REVISION 0
DATE: 02 Dec 2025

SAFETY DATA SHEET
SODIUM ETHYL XANTHATE (SEX)

1.CHEMICAL PRODUCT AND COMPANY DENTIFICATION

Product Name:	Sodium Ethyl Xanthate(SEX)
Other Name:	Ethylxanthic acid, Sodium xanthogenate
Chemical Formula:	C3H5OS2.Na
Uses:	Used as collector in flotation in mining (metal extraction)
Supplier:	MPL Products 26 Baddesley Way, Canning Vale, Western Australia Australia- 6155 Ph: +6 1421837661 Email: info@mplproducts.com.au

2. HAZARD IDENTIFICATION

Poisons Schedule (Australia) Not Scheduled

Globally Harmonised System

Hazard Classification	Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)
Hazard Categories	Self-heating Substances and Mixtures Category 1 Acute Toxicity Category 4 Skin Irritation Category 2 Serious Eye Damage/Irritation - Category 2

Pictograms

SIGNAL WORD:	DANGER
Hazard Statements	Self-heating in large quantities; may catch fire. Harmful if swallowed or in contact with skin. Causes skin irritation. Causes serious eye irritation. Contact with acids liberates toxic gas
Precautionary Statements	
Prevention	Wear protective gloves/protective clothing/eye protection/face protection. Keep cool. Protect from sunlight.

	Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Obtain special instructions before use.
Response	Call a POISON CENTER or doctor if you feel unwell.

Skin Contact: Wash with plenty of water and soap. If skin irritation occurs: Get medical advice. Take off contaminated clothing.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice.

Ingestion: Drink enough water, spits, medical treatment.

Storage: Store in a cool, well-ventilated and leak proof warehouse, away from direct sunlight and temperature shall not be more than 30 ° C. No use of sparks generating equipment and tools.

Disposal: Dispose of contents/container in accordance with local / regional / national / international regulations

National Transport Commission (Australia)
Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)
Dangerous Goods Classification: Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Safe Work Australia
National Guide for Classifying Hazardous Chemicals under the Model WHS Regulations
Hazard Classification: Hazardous according to the criteria of Safe Work Australia under Model WHS Regulations

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name: Sodium Ethylxanthate
CAS No.: 140-90-9
Sodium Ethylxanthate ≥ 90%
Free alkali (Sodium Hydroxide) ≤ 0.2%
Moisture and Volatile ≤ 4.0%

4.FIRST AID MEASURES

Description of necessary measures according to different routes of exposure:

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a Poison Centre or doctor/physician for advice. Give artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult.

Ingestion: Rinse mouth, then drink plenty of water. Do not induce vomiting. If vomiting occurs, give further water. Call a Poison Centre or doctor/physician for advice. Never give anything by mouth to an unconscious person.

Eye Contact: Immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. Call a Poison Centre or doctor/physician for advice.

Skin Contact: Remove contaminated clothing and shoes immediately. Wash skin and hair with plenty of soap and water. Call a Poison Centre or doctor/physician for advice. If skin irritation or rash occurs, get medical advice/attention. Wash contaminated clothing and shoes before reuse

Advice to Doctor: Treat symptomatically. Ensure that attending medical personnel are aware of identity and nature of the product(s) involved and take precautions to protect themselves.

Emergency personnel should take protection: aid workers should wear a self-sufficient positive pressure type respirator. When necessary to seek medical advice immediately and indicate the special treatment if the patient has lost consciousness, seek medical advice immediately.

5.FIRE FIGHTING MEASURES

General Measures	If safe to do so, move undamaged containers from fire area. Cool containers with flooding quantities of water until well after fire is out. Do not get water inside containers or in contact with substance.
Flammability Conditions	Spontaneously Combustible Substance/Self-Heating: Flammable/combustible material. May ignite on contact with air or moisture.
Extinguishing Media:	Use flooding amounts of water for small and large fires to stop the reaction. Smothering will not work for these materials; they do not need air to burn. *CAUTION: Xanthates (UN3342), when flooded with water, will continue to evolve flammable Carbon disulfide/Carbon disulphide vapours.
Fire and Explosion Hazard:	Risk of violent reaction or explosion. May burn rapidly with flare-burning effect. May react vigorously in contact with water. May re-ignite after fire is extinguished. Containers may explode when heated. *Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Hazardous Products of Combustion: Fire will produce irritating, toxic and/or corrosive gases, including Carbon disulfide, Hydrogen sulfide.

