

1. IDENTIFICATION

Product Name	ISOPAR E
Other Names	No Data Available
Uses	Solvent.
Chemical Family	No Data Available
Chemical Formula	Unspecified
Chemical Name	Naphtha, petroleum, light alkylate
Product Description	Isoparaffinic Hydrocarbon.

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Redox Pty Ltd	2 Swettenham Road Minto NSW 2566 Australia	+61-2-97333000
Redox Pty Ltd	11 Mayo Road Wiri Auckland 2104 New Zealand	+64-9-2506222
Redox Inc.	3960 Paramount Boulevard Suite 107 Lakewood CA 90712 USA	+1-424-675-3200
Redox Chemicals Sdn Bhd	Level 2, No. 8, Jalan Sapir 33/7 Seksyen 33, Shah Alam Premier Industrial Park 40400 Shah Alam Sengalor, Malaysia	+60-3-5614-2111

Emergency Contact Details

For emergencies only; DO NOT contact these companies for general product advice.

Organisation	Location	Telephone
Poisons Information Centre	Westmead NSW	1800-251525 131126
Chemcall	Australia	1800-127406 +64-4-9179888
Chemcall	Malaysia	+64-4-9179888
Chemcall	New Zealand	0800-243622 +64-4-9179888
National Poisons Centre	New Zealand	0800-764766
CHEMTREC	USA & Canada	1-800-424-9300 CN723420 +1-703-527-3887

2. HAZARD IDENTIFICATION

Poisons Schedule (Aust) 5

Globally Harmonised System

Hazard Classification Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)

Hazard Categories Flammable Liquids - Category 2
Skin Corrosion/Irritation - Category 2
Specific Target Organ Toxicity (Single Exposure) - Category 3
Aspiration Hazard - Category 1
Long-term Hazard To The Aquatic Environment - Category 2

Pictograms



Signal Word Warning

Hazard Statements

H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.

Precautionary Statements	Prevention	P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.	
		P280	Wear protective gloves/eye protection/face protection.	
		P261	Avoid breathing fumes/mists/vapours/spray.	
		P273	Avoid release to the environment.	
		P240	Ground/bond container and receiving equipment.	
		P241	Use explosion-proof electrical/ventilating/lighting and all other equipment.	
		P242	Use only non-sparking tools.	
		P243	Take precautionary measures against static discharge.	
		P235	Keep cool.	
		P271	Use only outdoors or in a well-ventilated area.	
		Response	P370 + P378	In case of fire: Use carbon dioxide (CO ₂), dry chemical, foam or water fog for extinction.
			P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
			P331	Do NOT induce vomiting.
			P303 + P361 + P353	IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.			
P391	Collect spillage.			
P332 + P313	If skin irritation occurs: Get medical advice/attention.			
Storage	P363	Wash contaminated clothing before reuse.		
	P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.		
	P403 + P233	Store in a well-ventilated place. Keep container tightly closed.		
	P405	Store locked up.		
Disposal	P501	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)

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

HSNO Classifications	Physical Hazards	3.1B	Flammable liquid - high hazard
	Health Hazards	6.1E	Substances that are acutely toxic –May be harmful, Aspiration hazard
		6.3B	Substances that are mildly irritating to the skin
		6.4A	Substances that are irritating to the eye
Environmental Hazards	9.1A	Substances that are very ecotoxic in the aquatic environment	

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Naphtha (petroleum), light alkylate	No Data Available	64741-66-8	100.0 %
Contains: octane	No Data Available	111-65-9	<70.0 %
Contains: nonane	No Data Available	111-84-2	<40.0 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	If swallowed, Do NOT induce vomiting. Keep at rest. Seek immediate medical attention.
Eye	Flush eyes with large amounts of water until irritation subsides. Seek immediate medical attention.
Skin	Flush area with large amounts of water and wash area with soap if available. Remove contaminated clothing, including shoes and laundry before reuse. Seek medical attention for skin irritations.
Inhaled	Using proper respiratory protection, immediately remove the affected victim from exposure. Administer artificial respiration if breathing has stopped. Keep at rest. Seek immediate medical attention.
Advice to Doctor	Treat symptomatically based on judgement of doctor and individual reactions of patient. Avoid gastric lavage - aspiration of product to the lungs may result in chemical pneumonitis.
Medical Conditions Aggravated by Exposure	Individuals with pre-existing respiratory or skin conditions are likely to be sensitive to this product. Other Health Effects Information: Long term narcotic effects are unlikely, however, prolonged intentional exposure may result in permanent central nervous system effects.

