

**FOR FURTHER INFORMATION, PLEASE REFER TO THE SDS FOLLOWING**

Issue: December 2022

**PRODUCT:** Brake Cleaner  
**Other Names:** Mixed heptanes  
**Uses:** Industrial solvent: cleaning and degreasing  
**Signal Word:** DANGER

<b>UN No.</b>	1206
<b>Dangerous Goods Class</b>	3
<b>Subsidiary Risk</b>	None
<b>Pack Group</b>	II
<b>Hazchem</b>	3YE

<b>Hazardous Nature:</b>	This product is classified as hazardous under GHS (7th revised edition) in accordance with the model WHS Regulations
<b>Hazardous Classification:</b>	Flammable liquids, Cat. 2; Skin irritation, Cat. 2; Specific target organ toxicity - single exposure, Cat. 3 (narcotic effects); Aspiration hazard, Cat. 1; Acute aquatic hazard, Cat. 1; Chronic aquatic hazard, Cat. 1
<b>Poisons Schedule:</b>	5
<b>AU Exposure Standards:</b>	TWA: Heptane (n-Heptane): 1640 mg/m <sup>3</sup> (400 ppm); STEL: Heptane (n-Heptane): 2050 mg/m <sup>3</sup> (500 ppm)

**Physical Characteristics (Typical)** **Section 9 of SDS**

Appearance	Clear, colourless liquid
Boiling Point/ Range (°C):	85-100
Flash Point (°C):	-17
Specific Gravity/ Density (g/mL):	0.69
Chemical Stability:	Stable at room temperature and pressure

**Product Ingredients** **Section 3 of SDS**

Heptane and Isomers	Various	>80%
Isohexane	107-83-5	< 15%

For further ingredients information, please refer to the full SDS.

**GHS Pictograms** **Section 2 of SDS**



For further risk and safety information, please refer to the full SDS.

**DEFINITIONS**

<b>Dangerous Goods</b>	Products that are classified as Dangerous for Storage and Transport: these products are allocated a UN No., with accompanying Class, Pack Group, and Sub. Risk, if required. Products that do not have a specific description under the code, but have low flash points, or such, must be classified under their most significant risk, eg. Flammable Goods N.O.S. (Not otherwise specified), UN 1993. Products not classed as Dangerous Goods are designated as not regulated for transport or N/R (non-regulated).
<b>Hazardous Substance</b>	Products are considered to be Hazardous if they pose an intrinsic risk to human or environmental health, such as mutagens (able to change DNA), teratogens (able to result in birth defects), carcinogens (able to generate cell abnormalities), etc. Materials classified with risks such as potential for misuse, like flammability, or explosions when heated and ignited, may be both classed as Dangerous Goods and Hazardous Substances.

**1. IDENTIFICATION**

<b>Product Name:</b>	<b>Brake Cleaner</b>
<b>Other Names:</b>	Mixed heptanes
<b>Chemical Family:</b>	Aliphatic, cycloparaffinic hydrocarbon
<b>Recommended Use:</b>	Industrial solvent: cleaning and degreasing
<b>Supplier:</b>	Concept Kleen
<b>ABN:</b>	90 986 349 121
<b>Street Address:</b>	2/12 Nicole close, Bayswater North VIC 3153
<b>Telephone:</b>	1800 009 555
<b>Fax:</b>	NA
<b>Emergency phone:</b>	<b>CHEMCALL: 1800 127 406</b>
<b>All other inquiries</b>	

**2. HAZARDS IDENTIFICATION****Hazardous Nature**

This product is classified as hazardous under GHS (7th revised edition) in accordance with the model WHS Regulations

**Hazardous Classification**

Flammable liquids, Cat. 2; Skin irritation, Cat. 2; Specific target organ toxicity - single exposure, Cat. 3 (narcotic effects); Aspiration hazard, Cat. 1; Acute aquatic hazard, Cat. 1; Chronic aquatic hazard, Cat. 1

**GHS Pictograms**

**Signal Word** DANGER

**Dangerous Goods Classification:** 3

**Hazard Statements**

- H225: Highly flammable liquid and vapour
- H304: May be fatal if swallowed and enters airways
- H315: Causes skin irritation
- H335: May cause respiratory irritation
- H373: May cause damage to organs through prolonged or repeated exposure
- H410: Very toxic to aquatic life with long lasting effects

**Precautionary Statements**

- P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233: Keep container tightly closed.
- P240: Ground and bond container and receiving equipment.
- P241: Use explosion-proof electrical/ventilating/lighting/.../equipment.
- P242: Use non-sparking tools.
- P243: Take action to prevent static discharges
- P261: Avoid breathing mist/vapours/spray.
- P264: Wash hands thoroughly after handling.
- P273: Avoid release to the environment.
- P280: Wear protective gloves/clothing and eye/face protection.

