Aquatic ecotoxicity Keep out of waterways. Harmful to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
O-Isopropyl ethyl thiocarbamate	-	LC50: 40 - 45mg/L (96h, Oncorhynchus mykiss)	-	-
Isopropyl alcohol	EC50: >1000mg/L (96h, Desmodesmus subspicatus) EC50: >1000mg/L (72h, Desmodesmus subspicatus)	LC50: =9640mg/L (96h, Pimephales promelas) LC50: =11130mg/L (96h, Pimephales promelas) LC50: >1400000µg/L (96h, Lepomis macrochirus)	-	EC50: =13299mg/L (48h, Daphnia magna)
1,3-Diethyl-2-thiourea	-	LC50: =910mg/L (96h, Danio rerio)	-	EC50: =56mg/L (48h, Daphnia magna)

Terrestrial ecotoxicity There is no data for this product.

Persistence and degradability

Persistence and degradability No information available.

Bioaccumulative potential

Bioaccumulation There is no data for this product.

Component Information

Chemical name	Partition coefficient
O-Isopropyl ethyl thiocarbamate	2.3
Phosphorodithioic acid, O,O-bis(2-methylpropyl)ester, sodium salt	2.06
Isopropyl alcohol	0.05
1,3-Diethyl-2-thiourea	0.57

Mobility

Mobility No information available.

Other adverse effects

Other adverse effects No information available.

Section 13: Disposal considerations

Waste treatment methods

Waste from residues/unused products Refer to Waste Management Authority. Dispose of material through a licensed waste contractor.

Contaminated packaging Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers. Empty containers should be taken to an approved waste handling site for recycling or disposal.

See section 8 for more information

Section 14: Transport information

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

UN number or ID number 1719
Proper shipping name CAUSTIC ALKALI LIQUID, N.O.S. (CONTAINS PHOSPHORODITHIOIC ACID, O,O-BIS(2-METHYLPROPYL)ESTER, SODIUM SALT)
Transport hazard class(es) 8
Packing group II
Hazchem code 2R

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

UN number 1719
UN proper shipping name CAUSTIC ALKALI LIQUID, N.O.S. (CONTAINS PHOSPHORODITHIOIC ACID, O,O-BIS(2-METHYLPROPYL)ESTER, SODIUM SALT)
Transport hazard class(es) 8
Packing group II

IMDG	Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.
UN number	1719
UN proper shipping name	CAUSTIC ALKALI LIQUID, N.O.S. (CONTAINS PHOSPHORODITHIOIC ACID, O,O-BIS(2-METHYLPROPYL)ESTER, SODIUM SALT)
Transport hazard class(es)	8
Packing group	II
IMDG EMS Fire	F-A
IMDG EMS Spill	S-B
Marine pollutant	Not applicable

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No information available

Section 15: Regulatory information**Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations****Australia**

Classified as a hazardous substance in accordance with the criteria of Safe Work Australia - Globally Harmonized System (GHS).
Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

See section 8 for national exposure control parameters

Standard for Uniform Scheduling of Medicines and Poisons (SUSMP)

Classified as a scheduled poison according to the Standard for Uniform Scheduling of Medicines and Poisons (SUSMP)

Poison Schedule Number 5**Australian Industrial Chemicals Introduction Scheme (AICIS)**

Contact supplier for inventory compliance status

Chemical name	Australian Industrial Chemicals Introduction Scheme (AICIS)	Additional information
O-Isopropyl ethyl thiocarbamate - 141-98-0	Present	-
Phosphorodithioic acid, O,O-bis(2-methylpropyl)ester, sodium salt - 53378-51-1	Present	-
Isopropyl alcohol - 67-63-0	Present	-
1,3-Diethyl-2-thiourea - 105-55-5	Present	-

Illicit Drug Precursors/Reagents

This product does not contain any substance(s) on the Illicit Drug Precursors/Reagents list.

National pollutant inventory

Subject to reporting requirement

Chemical name	National pollutant inventory
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Isopropyl alcohol - 67-63-0	20 MW Threshold category 2b total 60000 MWH Threshold category 2b total 1 tonne/h Threshold category 2a total 25 tonne/yr Threshold category 1a total 400 tonne/yr Threshold category 2a total 2000 tonne/yr Threshold category 2b total
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International Inventories

AIIC	All the constituents of this material are listed on the Australian Inventory of Industrial Chemicals or are exempt.
NZIoC	Contact supplier for inventory compliance status.
TSCA	Contact supplier for inventory compliance status.
DSL/NDSL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
IECSC	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.

Legend:**AIIC**- Australian Inventory of Industrial Chemicals**NZIoC** - New Zealand Inventory of Chemicals**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances**ENCS** - Japan Existing and New Chemical Substances**IECSC** - China Inventory of Existing Chemical Substances**KECL** - Korean Existing and Evaluated Chemical Substances**PICCS** - Philippines Inventory of Chemicals and Chemical Substances**International Regulations****The Montreal Protocol on Substances that Deplete the Ozone Layer** Not applicable**The Stockholm Convention on Persistent Organic Pollutants** Not applicable**The Rotterdam Convention** Not applicable**Section 16: Other information**

Reason(s) For Issue:	First Issue Primary SDS
Prepared By	This Safety Data Sheet has been prepared by Ixom Operations Pty Ltd (Toxicology and SDS Services).
Revision date:	21-Mar-2024

Revision Note:

The symbol (*) in the margin of this SDS indicates that this line has been revised.

Key or legend to abbreviations and acronyms used in the safety data sheet**Legend**

SVHC: Substances of Very High Concern for Authorization:

PBT: Persistent, Bioaccumulative, and Toxic (PBT) Substances

vPvB: Very Persistent and very Bioaccumulative (vPvB) Substances

STOT: Specific Target Organ Toxicity

ATE: Acute Toxicity Estimate
LC50: 50% Lethal Concentration
LD50: 50% Lethal Dose

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
C	Carcinogen		

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
Environmental Protection Agency
Acute Exposure Guideline Level(s) (AEGl(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
Australian Industrial Chemicals Introduction Scheme (AICIS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
U.S. National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Disclaimer

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.

End of Safety Data Sheet