

SAFETY DATA SHEET



Revision date: 13-Dec-2023

Revision Number 6

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product identifier

Product Name 2-ETHYLHEXANOIC ACID

Product Code(s) 00000008018

Other means of identification

CAS No. 149-57-5

Synonyms 2-EHA

Recommended use of the chemical and restrictions on use

Recommended use Chemical intermediate.

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
Reproductive toxicity	Category 1B

SIGNAL WORD

Danger

Label elements

Health hazard
Exclamation mark

**Hazard statements**

H315 - Causes skin irritation

H360D - May damage the unborn child

Precautionary Statements - Prevention

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Wash hands thoroughly after handling

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

Use personal protective equipment as required

Precautionary Statements - Response

If exposed or concerned: Get medical advice/attention

Specific treatment (see First aid on this SDS)

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

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

May be harmful if swallowed

Harmful to aquatic life

General Hazards**Poisons Schedule (SUSMP)**

None allocated

3. COMPOSITION/INFORMATION ON INGREDIENTS**Substance**

Chemical name	CAS No.	Weight-%
2-Ethyl hexanoic acid	149-57-5	99.5%

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. 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. Call a physician if symptoms occur.

Ingestion Rinse mouth thoroughly with water. Drink 1 or 2 glasses of water. Get medical attention if symptoms occur.

Most important symptoms and effects, both acute and delayed

Symptoms Irritation. Erythema (skin redness).

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE FIGHTING MEASURES

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.

Hazardous combustion products Carbon monoxide. Carbon dioxide (CO₂).

Special protective actions for fire-fighters

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

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin and eyes. Avoid breathing vapors or mists. Evacuate personnel to safe areas. Stop leak if you can do it without risk. 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 See Section 12 for additional Ecological Information.

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. After cleaning, flush away traces with water. For large amounts, pump off product.

7. HANDLING AND STORAGE

Precautions for safe handling**Advice on safe handling**

Avoid contact with skin and eyes. Avoid breathing vapors or mists. Take precautionary measures against static discharges. Do not eat, drink or smoke when using this product. Use personal protection equipment. Wash thoroughly after handling. Not to be used by pregnant workers and workers who have recently given birth or who are breastfeeding.

Conditions for safe storage, including any incompatibilities**Storage Conditions**

Keep containers tightly closed in a dry, cool and well-ventilated place. Store away from sources of heat or ignition. Store locked up. 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 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.

Chemical name	Australia	ACGIH TLV
2-Ethyl hexanoic acid 149-57-5		TWA: 5 mg/m ³ inhalable fraction and vapor

Chemical name	Australia	ACGIH
2-Ethyl hexanoic acid 149-57-5	-	TWA: 5 mg/m ³ inhalable fraction and vapor

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

TWA (ACGIH - Time-weighted Average) the time-weighted average concentration for a conventional 8-hour work day and a 40-hour work week, to which it is believed that nearly all workers may be repeatedly exposed, day after day, without adverse effect.

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**Engineering controls**

Ensure adequate ventilation, especially in confined areas. 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, SAFETY SHOES, SAFETY GLASSES, GLOVES, RESPIRATOR.



Eye/face protection

Glasses.

Skin and body protection

Protective shoes or boots. Overalls.

Hand protection

Impervious gloves.

Respiratory protection

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

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	Colourless
Odor	Sweet
Odor threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	3.5 @20°C	None known
pH (as aqueous solution)	No data available	None known
Melting point / freezing point	< -20°C	None known
Boiling point / boiling range	228°C	None known
Flash point	114°C	ASTM D7094-04
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	6.7 Vol-%	
Lower flammability or explosive limits	0.9 Vol-%	
Vapor pressure	0.004 kPa @20°C	Calculation Method
Vapor density	5 (air=1)	None known
Relative density	0.906 @20°C	None known
Water solubility	1.5 g/L @ 20 °C	None known
Solubility(ies)	No data available	None known
Partition coefficient	log Pow = 2.7	None known
Autoignition temperature	335°C	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	7.5 mPa.s @20°C	None known

Other information

10. STABILITY AND REACTIVITY

Reactivity

Reactivity 2-Ethylhexanoic acid is a carboxylic acid and will react with all bases, both organic and inorganic by the evolution of substantial amounts of heat. The substance can be oxidized by strong oxidizing agents and reduced by strong reducing agents. It may initiate polymerization reactions and may, like other acids, they catalyze chemical reactions.

Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge Yes.

Possibility of hazardous reactions

Possibility of hazardous reactions Reacts with cyanide salts to generate gaseous hydrogen cyanide. Flammable and/or toxic gases and heat are generated by the reaction with diazo compounds, dithiocarbamates, isocyanates, mercaptans, nitrides, and sulfides. Reaction with carbonates and bicarbonates generates carbon dioxide and heat.

Hazardous polymerization Hazardous polymerization may occur.

Conditions to avoid

Conditions to avoid Heat, flames and sparks.

Incompatible materials

Incompatible materials Strong oxidizing agents.

Hazardous decomposition products

Hazardous decomposition products Carbon monoxide. Carbon dioxide (CO₂).

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 May cause irritation.

Skin contact Causes skin irritation.

Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

Symptoms Irritation. Erythema (skin redness).

Numerical measures of toxicity - Product Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
2-Ethyl hexanoic acid	= 2043 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 skin irritation.
Serious eye damage/eye irritation	No information available.
Respiratory or skin sensitization	Not a skin sensitizer. (guinea pig).
Germ cell mutagenicity	Not classified.
Carcinogenicity	Not listed as carcinogenic according to IARC. (IARC - International Agency for Research on Cancer).
Reproductive toxicity	H360D - May damage the unborn child.
STOT - single exposure	No information available.
STOT - repeated exposure	Not classified.
Aspiration hazard	No information available.

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Ecotoxicity Keep out of waterways. Harmful to aquatic life.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
2-Ethyl hexanoic acid	EC50: =61mg/L (72h, Desmodesmus subspicatus) EC50: =41mg/L (96h, Desmodesmus subspicatus)	LC50: =70mg/L (96h, Pimephales promelas)	-	EC50: =85.4mg/L (48h, Daphnia magna)

Persistence and degradability

Persistence and degradability Readily biodegradable.

Bioaccumulative potential

Bioaccumulation This chemical shows a low bioaccumulation potential.

Component Information

Chemical name	Partition coefficient
2-Ethyl hexanoic acid	2.7

Mobility

Mobility in soil High mobility in soil.

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**ADG**

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.

IATA

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**

This material is listed on the Australian Inventory of Industrial Chemicals.

NZIoC

This material is listed on the New Zealand Inventory of Chemicals.

Legend:

AIIIC- Australian Inventory of Industrial Chemicals

NZIoC - New Zealand Inventory of 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 10/ 2023

Reason(s) For Issue: 5 Yearly Revised Primary SDS**Issuing Date:** 13-Dec-2023

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/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

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