Special Fire Fighting Instructions: Contain runoff from fire control water - Runoff may pollute waterways. Runoff may create fire or explosion hazard!

Personal Protective Equipment Wear positive pressure self-contained breathing apparatus (SCBA). Wear chemical protective clothing - It may provide little or no thermal protection. Structural firefighters' protective clothing will only provide limited protection.
Flash Point : No Data Available
Lower Explosion Limit: No Data Available
Upper Explosion Limit : No Data Available

Auto Ignition Temperature: No Data Available
Hazchem Code:1Y

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure: Ensure adequate ventilation. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Do not touch or walk through spilled material. Do not breathe dust/vapours and prevent contact with eyes, skin and clothing.

Clean Up Procedures: For spills of Xanthates (UN3342), Use clean, non-sparking tools to collect material; dissolve in 5 parts water and place it into loosely covered plastic containers for later disposal (see SECTION 13).

Containment : Stop leak if you can do it without risk. Prevent entry into waterways, sewers, basements or confined areas. Do not allow material to get wet.

Decontamination: Ventilate the area.

Environmental Precautionary Measures: Spillages and decontamination runoff should be prevented from entering drains and watercourses.

Evacuation Criteria: Spill or leak area should be isolated immediately. Keep unauthorised personnel away. Keep upwind and to higher ground.

Personal Precautionary Measures: Fully encapsulating, vapour-protective clothing should be worn for spills and leaks with no fire.

7. HANDLING AND STORAGE

Handling: Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure adequate ventilation. Obtain special instructions before use - Do not handle until all safety precautions have been read and understood. Avoid dust formation. Do not breathe dust and prevent contact with eyes, skin and clothing.
Do not ingest. Wear protective gloves/protective clothing/eye protection/face protection (see SECTION 8).
Spontaneously Combustible Substance/Self-Heating: Keep away from heat and sources of ignition - No smoking. Take precautionary measures against static discharge.

Storage: Store separately in a cool, dry and well-ventilated place. Protect from sunlight. Keep container tightly closed - check regularly for spills. Avoid exposure to air and water/moisture (hygroscopic). Maintain air gap between stacks/pallets. Keep away from any possible contact with water. Store away from foodstuffs and other/incompatible materials (see SECTION 10). Store locked up.

Container: Keep in the original container.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General: No specific exposure standards are available for this product.

Component: Sodium hydroxide (CAS No. 1310-73-2): Safe Work Australia Exposure Standard: TWA = 2 mg/m3 Peak limitation.

Decomposition Product: Carbon disulphide (CAS No. 75-15-0): Safe Work Australia Exposure Standard: TWA = 10 ppm (31 mg/m3); Absorption through the skin may be a significant source of exposure (Sk).

Engineering controls: Ensure ventilation is adequate to maintain air concentrations below 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.

Control parameters: No information Available

Occupational exposure to limit: No Data Available

Biological limit: No information Available

Personal protective equipment: self-priming filter gas mask, anti-static work clothes.

Respiratory protection: If inhalation risk exists, wear a dust mask/respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716

Hand protection: wear rubber gloves

Eye protection: wear chemical safe protective glasses

Skin and body protection: wear anti-static work clothes

Health measures: after work, take shower and change clothes. Pay attention to personal hygiene and sanitation.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: yellowish, solid

Odor: Pungent

Boiling Point: No Data available

Melting Point: 150-250 ^{0}C

Vapor Pressure: No Data available

Vapor Density: No Data available

Solubility in Water: Complete

Specific Gravity: 0.8

Freezing Point: No Data available

PH: >12

10. STABILITY AND REACTIVITY

General Information: Reacts with moisture liberating highly flammable carbon disulfide vapors.