5. FIRE FIGHTING MEASURES

General Measures	Flame-proof equipment is necessary in all areas where this chemical is being used. Nearby equipment must be earthed.
Flammability Conditions	Product is a flammable liquid.
Extinguishing Media	In case of fire, use Dry chemical or foam
Fire and Explosion Hazard	May form flammable mixtures with air. Vapours are heavier than air and may travel to an ignition source and flash back. Vapour can spread along the ground and collect in low or confined areas. Vapour may cause flash fire. May be ignited by heat, sparks or flame. May polymerise explosively when involved in a fire. Heating can cause expansion or decomposition of the material, which can lead to the containers exploding.
Hazardous Products of Combustion	Carbon dioxide and carbon monoxide.
	Clear fire area of all non-emergency personnel. Stay upwind. Keep out of low areas. Eliminate ignition sources. Move

Special Fire Fighting Instructions	fire exposed containers from fire area if it can be done without risk. Do NOT allow fire fighting water to reach waterways, drains or sewers. Store fire fighting water for treatment.
Personal Protective Equipment	Fire fighters should wear a positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots and gloves) or chemical splash suit. Please note: Structural fire fighters uniform will provide limited protection.
Flash Point	6 °C
Lower Explosion Limit	0.9 %
Upper Explosion Limit	6.0 %
Auto Ignition Temperature	380 °C
Hazchem Code	3YE

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Shut off all possible sources of ignition. Personnel involved in the clean up should wear full protective clothing as listed in section 8. Avoid accidents, clean up immediately. Evacuate all unnecessary personnel. Increase ventilation. Avoid walking through spilled product as it is slippery when spilt. Stop leak if safe to do so. Do NOT let product reach drains or waterways. If product does enter a waterway, advise the Environmental Protection Authority or your local Waste Management. Use clean, non-sparking tools and equipment. Prevent vapours or dusts from building up in confined areas. Ensure that drain valves are closed at all times.
Clean Up Procedures	<p>Major Land Spill Eliminate sources of ignition. Warn occupants of downwind areas of possible fire and explosion hazard. Prevent liquid from entering sewers, watercourses, or low-lying areas. Keep the public away from the area. Shut off the source of the spill if possible and safe to do so. Advise authorities if substance has entered a watercourse or sewer or has contaminated soil or vegetation. Take measures to minimise the effect on the ground water. Contain the spilled liquid with sand or earth Recover by pumping – use explosion proof pump or hand pump – or with a suitable absorbent material. Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations. See “First Aid Measures” and “Stability and Reactivity”</p> <p>Major Water Spill Eliminate any sources of ignition. Warn occupants and shipping in downwind areas of possible fire and explosion hazard. Notify the port or relevant authority and keep the public away from the area. Shut off the source of the spill if possible and safe to do so. Confine the spill if possible. Remove the product from the surface by skimming or with suitable absorbent material. Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations. See “First Aid Measures” and “Stability and Reactivity”.</p>
Containment	Stop leak if safe to do so.
Environmental Precautionary Measures	Do NOT let product reach drains or waterways. If product does enter a waterway, advise the Environmental Protection Authority or your local Waste Management.
Evacuation Criteria	Evacuate all unnecessary personnel.
Personal Precautionary Measures	Personnel involved in the clean up should wear full protective clothing as listed in section 8.