**Response Statements**

- P301+ P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor.
- P331: Do NOT induce vomiting.

P303 + P361 + P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower

P332 + P313: If skin irritation occurs: Get medical advice/attention.

P363: Wash contaminated clothing before reuse.

P304 + P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P312: Call a POISON CENTER/ doctor/.../if you feel unwell.

P370 + P378: In case of fire: Use dry chemical, carbon dioxide or alcohol resistant foam to extinguish

P391: Collect spillage.

#### Storage Statements

P403+P233: Store in a well ventilated place. Keep container tightly closed.

P235: Keep cool..

P405: Store locked up.

#### Disposal Statements

P501: Dispose of contents/container in accordance with local/regional/national/international regulation.

### 3. COMPOSITION: Information on Ingredients

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

### 4. FIRST AID MEASURES

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

#### Inhalation

Move the victim to fresh air and keep at rest in a position comfortable for breathing. Begin artificial respiration if breathing has stopped. Seek medical attention

#### Skin/Hair Contact

If skin contact occurs, remove contaminated clothing and wash skin with soap and water. If skin irritation occurs, get medical advice. Launder contaminated clothing before re-use.

#### Eye Contact

Hold eyelids apart and flush the eye with running water for at least 15 minutes. Seek medical attention if irritation persists

#### Ingestion

If swallowed, do NOT induce vomiting. Obtain immediate medical advice. If vomiting occurs spontaneously, keep head below hips to prevent aspiration into lungs.

#### Most Important Symptoms and Effects

Irritating to skin and eyes. May cause drowsiness or dizziness. If ingested, material may be aspirated into the lungs and cause chemical pneumonitis.

#### 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.

#### Specific Hazards Arising from the Material

Static electricity may cause fire or explosion. Contains low boiling substances: closed containers may rupture due to pressure buildup under fire conditions. May emit clouds of acrid smoke.

**Hazards from combustion products**

Carbon dioxide and carbon monoxide

**Fire-fighting Precautions**

Evacuate area. Fight fire from a safe distance with adequate cover. Cool fire exposed containers with water spray from a protected location.

**Special Protective Equipment**

Full protective clothing and self-contained breathing apparatus

**Hazchem Code:** 3YE

**6. ACCIDENTAL RELEASE MEASURES****Emergency Procedures**

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

**Personal Precautions**

Eliminate any ignition sources. Avoid any personal contact with spilled material, including inhalation of vapours.

**Environmental Precautions**

Prevent spillage from entering drains or water courses.

**Methods and Materials for Containment**

Contain spillage and collect with non-combustible absorbent material (e.g. sand, earth, diatomaceous earth, vermiculite) and place into container for disposal.

**Major land spill**

- Eliminate sources of ignition
- Warn occupants of downwind areas of possible fire/explosion or toxicity hazard
- Prevent product 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 ground water
- Contain any spilled liquid with sand or earth
- Recover liquid spills by pumping – use explosion proof pump or hand pump – or with a suitable absorbent material
- Recover solid spills by mechanical collection methods; cover and prevent dusts or particles from spreading – consider wetting the product down, without diluting it – and vacuum or sweep up
- 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/explosion or toxicity 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.

**Storage compatibility**

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

See also: Section 10 – Stability and Reactivity for further information on incompatible materials

## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

### Exposure Standards

**Australia:** Workplace Exposure Standards for Airborne Contaminants, 16 December 2019

TWA: Heptane (n-Heptane): 1640 mg/m<sup>3</sup> (400 ppm)

STEL: Heptane (n-Heptane): 2050 mg/m<sup>3</sup> (500 ppm)

Advisory information None

**New Zealand:** Workplace Exposure Standards and Biological Exposure Indices, Edition 13: April 2022

TWA: Heptane (n-Heptane): 1640 mg/m<sup>3</sup> (400 ppm);

STEL: Heptane (n-Heptane): STEL 2050 mg/m<sup>3</sup> (500 ppm)

Advisory information Heptane: oto

### International:

ACGIH: Isohexane TWA 500ppm; Heptane TWA 400 ppm, STEL 500 ppm

The time weighted average (TWA) exposure standard is the highest allowable average airborne concentration of a particular substance when calculated over an eight-hour working day.

The short-term exposure limit (STEL) exposure standard is the maximum allowable exposure concentration for a substance during any 15-minute period in the working day.

Products may be identified as carcinogens, respiratory or skin sensitisers, or easily absorbed to the skin according to the below notations.

