

P304+340: IF INHALED: Remove person to fresh air and keep comfortable for breathing. P312: Call a POISON CENTER or doctor/ physician if you feel unwell

P370+378: In case of fire: use foam, carbon dioxide, dry earth or sand to extinguish

Dangerous Goods Classification 3

Poisons Schedule 5

Signal Word DANGER

3. COMPOSITION: Information on Ingredients

Chemical Ingredient	CAS No.	Proportion (%v/v)
Heptane and Isomers	Various	>80
Isohexanes	107-83-5	< 15

4. FIRST AID MEASURES

For advice, contact Poisons Information Centre (Phone Australia: 13 1126) or a doctor.

Ingestion

If swallowed, DO NOT induce vomiting. Keep at rest. Seek immediate medical attention.

Eye Contact

Flush eyes with large amounts of water until irritation subsides. Seek immediate medical attention.

Skin Contact

Flush area with large amounts of water and wash area with soap if available. Remove contaminated clothing, including shoes, and launder before reuse. Seek medical attention for skin irritations.

Inhalation

Using proper respiratory protection, immediately remove the affected victim from exposure. Administer artificial respiration if breathing is stopped. Keep at rest. Seek immediate medical attention.

First Aid facilities

Provide eye baths and safety showers.

Medical Attention

Treat according to symptoms. Avoid gastric lavage: risk of aspiration of product to the lungs with the potential to cause chemical pneumonitis.

5. FIRE FIGHTING MEASURES

Shut off product that may 'fuel' a fire if safe to do so. Allow trained personnel to attend a fire in progress, providing firefighters with this Safety Data Sheet. Prevent extinguishing media from escaping to drains and waterways.

Suitable extinguishing media

Foam, dry chemical powder, carbon dioxide or dry sand. Water spray or fog for large fires.

Do not use a solid water stream as it may scatter and spread fire.

Hazards from combustion products

Carbon dioxide and carbon monoxide

Precautions for fire fighters and special protective equipment

Full protective clothing and self-contained breathing apparatus

Hazchem Code: 3YE

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures

Prevent fluid from escaping to drains and waterways. Contain leaking packaging in a containment drum. Prevent vapours from building up in confined areas. Ensure that drain valves are closed at all times. Clean up and report spills immediately.

Methods and materials for containment

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”

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”.

7. HANDLING AND STORAGE

Precautions for safe handling

This product is flammable. Do not open near open flame, sources of heat or ignition. No smoking. Keep container closed. Handle containers with care. Open slowly to control possible pressure release. Material will accumulate static charge. Use grounding leads to avoid discharge (electrical spark).

Use only with adequate ventilation and avoid breathing vapour. Observe good industrial hygiene practices.

Conditions for safe storage

Store in a cool, dry place away from direct sunlight. Do not pressurise, cut, heat or weld containers - residual vapours are flammable. This product is flammable and will fuel a fire in progress.

Incompatible materials

Natural Rubber, Butyl Rubber, EPDM, Polystyrene, oxidising agents, strong acids.

8. EXPOSURE CONTROLS: PERSONAL PROTECTION

National Exposure Standards

The time weighted average concentration (TWA) for this product is: n-heptane: 1640 mg/m³ (400 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: n-heptane: 2050 mg/m³ (500 ppm), which is the maximum allowable exposure concentration at any time. Products may be identified as skin sensitisers, indicated as (Sen), which means that the product will induce ever-increasing adverse effects with subsequent exposure, such as loss of feeling in extremities, or pain or irritation on contact with the product. Where (Sk) appears, the product will be easily absorbed to the skin, risking overexposure and symptoms similar to Ingestion or Inhalation. applies in this case. Refer: Section 11: Toxicological Effects.

Biological limit values

Not available

Engineering Controls: Ventilation

The use of local exhaust ventilation is recommended to control process emissions near the source. Laboratory samples should be handled in a fume hood. Provide mechanical ventilation of confined spaces. Use explosion-proof ventilation equipment.

Personal Protective Equipment

Respiratory Protection: Where concentrations in air may exceed the limits described in the National Exposure Standards, 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.

Eye Protection: Always use safety glasses or a face shield when handling this product.

Skin/ Body Protection: Always wear long sleeves and long trousers or coveralls, and enclosed footwear or safety boots when handling this product. It is recommended that chemical resistant gloves (e.g. PVC) be worn when handling this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Property	Unit of measurement	Typical value
Appearance	-	Clear, colourless liquid
Boiling Point/ Range	°C	85-100
Flash Point	°C	-17
Density @ 15°C	g/ml	0.69
Vapour Pressure @ 20°C	kPa	No data available
Explosive Limits (LEL – UEL)	%	1.0 – 8.0
Vapour Density @ 20°C	kPa	Not available
Autoignition Temperature	°C	> 200
Viscosity @ 20°C	cSt	Not applicable
Percent Volatiles	%	100
Solubility with Water	% w/w	Not available

The values listed are indicative of this product's physical and chemical properties. For a full product specification, please consult the Product Data Sheet.