7. HANDLING AND STORAGE

Handling	Ensure an eye bath and safety shower are available and ready for use. Observe good personal hygiene practices and recommended procedures. This product is flammable. Do NOT open near open flame, sources of heat or ignition. No smoking. Keep container closed. Handle with care. Open slowly to control possible pressure release. Use grounding leads to avoid electrical discharge. Wash thoroughly after handling. Avoid contact with eyes, skin, and clothing. Do not inhale product vapours. Avoid prolonged or repeated exposure. Remove contaminated clothing and wash before reuse.
Storage	Store in a cool, dry, well-ventilated, fire-proof area. Keep containers tightly sealed when not in use. Inspect regularly for deficiencies such as damage or leaks. Protect against physical damage. Ground and bond storage containers. Store away from incompatible materials as listed in section 10. Protect from direct sunlight. Do NOT pressurise, cut, heat or weld containers - residual vapours are flammable. This product is flammable and will fuel fire in progress. This

product has a UN classification of 3295 and a Dangerous Goods Class 3 (flammable) according to The Australian Code for the Transport of Dangerous Goods By Road and Rail.

Container

Container type/packaging must comply with all applicable local legislation.
Store in original packaging as approved by manufacturer.
Incompatible materials: Natural rubber, Butyl rubber, EPDM, Polystyrene.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General

The time weighted average concentration (TWA) for this product is: 1200 mg/m³ (241 ppm), which means the highest allowable exposure concentration in an eight-hour day for a five-day working week. The short-term exposure limit (STEL) is: None specified; consider 5 g/m³, which is the maximum allowable exposure concentration at any time.

Exposure Limits

No Data Available

Biological Limits

No information available on biological limit values for this product.

Engineering Measures

A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Use an explosion proof exhaust ventilation system. Vapour heavier than air - prevent concentration in hollows and sumps. Do NOT enter confined spaces where vapour may have collected.

NOTE: Laboratory samples should be handled in a fume hood.

Personal Protection Equipment

RESPIRATOR: It is recommended to use a half-face filter mask to protect from overexposure by inhalation. A type 'A' filter material is considered suitable for this product (AS1715/1716).

EYES: Always use safety glasses or a face shield when handling this product (AS1336/1337).

HANDS: It is recommended that chemical resistant gloves be worn when handling this product (AS2161).

CLOTHING: Always wear long sleeves, long trousers, or coveralls, and enclosed footwear or safety boots when handling this product (AS3765/2210).

Work Hygienic Practices

No Data Available

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State

Liquid

Appearance

Clear liquid

Odour

Sweet

Colour

Colourless

pH

No Data Available

Vapour Pressure

2 kPa (15 mmHg) [Calculated] (@ 20 °C)

Relative Vapour Density

4.1 Air = 1

Boiling Point

115 - 140 °C [ASTM D86]

Melting Point

-105 °C (Pour point) [ASTM D5950]

Freezing Point

No Data Available

Solubility

Negligible solubility in water

Specific Gravity

0.72 (with respect to water) [Calculated]

Flash Point

6 °C

Auto Ignition Temp

380 °C

Evaporation Rate

2 (n-butyl acetate = 1)

Bulk Density

No Data Available

Corrosion Rate

No Data Available

Decomposition Temperature

No Data Available

Density

720 kg/m³ [ASTM D4052]

Specific Heat

No Data Available

Molecular Weight

119 g/mol [Calculated]

Net Propellant Weight

No Data Available

Octanol Water Coefficient

Log Pow >4 [Estimated]

Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	(@ 101 kPa)
Viscosity	0.7 cSt (@ 40 °C)
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	No Data Available
Potential for Dust Explosion	Not applicable.
Fast or Intensely Burning Characteristics	No Data Available
Flame Propagation or Burning Rate of Solid Materials	No Data Available
Non-Flammables That Could Contribute Unusual Hazards to a Fire	No Data Available
Properties That May Initiate or Contribute to Fire Intensity	No Data Available
Reactions That Release Gases or Vapours	No Data Available
Release of Invisible Flammable Vapours and Gases	No Data Available

10. STABILITY AND REACTIVITY

Chemical Stability	Product is stable under normal conditions of use, storage and temperature. Flammable Liquid.
Conditions to Avoid	Sources of heat and ignition, open flames.
Materials to Avoid	Incompatible with strong oxidising agents, mineral acids, and sources of ignition.
Hazardous Decomposition Products	Carbon monoxide, carbon dioxide, and other organic complexes on incomplete burning or oxidation.
Hazardous Polymerisation	Hazardous Polymerisation will not occur.