Chemical Stability: Stable under normal conditions of use

Hazardous Polymerisation: Reacts exothermically with water

Hazardous Composition Products: Fire/decomposition will produce irritating, corrosive and/or toxic gases, including Carbon disulfide, Hydrogen, oxides of Carbon, oxides of Sulfur

Incompatibility: Incompatible with acids , oxidising agents , moisture

11. TOXICOLOGICAL INFORMATION

GENERAL INFORMATION

Information on toxicological effects:

- Acute toxicity: Harmful if swallowed and in contact with skin.
- Skin corrosion/irritation: Causes skin irritation.
- Eye damage/irritation: Causes serious eye irritation.
- Respiratory/skin sensitisation: No information available.
- Germ cell mutagenicity: No information available.
- Carcinogenicity: No information available.
- Reproductive toxicity: No information available.
- STOT (single exposure): The target organs for oral toxicity of SEX were the central nervous system, liver and spleen [ECHA].
- STOT (repeated exposure): No information available.
- Aspiration toxicity: No information available.

Information on likely routes of exposure:

- Ingestion: Harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.
- Eye contact: Causes serious eye irritation.
- Skin contact: Harmful in contact with skin. Causes skin irritation. Sodium ethyl xanthate liberates Carbon disulfide in contact with moisture/moist skin, absorption through the skin may be a significant source of exposure.
- Inhalation: Breathing in dust may result in respiratory irritation.

Chronic effects: Chronic exposure to carbon disulphide may produce central and peripheral nervous system, cardiovascular, gastrointestinal, kidney, eye disorders.

Acute toxicity (Oral):

Component: Sodium Ethyl xanthate (CAS No. 140-90-9):

- LD50, Mouse (male): 730 mg/kg bw. (as 10% water solution) [ECHA].

Acute toxicity (Inhalation):

Component: Sodium Ethyl xanthate (CAS No. 140-90-9):- LC50, Rat: 7,690 mg/m3 air (2 h) [ECHA].

12. ECOLOGICAL INFORMATION

Ecological toxicity:

Aquatic toxicity:

Component: Sodium Ethyl xanthate (CAS No. 140-90-9):

- LC50, Fish (Salmo gairdneri (Rainbow trout)): 217 mg/l (96 h)
- LC50, Fish (Lepomis macrochirus (Bluegill sunfish)): 10 mg/l (96 h)
- LC50, Fish (Letalurus punctatus (Channel catfish)): 10 mg/l (96 h)
- EC50, Crustacea (Daphnia magna (Water flea)): 3.7 mg/l (24 h)

Persistence and Degradability: No information Available

Bioaccumulation Potential: Not expected to bioaccumulate [ECHA].

Mobility: No information Available

Environmental Impact: Toxic to aquatic life - Prevent entry into drains and waterways

13. DISPOSAL CONSIDERATIONS

General Information: Dispose of contents/container through a licensed waste contractor and in accordance with local/regional/national regulations.

Special Precautions for Land Fill: Empty containers should be completely drained, properly closed and promptly returned to a drum reconditioner or disposed of in accordance with local/regional/national regulations. Containers, even those that have been emptied, can contain residues of dusts or solid particulates which may create both health and fire/explosion hazards

14. TRANSPORT INFORMATION

Land Transport (Australia)
ADG Code

Proper Shipping Name	XANTHATES
Class	4.2 Flammable Solids - Substances liable to spontaneous combustion
Subsidiary Risk(s)	No Data Available
EPG	135 Spontaneously Combustible Substances
UN Number	3342

Hazchem	1Y
Pack Group	III
Special Provision	No Data Available

Sea Transport

IMDG Code	
Proper Shipping Name	XANTHATES
Class	4.2 Flammable Solids - Substances liable to spontaneous combustion
Subsidiary Risk(s)	No Data Available
UN Number	3342
Hazchem	1Y
Pack Group	III
Special Provision	No Data Available
EMS	F-A, S-J
Marine Pollutant	No

Air Transport

IATA DGR

Proper Shipping Name	XANTHATES
Class	4.2 Flammable Solids - Substances liable to spontaneous combustion
Subsidiary Risk(s)	No Data Available
UN Number	3342
Hazchem	1Y
Pack Group	III
Special Provision	No Data Available

National Transport Commission (Australia)
Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification: Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

15. REGULATORY INFORMATION

General Information: No Data Available
Poisons Schedule (Aust): Not Scheduled
Environmental Protection Authority (New Zealand)
Hazardous Substances and New Organisms Amendment Act 2015
Approval Code: HSR002522 - Class 4 Substances Group Standard 2020

National/Regional Inventories
Australia (AIIC): Listed
China (IECSC): Not Determined
New Zealand (NZIoC): Listed

16. OTHER INFORMATION

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 MPL PRODUCTS 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.