SAFETY DATA SHEET

Revision date: 28-Jun-2022



Revision Number 1

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product identifier			
Product Name	ISOPROPYL XANTHOGEN ETHYL FORMATE		
Product Code(s)	00000054264		
Other means of identification			
Recommended use of the chemical and restrictions on use			
Recommended use	Chelating agent for sulphide and industrial mineral applications.		
Uses advised against	No information available.		

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.

2. HAZARDS IDENTIFICATION

GHS Classification

Not classified as dangerous goods in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG)

Classified as a hazardous chemical in accordance with the criteria of Safe Work Australia - Globally Harmonized System (GHS).

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2

SIGNAL WORD Warning

Label elements

Exclamation mark



Hazard statements H315 - Causes skin irritation H320 - Causes eye irritation

Precautionary Statements - Prevention

Wash hands thoroughly after handling
Wear protective gloves / protective clothing / eye protection / face protection
Precautionary Statements - Response
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
If eye irritation persists: Get medical advice/attention
IF ON SKIN: Wash with plenty of soap and water
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash before reuse
Precautionary Statements - Storage
No storage statements
Precautionary Statements.

Other hazards which do not result in classificationPoisons Schedule (SUSMP)None allocated

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Chemical name	CAS No.	Weight-%
Isopropyl xanthogen ethyl formate	67969-80-6	90% min
Other component(s)	-	to 100%

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 and keep at rest in a position comfortable for breathing. Call a physician if symptoms occur.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash skin with soap and water. Get medical attention if symptoms occur.
Ingestion	Clean mouth with water. Drink 1 or 2 glasses of water. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Get medical attention if symptoms occur.

Most important symptoms and effects, both acute and delayed		
Symptoms	Irritation. Erythema (skin redness). May cause redness and tearing of the eyes.	
Indication of any immediate medica	al attention and special treatment needed	
Note to physicians	Treat symptomatically.	
5. FIRE FIGHTING MEASU	RES	
Suitable Extinguishing Media		
Suitable Extinguishing Media	Dry chemical, CO2, water spray or regular foam.	
Unsuitable extinguishing media	High volume water jet.	
Specific hazards arising from the chemical		
Specific hazards arising from the chemical	Combustible liquid. Most vapors are heavier than air. Vapors may spread along ground and collect in low or confined areas (sewers, basements, tanks). Flash back possible over considerable distance. Cool drums with water spray.	
Hazardous combustion products	Carbon oxides.	
Special protective actions for fire-f	ighters	
Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.	
6. ACCIDENTAL RELEASE	MEASURES	
O. ACCIDENTAL NELLASI		
Personal precautions, protective e	quipment and emergency procedures	
Personal precautions	Avoid contact with skin, eves and inhalation of vapors. Stop leak if you can do it without	

Avoid contact with skin, eyes and inhalation of vapors. Stop leak if you can do it without risk. Evacuate personnel to safe areas. Remove all sources of ignition. Do not touch or walk through spilled material. Use personal protective equipment as required. Wash thoroughly after handling.		
Use personal protection recommended in Section 8.		
See Section 12 for additional Ecological Information.		
Methods and material for containment and cleaning up		
Prevent further leakage or spillage if safe to do so.		
Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Use non-sparking tools. After cleaning, flush away traces with water and detergent.		

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling	Avoid contact with skin and eyes. Avoid breathing vapors or mists. Do not eat, drink or smoke when using this product. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use personal protection equipment. Wash thoroughly after handling.
Conditions for safe storage, includi	ng any incompatibilities
Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from direct sunlight. Store away from sources of heat or ignition. Keep at temperatures below $45^{\circ}C$ / 113°F. 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.
Incompatible materials	Strong acids. Strong bases. Strong oxidizing agents.
Poisons Schedule (SUSMP)	None allocated
8. EXPOSURE CONTROLS	PERSONAL PROTECTION

Control parameters

Exposure Limits

No value assigned for this specific material by Safe Work Australia.

Appropriate engineering controls

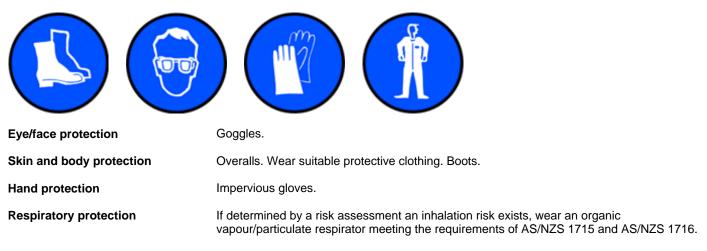
Engineering controls

Ensure adequate ventilation, especially in confined areas.