10. STABILITY AND REACTIVITY**Chemical Stability**

Stable at room temperature and pressure

Conditions to avoid

Sources of heat and ignition, open flames.

Hazardous decomposition products

Carbon monoxide, carbon dioxide and other organic complexes on incomplete burning or oxidation.

Hazardous reactions

None anticipated. Avoid contact with oxidizing agents, mineral acids, halogenated organic compounds.

Hazardous Polymerisation

Will not occur

11. TOXICOLOGICAL INFORMATION**Acute Effects****Ingestion**

Produces hallucinations and narcotic effect. Ingestion of large amounts will result in drowsiness, fatigue, loss of appetite, paresthesia in distal extremities (tingling in hands and feet). Possibility of muscle weakness, cold pulsation in

extremities (hands and feet), blurred vision, headache, and nausea. Vomiting may cause this product to be aspirated to the lungs resulting in chemical pneumonitis or pulmonary oedema.

Eye Contact

This product is irritating to eyes, but will not permanently damage the eye tissue

Skin Contact

This product is irritating to the skin with prolonged exposure. It may result in dryness and cracking.

Inhalation

This product is irritating to the respiratory tract. Exposure to large concentrations over an extended period of time will result in muscle weakness, tingling in hands and feet, blurred vision, headaches, nausea, loss of appetite, hallucinations, and possible loss of consciousness.

Chronic Effects

There is evidence of potentially irreversable damage to the peripheral nervous system, particularly arms and legs.

Other Health Effects Information

This product contains isomers of heptane which have fewer health effects than products containing hexanes; although the same precautions to minimise inhalation and skin exposures should be observed.

Toxicological Information

Heptane: LC₅₀: 103 g/m³ (4H, inhalation, rat)

Heptane: 1000 ppm (inhalation, human)

12. ECOLOGICAL INFORMATION

Ecotoxicity

Aquatic Toxicity

Fish Toxicity (rainbow trout, goldfish, bluegill):

Isoheptane: LC₅₀ 0.961 mg/L/96 h, n-heptane: LC₅₀ 375 mg/L/96 h

Daphnia Magna EC₅₀ (24 hr):

Isoheptane: EC₅₀ 2.212 mg/L/48 h, n-Heptane: LC₅₀ = 2500 mg/L/96 h

Blue-green algae (Toxicity threshold 7-8 days):

No data available

Green algae (Toxicity threshold 7-8 days):

Isoheptane: EC₅₀ 1.526 mg/L/96 h

Persistence/ degradability

Readily biodegradable. Oxidises rapidly by photo-chemical reactions in air. Does not bioaccumulate significantly.

Mobility

This product is highly volatile and will rapidly evaporate to the air if released into the water

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Empty packaging should be taken for recycling, recovery or disposal through a suitably qualified or licensed contractor. Care should be taken to ensure compliance with national and local authorities. Packaging may still contain fumes and vapours that are flammable and harmful. Ensure that empty packaging is allowed to dry.

Special Precautions for Landfill or Incineration

This product is NOT suitable for disposal by either landfill or via municipal sewers, drains, natural streams or rivers. This product must be disposed as chemical waste in accordance with the local authority.

14. TRANSPORT INFORMATION

Road and Rail Transport		Marine Transport		Air Transport	
UN No.	1206	UN No.	1206	UN No.	1206
Proper Shipping Name	HEPTANES	Proper Shipping Name	HEPTANES	Proper Shipping Name	HEPTANES
DG Class	3	DG Class	3	DG Class	3

Sub. Risk	None	Sub. Risk	None	Sub. Risk	None
Pack Group	II	Pack Group	II	Pack Group	II
Hazchem	3YE	Hazchem	3YE	Hazchem	3YE

Dangerous Goods Segregation

This product is classed as Dangerous Goods Class 3, packing group II. Please consult the Australian Dangerous Goods Code for Transport by Road and Rail for information.

15. REGULATORY INFORMATION

Country/ Region: Australia

Inventory: AICS

Status: Listed

Poisons Schedule: 5

16. OTHER INFORMATION

Reasons for Issue: 5 year update. GHS classification and hazard statements updated

Abbreviations:

AICS: Australian Inventory of Chemical Substances

CAS Number: Chemical Abstracts Number

IARC: International Agency for Research on Cancer

NOHSC: National Occupational Health and Safety Council

References:

- Supplier Safety Data Sheets
- <http://chem.sis.nlm.nih.gov/chemidplus> (December 20)
- <https://www.nicnas.gov.au/> (December 20)
- OECD eChemPortal Substance Search
<https://www.echemportal.org/echemportal/participant/page.action?pageID=9>

The information sourced for the preparation of this document was correct and complete at the time of writing to the best of the writer's knowledge. The document represents the commitment to the company's responsibilities surrounding the supply of this product, undertaken in good faith. This document should be taken as a safety guide for the product and its recommended uses, but is in no way an absolute authority. Please consult the relevant legislation and regulations governing the use and storage of this type of product. For further information, please contact Australasian Solvents and Chemicals Company Pty. Ltd.