11. TOXICOLOGICAL INFORMATION

General Information	Oral LD50: > 10000 mg/kg Dermal TCLo: LC50 > 21 mg/L
EyeIrritant	This product is irritating to eyes, but will not permanently damage the eye tissue.
Ingestion	Small amounts of liquid aspirated into the lungs during ingestion, or from vomiting, may cause chemical pneumonitis, or pulmonary oedema. Ingesting large amounts of this product will result in headaches, nausea, dizziness, and tracheal burning.
Inhalation	Inhalation of this product will yield moderate discomfort in large quantities. Vapour concentrations are irritating to nose and throat. Overexposure may be evident through dizziness, nausea, headaches and other central nervous system effects.
SkinIrritant	This product is irritating to the skin with prolonged exposure. It may result in dryness and cracking.
Carcinogen Category	No Data Available

12. ECOLOGICAL INFORMATION

Ecotoxicity	Fish Toxicity (rainbow trout, goldfish, bluegill): LC50(96hr): Based on data for a similar component or preparation, this
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Persistence/Degradability	product is expected to be toxic to aquatic organisms.
Mobility	This product will evaporate and commence degradation on exposure to light and air.
Environmental Fate	This product is highly volatile and will rapidly evaporate to the air if released into the water.
Bioaccumulation Potential	Do NOT let product reach waterways, drains and sewers.
Environmental Impact	No information available on bioaccumulation for this product.
	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Dispose of in accordance with all local, state and federal regulations. All empty packaging should be disposed of in accordance with Local, State, and Federal Regulations or recycled/reconditioned at an approved facility.
Special Precautions for Land Fill	Contact a specialist disposal company or the local waste regulator for advice. This should be done in accordance with 'The Hazardous Waste Act'. This product is not suitable for disposal by either landfill or via municipal sewers, drains, natural streams or rivers. This product is ashless and can be incinerated in a regulated facility. In the absence of a designated industrial incinerator, this product should be treated and disposed through chemical waste treatment or considered for use in solvent recycling.

14. TRANSPORT INFORMATION

Land Transport (Australia)

ADG Code

Proper Shipping Name	HYDROCARBONS, LIQUID, N.O.S. (Naphtha, petroleum, light alkylate; Octane and isomers)
Class	3 Flammable Liquids
Subsidiary Risk(s)	No Data Available
EPG	14 Liquids - Highly Flammable
UN Number	3295
Hazchem	3YE
Pack Group	II
Special Provision	No Data Available

Land Transport (Malaysia)

ADR Code

Proper Shipping Name	HYDROCARBONS, LIQUID, N.O.S. (Naphtha, petroleum, light alkylate; Octane and isomers)
Class	3 Flammable Liquids
Subsidiary Risk(s)	No Data Available
EPG	14 Liquids - Highly Flammable
UN Number	3295
Hazchem	3YE
Pack Group	II
Special Provision	No Data Available

Land Transport (New Zealand)

NZS5433

Proper Shipping Name	HYDROCARBONS, LIQUID, N.O.S. (Naphtha, petroleum, light alkylate; Octane and isomers)
Class	3 Flammable Liquids

Subsidiary Risk(s)	No Data Available
EPG	14 Liquids - Highly Flammable
UN Number	3295
Hazchem	3YE
Pack Group	II
Special Provision	No Data Available

Land Transport (United States of America)

US DOT

Proper Shipping Name	HYDROCARBONS, LIQUID, N.O.S. (Naphtha, petroleum, light alkylate; Octane and isomers)
Class	3 Flammable Liquids
Subsidiary Risk(s)	No Data Available
ERG	128 Flammable Liquids (Non-Polar / Water-Immiscible)
UN Number	3295
Hazchem	3YE
Pack Group	II
Special Provision	No Data Available