**Carc 1A:** Known to have carcinogenic potential for humans

**Sk/Skin:** Substance is considered to have potential for significant skin absorption, risking overexposure

**Sen:** Substance is identified as having potential to cause respiratory and/or dermal sensitisation – an allergic reaction or hypersensitivity affecting skin (dsen) or respiratory system (rsen). High exposure may hasten the onset of the allergy, but once developed in an individual, very low exposures can provoke a significant reaction.

**Carc. 1B:** Presumed to have carcinogenic potential for humans

**Oto:** Substance can cause hearing loss. This may be in conjunction with noise exposure or without concurrent noise exposure. Risk may be via inhalation or skin absorption.

**Carc. 2:** Suspected human carcinogen

**6.7A/Carcinogen Category 1:** Known or presumed human carcinogen

**6.7B/Carcinogen Category 2:** Suspected human carcinogen

### Biological Limit Values

None identified

### Engineering Controls

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 or full-face filter mask to protect from overexposure by inhalation.

**Recommended filter type:** Type A filter (organic vapour)

Refer to AS/NZS 1715: *Selection, Use and Maintenance of Respiratory Equipment* and AS/NZS 1716: *Respiratory Protective Devices* for further details on the use of respiratory protective equipment.

**Eye protection:** Wear safety glasses or goggles

**Skin/ body protection:** Wear long sleeved, chemical resistant protective clothing. Wear chemical resistant gloves (butyl rubber is recommended).

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Property	Unit of measurement	Typical value
Appearance	-	Clear, colourless liquid
Odour	-	Gasoline like
Odour threshold	ppm	Not available
Melting Point/Freezing Point	°C	Not available
Boiling Point/ Range	°C	85-100
Flash Point	°C	-17
Flammability	-	Highly flammable

Property	Unit of measurement	Typical value
Explosive Limits (LEL – UEL)	%	1.0 – 8.0
Vapour Pressure	kPa	Not available
Vapour Density	kPa	Not available
Specific Gravity / Density	g/mL	0.69
Autoignition Temperature	°C	> 200
Decomposition Temperature	°C	Not available
pH	-	Not available
Kinematic Viscosity	cSt	Not applicable
Solubility with Water	% w/w	Not available
Other Solubility	% w/w	Not available
Partition Coefficient: n-octanol/water	-	Not available
Particle Characteristics	-	Not available
Percent Volatiles	%	100
Other Information	-	-

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

### Reactivity

No reactivity hazards identified

### Chemical Stability

Stable at room temperature and pressure

### Conditions to Avoid

Sources of heat and ignition, open flames.

### Incompatible materials

Oxidising agents, strong acids

### 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.

#### **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.

#### **Skin Contact**

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

#### **Eye Contact**

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

## **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**

**Acute Toxicity - Oral:** Not classified as acutely toxic by ingestion

LD<sub>50</sub>: Heptane: LC<sub>50</sub>: 103 g/m<sup>3</sup> (4H, inhalation, rat)

**Acute Toxicity – Dermal:** Not classified as acutely toxic by skin contact

LD<sub>50</sub>: No data available

**Acute Toxicity – Inhalation:** Not classified as acutely toxic by inhalation

LC<sub>50</sub>: heptane: 1000 ppm (inhalation, human)

**Skin Corrosion/Irritation:** Causes skin irritation

**Serious Eye damage/irritation:** Not classified

**Respiratory or Skin Sensitisation:** Not classified

**Germ cell mutagenicity:** Not classified

**Carcinogenicity:** Not classified

**Reproductive Toxicity:** Not classified

**Specific Target Organ Toxicity (STOT) – Single Exposure:** May cause drowsiness or dizziness

**Specific Target Organ Toxicity (STOT) – Repeated Exposure:** May cause damage to organs through prolonged or repeated exposure

**Aspiration Hazard:** May be fatal if swallowed and enters airways

## **12. ECOLOGICAL INFORMATION**

### **Ecotoxicity**

#### **Aquatic Toxicity**

Very toxic to aquatic life with long lasting effects

Fish toxicity: Isoheptane: LC<sub>50</sub> 0.961 mg/L/96 h, n-heptane: LC<sub>50</sub> 375 mg/L/96 h

Crustacean toxicity): Isoheptane: EC<sub>50</sub> 2.212 mg/L/48 h, n-Heptane: LC<sub>50</sub> = 2500 mg/L/96 h

Algae toxicity: Isoheptane: EC<sub>50</sub> 1.526 mg/L/96 h

#### **Terrestrial Ecotoxicity**

Not classified as hazardous to the terrestrial environment

#### **Persistence/Degradability**

Readily biodegradable. Oxidises rapidly by photo-chemical reactions in air.

#### **Bioaccumulative Potential**

Does not bioaccumulate significantly.