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, SAFETY SHOES, CHEMICAL GOGGLES, GLOVES.



Environmental exposure controls No information available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties	
Physical state	Liquid
Appearance	No information available.
Color	Yellow
Odor	Slight Sweet
Odor threshold	No information available.

<u>Property</u> pH	<u>Values</u> Not applicable
pH (as aqueous solution)	No data available
Melting point / freezing point	< -32°C
Boiling point / boiling range	>100°C
Flash point	>93.3°C
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Flammability Limit in Air	
Upper flammability or explosive	No data available
limits	
Lower flammability or explosive	No data available
limits	
Vapor pressure	0.333 kPa @23°C
Vapor density	>1 (air=1)
Relative density	1.05-1.10 @25°C
Water solubility	Immiscible in water
Solubility(ies)	No data available
Partition coefficient	No data available
Autoignition temperature	No data available
Decomposition temperature	No data available
Kinematic viscosity	No data available
Dynamic viscosity	No data available

Remarks • Method None known

None known None known Tag Closed Cup None known None known None known

None known None known None known None known None known None known None known None known

Other information

10. STABILITY AND REACTIVITY

<u>Reactivity</u>		
Reactivity	No information available.	
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	None under normal processing.	

Hazardous polymerization	Hazardous polymerization does not occur.
Conditions to avoid	
Conditions to avoid	Heat, flames and sparks. Direct sunlight.
Incompatible materials	
Incompatible materials	Strong acids. Strong bases. Strong oxidizing agents.

Hazardous decomposition products

Hazardous decomposition products Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

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 eye irritation.
Skin contact	Causes skin irritation.
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.
Symptoms	Irritation. Erythema (skin redness). May cause redness and tearing of the eyes.

Numerical measures of toxicity - Product Information

Refer to component information below.

Component Information

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 skin irritation. Classification is based on mixture calculation methods based on component data.
Serious eye damage/eye irritation	Mild eye irritation. Classification is based on mixture calculation methods based on component data.
Respiratory or skin sensitization	No information available.
Germ cell mutagenicity	No information available.
Carcinogenicity	This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP. (OSHA - Occupational Safety and Health Administration) (IARC - International Agency for Research on Cancer) (NTP - National Toxicology Program).

Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Aspiration hazard	No information available.

12. ECOLOGICAL INFORMATION

<u>Ecotoxicity</u>	
Ecotoxicity	Keep out of waterways.
Persistence and degradability	
Persistence and degradability	No information available.
Bioaccumulative potential	
Bioaccumulation	No information available.
Mobility	
Mobility in soil	No information available.

Other adverse effects

13. DISPOSAL CONSIDERATIONS

Waste treatment methods	
Waste from residues/unused products	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
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.

14. TRANSPORT INFORMATION

<u>ADG</u>

Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail; NON-DANGEROUS GOODS.

<u>IATA</u>

Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; NON-DANGEROUS GOODS.

IMDG

Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; NON-DANGEROUS GOODS.

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations

Australia

Not classified as dangerous goods in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG)

Classified as a hazardous chemical in accordance with the criteria of Safe Work Australia - Globally Harmonized System (GHS).

See section 8 for national exposure control parameters

Poisons Schedule (SUSMP) None allocated

International Inventories	
AIIC	A constituent of this material is not listed on the Australian Inventory of Industrial Chemicals.

Legend: AIIC - Australian Inventory of Industrial Chemicals

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

16. OTHER INFORMATION

Supplier Safety Data Sheet , not dated.

Reason(s) For Issue: First Issue Primary SDS

Issuing Date: 28-Jun-2022

This Safety Data Sheet has been prepared by Ixom Operations Pty Ltd (Toxicology and SDS Services).

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	Section 8: EXPOSURE CONTROLS/PERSONA	AL PROTECTION	
	TMA (time-weighted average)	STEI	

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

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

EPA (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) Japan GHS Classification 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) 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 RTECS (Registry of Toxic Effects of Chemical Substances) 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