Sea Transport

IMDG Code

Proper Shipping Name	HYDROCARBONS, LIQUID, N.O.S. (Naphtha, petroleum, light alkylate; Octane and isomers)
Class	3 Flammable Liquids
Subsidiary Risk(s)	No Data Available
UN Number	3295
Hazchem	3YE
Pack Group	II
Special Provision	No Data Available
EMS	F-E, S-D
Marine Pollutant	Yes

Air Transport

IATA DGR

Proper Shipping Name	HYDROCARBONS, LIQUID, N.O.S. (Naphtha, petroleum, light alkylate; Octane and isomers)
Class	3 Flammable Liquids
Subsidiary Risk(s)	No Data Available
UN Number	3295
Hazchem	3YE
Pack Group	II
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)
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15. REGULATORY INFORMATION

General Information No Data Available

Poisons Schedule (Aust) 5

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

Approval Code HSR001415

National/Regional Inventories

Australia (AICS)	Listed
Canada (DSL)	Not Determined
Canada (NDSL)	Not Determined
China (IECSC)	Not Determined
Europe (EINECS)	Not Determined
Europe (REACH)	Not Determined
Japan (ENCS/METI)	Not Determined
Korea (KECI)	Not Determined
Malaysia (EHS Register)	Not Determined
New Zealand (NZIoC)	Listed
Philippines (PICCS)	Not Determined
Switzerland (Giftliste 1)	Not Determined
Switzerland (Inventory of Notified Substances)	Not Determined
Taiwan (NCSR)	Not Determined
USA (TSCA)	Not Determined

16. OTHER INFORMATION

Related Product Codes ISOPAR2100, ISOPAR2101, ISOPAR2410

Revision 2

Revision Date 15 Feb 2016

Reason for Issue Updated sds

Key/Legend

< Less Than

> Greater Than

AICS Australian Inventory of Chemical Substances

atm Atmosphere

CAS Chemical Abstracts Service (Registry Number)

cm² Square Centimetres

CO₂ Carbon Dioxide

COD Chemical Oxygen Demand

deg C (°C) Degrees Celcius

EPA (New Zealand) Environmental Protection Authority of New Zealand

deg F (°F) Degrees Farenheit

g Grams

g/cm³ Grams per Cubic Centimetre
g/l Grams per Litre
HSNO Hazardous Substance and New Organism
IDLH Immediately Dangerous to Life and Health
immiscible Liquids are insoluble in each other.
inHg Inch of Mercury
inH₂O Inch of Water
K Kelvin
kg Kilogram
kg/m³ Kilograms per Cubic Metre
lb Pound
LC50 LC stands for lethal concentration. LC50 is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.
LD50 LD stands for Lethal Dose. LD50 is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals.
ltr or **L** Litre
m³ Cubic Metre
mbar Millibar
mg Milligram
mg/24H Milligrams per 24 Hours
mg/kg Milligrams per Kilogram
mg/m³ Milligrams per Cubic Metre
Misc or **Miscible** Liquids form one homogeneous liquid phase regardless of the amount of either component present.
mm Millimetre
mmH₂O Millimetres of Water
mPa.s Millipascals per Second
N/A Not Applicable
NIOSH National Institute for Occupational Safety and Health
NOHSC National Occupational Health and Safety Commission
OECD Organisation for Economic Co-operation and Development
Oz Ounce
PEL Permissible Exposure Limit
Pa Pascal
ppb Parts per Billion
ppm Parts per Million
ppm/2h Parts per Million per 2 Hours
ppm/6h Parts per Million per 6 Hours
psi Pounds per Square Inch
R Rankine
RCP Reciprocal Calculation Procedure
STEL Short Term Exposure Limit
TLV Threshold Limit Value
tne Tonne
TWA Time Weighted Average
ug/24H Micrograms per 24 Hours
UN United Nations
wt Weight