#### **Mobility in Soil**

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

#### **Other adverse effects**

No additional adverse effects identified

## **13. DISPOSAL CONSIDERATIONS**

### **Disposal Methods**

Disposal of hazardous waste must be carried out in compliance with all applicable regional and national regulations. This product is NOT suitable for disposal by domestic landfill or via municipal sewers, drains, natural streams or rivers. It must be disposed as chemical waste in accordance with the local authority.

Care should be taken to ensure compliance with national and local authorities.

Refer to Section 8 of this SDS for precautions before carrying out disposal or recycling activities.

#### **Product Disposal**

Dispose of product as chemical waste via a licenced service provider.

#### **Packaging Disposal**

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 harmful residue and/or fumes and vapours that are flammable. Ensure that empty packaging is allowed to dry

**14. TRANSPORT INFORMATION**

Road and Rail Transport		Marine Transport		Air Transport	
(ADG)		(IMDG)		(IATA)	
UN No.	1206	UN No.	1206	UN No.	1206
Proper Shipping Name	HEPTANSE	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
Packing Group	II	Packing Group	II	Packing Group	II

**Dangerous Goods Segregation**

This product is classified as Dangerous Goods Class 3, packing group II.

Please consult the *Australian Dangerous Goods Code for Transport by Road and Rail* (ADG Code Edition 7.7, 2020) for further information.



**Environmental Hazards**

**Marine Pollutant:** Yes

**Special Precautions**

-

**Additional Information**

-

**Hazchem Code:**

**Marpol 73/78 Convention – Annex II**

**Product Name:** Not determined

**Ship Type:** -

**Pollution:** -

**15. REGULATORY INFORMATION**

**Country/ Region:** Australia

**Inventory:** Australian Inventory of Industrial Chemicals (Inventory)

**Status:** Listed in AICIS Inventory

**Poisons Standard:**

If this material is made available to the public it must be packaged and labelled in accordance with the current Poisons Standard (SUSMP)

**Schedule:** 5

**Agricultural Compounds and Veterinary Medicines Act 1997 (ACVM)**

Not applicable

**International Agreements**

**Montreal Protocol on Substances that Deplete the Ozone Layer:** Not applicable

**Stockholm Convention:** Not applicable

**Rotterdam Convention:** Not applicable

**Basel Convention:** Not applicable

**International Inventory Status:**

**New Zealand Inventory of Chemicals (NZIoC):** All components are listed in NZIoC

**International Inventories:**

Not determined

## 16. OTHER INFORMATION

**SDS Version Number:** 2.0

**Reasons for Issue:** Update to GHS v7

**Replaces SDS dated:** 29 December 2020

**New SDS issue date:** 19 December 2022

**Abbreviations:**

ACGIH: American Conference of Governmental Industrial Hygienists

AICIS: Australian Industrial Chemicals Introduction Scheme

AICS: Australian Inventory of Chemical Substances

AS/NZS: Standards Australia & Standards New Zealand

BCF: Bioconcentration Factor

BEI: Biological Exposure Index

CAS: Chemical Abstracts Service

CCID: Chemical Classification and Information Database

EC<sub>50</sub>: Effective Concentration, 50 per cent

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

GHS 7: Globally Harmonized System of Classification and Labelling of Chemicals Revision 7, as implemented by the *Model Work Health and Safety Regulations (Hazardous Chemicals) Amendment 2020*

IARC: International Agency for Research on Cancer

IC<sub>50</sub>: Half Maximal Inhibitory Concentration

LC<sub>50</sub>: Lethal Concentration, 50 per cent

LD<sub>50</sub>: Lethal Dose, 50 per cent

LEL: Lower Explosive Limit

LOAEL: Lowest-observed-adverse-effect level

N/R: Not Regulated

NOAEL: No-observed-adverse-effect-level

NOEC: No Observed Effect Concentration

OECD: Organisation for Economic Co-operation and Development

STEL: Short-Term-Exposure Limit

SUSMP: Standard for the Uniform Scheduling of Medicines and Poisons (Poisons Standard)

TLV: Threshold Limit Value

TWA: Time-Weighted Average

WHS (model WHS Regulations): model Work Health and Safety Regulations

WES: Workplace Exposure Standard

UEL: Upper Explosive Limit

**References:**

- Supplier Safety Data Sheets
- AICIS Chemical Information <https://www.industrialchemicals.gov.au/chemical-information>
- Safe Work Australia: Hazardous Chemical Information System (HCIS) <http://hcis.safeworkaustralia.gov.au/HazardousChemical>
- Workplace Exposure Standards for Airborne Contaminants (16 December 2019), published by Safe Work Australia <https://www.safeworkaustralia.gov.au/doc/workplace-exposure-standards-airborne-contaminants>
- US NLM ChemIDPlus: <https://chem.nlm.nih.gov/chemidplus/>

- OECD eChemPortal Substance Search <https://www.echemportal.org/echemportal/>

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.