

# SAFETY DATA SHEET

## BRAKE CLEANER



Version 1.0  
Revision Date: 10.11.2017

Date of last issue: -  
Date of first issue: 10.11.2016

### SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : BRAKE CLEANER

Product code : E003

#### Manufacturer or supplier's details

Company : Tranz Brite Limited

Address : 23 Alfred Street  
Onehunga 1643

Telephone : +64 9 636 4632

Emergency telephone number : 0800 764 766

E-mail address : [office@tranzbrite.co.nz](mailto:office@tranzbrite.co.nz)

Telefax :

#### Recommended use of the chemical and restrictions on use

Recommended use : Cleaning agent

### SECTION 2. HAZARDS IDENTIFICATION

#### GHS Classification

Flammable liquids : Category 2

Skin corrosion/irritation : Category 2

Serious eye damage/eye irritation : Category 2A

Specific target organ toxicity - single exposure : Category 3

Aspiration hazard : Category 1

#### GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H225 Highly flammable liquid and vapour.  
H304 May be fatal if swallowed and enters airways.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.

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H336 May cause drowsiness or dizziness.

### Precautionary statements

- Prevention:**  
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
P233 Keep container tightly closed.  
P240 Ground/bond container and receiving equipment.  
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.  
P242 Use only non-sparking tools.  
P243 Take precautionary measures against static discharge.  
P261 Avoid breathing spray.  
P271 Use only outdoors or in a well-ventilated area.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
- Response:**  
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.  
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.  
P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P331 Do NOT induce vomiting.  
P332 + P313 If skin irritation occurs: Get medical advice/ attention.  
P337 + P313 If eye irritation persists: Get medical advice/ attention.  
P362 Take off contaminated clothing and wash before reuse.  
P370 + P378 In case of fire: Use dry powder or dry sand for extinction.
- Storage:**  
P403 + P235 Store in a well-ventilated place. Keep cool.  
P405 Store locked up.
- Disposal:**  
P501 Dispose of contents/ container to an approved waste disposal plant.

### Other hazards which do not result in classification

Static-accumulating flammable liquid.  
Vapours may form explosive mixture with air.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

### Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
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Heptane	142-82-5	$\geq 60$ - $\leq 100$
Cyclohexane	110-82-7	$\geq 10$ - $< 30$
Propan-2-ol	67-63-0	$\geq 10$ - $< 30$
Methylcyclohexane	108-87-2	$\geq 10$ - $< 30$
n-Hexane	110-54-3	$< 10$

### SECTION 4. FIRST AID MEASURES

- General advice : In the case of accident or if you feel unwell, seek medical advice immediately.  
When symptoms persist or in all cases of doubt seek medical advice.
- If inhaled : If inhaled, remove to fresh air.  
Get medical attention.
- In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.  
Get medical attention.  
Wash clothing before reuse.  
Thoroughly clean shoes before reuse.
- In case of eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.  
If easy to do, remove contact lens, if worn.  
Get medical attention.
- If swallowed : If swallowed, DO NOT induce vomiting.  
If vomiting occurs have person lean forward.  
Call a physician or poison control centre immediately.  
Rinse mouth thoroughly with water.  
Never give anything by mouth to an unconscious person.
- Most important symptoms and effects, both acute and delayed : May be fatal if swallowed and enters airways.  
Causes skin irritation.  
Causes serious eye irritation.  
May cause drowsiness or dizziness.
- Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists.
- Notes to physician : Treat symptomatically and supportively.

### SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Dry powder  
Dry sand
- Unsuitable extinguishing media : Carbon dioxide (CO<sub>2</sub>)  
Dry chemical  
Foam  
Water

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- Specific hazards during fire-fighting : Warning: water promotes the spread of fire.  
Flash back possible over considerable distance.  
Vapours may form explosive mixtures with air.  
Exposure to combustion products may be a hazard to health.
- Hazardous combustion products : Carbon oxides
- Specific extinguishing methods : Fires involving this material should be treated as combustible metal fires.  
Extinguish using suitable media, or isolate and allow to burn out.  
Use water spray to cool unopened containers.  
Do not allow run-off from fire fighting to enter drains or water courses.  
Dispose of in accordance with local regulations.  
Remove undamaged containers from fire area if it is safe to do so.  
Evacuate area.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.  
Use personal protective equipment.
- Hazchem Code : 3YE

### SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Remove all sources of ignition.  
Ventilate the area.  
Use personal protective equipment.  
Follow safe handling advice and personal protective equipment recommendations.
- Environmental precautions : Discharge into the environment must be avoided.  
Prevent further leakage or spillage if safe to do so.  
Prevent spreading over a wide area (e.g. by containment or oil barriers).  
Retain and dispose of contaminated wash water.  
Local authorities should be advised if significant spillages cannot be contained.
- Methods and materials for containment and cleaning up : Non-sparking tools should be used.  
Soak up with inert absorbent material.  
Suppress (knock down) gases/vapours/mists with a water spray jet.  
For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container.  
Clean up remaining materials from spill with suitable absorbent.  
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.  
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

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### SECTION 7. HANDLING AND STORAGE

- Technical measures : Ensure all equipment is electrically grounded before beginning transfer operations.  
This material can accumulate static charge due to its inherent physical properties and can therefore cause an electrical ignition source to vapors. In order to prevent a fire hazard, as bonding and grounding may be insufficient to remove static electricity, it is necessary to provide an inert gas purge before beginning transfer operations.  
Restrict flow velocity in order to reduce the accumulation of static electricity.  
  
Ground and bond container and receiving equipment.
- Local/Total ventilation : Use with local exhaust ventilation.  
Use only in an area equipped with explosion proof exhaust ventilation.
- Advice on safe handling : Do not get on skin or clothing.  
Do not breathe vapours or spray mist.  
Do not swallow.  
Do not get in eyes.  
Handle in accordance with good industrial hygiene and safety practice.  
Non-sparking tools should be used.  
Keep container tightly closed.  
Keep away from heat and sources of ignition.  
Take precautionary measures against static discharges.  
Take care to prevent spills, waste and minimize release to the environment.
- Hygiene measures : Ensure that eye flushing systems and safety showers are located close to the working place.  
When using do not eat, drink or smoke.  
Wash contaminated clothing before re-use.
- Conditions for safe storage : Keep in properly labelled containers.  
Store locked up.  
Keep tightly closed.  
Keep in a cool, well-ventilated place.  
Store in accordance with the particular national regulations.  
Keep away from heat and sources of ignition.
- Materials to avoid : Do not store with the following product types:  
Self-reactive substances and mixtures  
Organic peroxides  
Oxidizing agents  
Flammable gases  
Pyrophoric liquids  
Pyrophoric solids  
Self-heating substances and mixtures  
Poisonous gases  
Explosives

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Storage period : 12 Months

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Heptane	142-82-5	WES-TWA	400 ppm 1,640 mg/m <sup>3</sup>	NZ OEL
		WES-STEL	500 ppm 2,050 mg/m <sup>3</sup>	NZ OEL
		TWA	400 ppm	ACGIH
		STEL	500 ppm	ACGIH
Cyclohexane	110-82-7	WES-TWA	100 ppm 350 mg/m <sup>3</sup>	NZ OEL
		WES-STEL	300 ppm 1,050 mg/m <sup>3</sup>	NZ OEL
		TWA	100 ppm	ACGIH
Propan-2-ol	67-63-0	WES-TWA	400 ppm 983 mg/m <sup>3</sup>	NZ OEL
		WES-STEL	500 ppm 1,230 mg/m <sup>3</sup>	NZ OEL
		TWA	200 ppm	ACGIH
		STEL	400 ppm	ACGIH
Methylcyclohexane	108-87-2	WES-TWA	400 ppm 1,610 mg/m <sup>3</sup>	NZ OEL
		TWA	400 ppm	ACGIH
n-Hexane	110-54-3	WES-TWA	20 ppm 72 mg/m <sup>3</sup>	NZ OEL
Further information: Exposure can also be estimated by biological monitoring				
		TWA	50 ppm	ACGIH

#### Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
n-Hexane	110-54-3	2,5-hexanedi-one	Urine	End of shift	5 mg/l	NZ BEI
		2,5-Hexanedi-one	Urine	End of shift at end of work-week	0.4 mg/l	ACGIH BEI
Propan-2-ol	67-63-0	Acetone	Urine	End of shift at end of work-week	40 mg/l	ACGIH BEI

Engineering measures : Minimize workplace exposure concentrations.

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Use only in an area equipped with explosion proof exhaust ventilation.

Use with local exhaust ventilation.

### Personal protective equipment

Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

Filter type : Organic vapour type

### Hand protection

Material : Nitrile rubber  
Break through time : 60 min  
Glove thickness : 0.5 mm

Remarks : Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.

Eye protection : Wear the following personal protective equipment:  
Safety goggles

Skin and body protection : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.  
Wear the following personal protective equipment:  
Flame retardant antistatic protective clothing.  
Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid  
Colour : clear  
Odour : solvent-like  
Odour Threshold : No data available  
pH : No data available  
Melting point/freezing point : No data available  
Initial boiling point and boiling range : 78 - 100 °C  
Flash point : -15 °C

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Evaporation rate	: No data available
Flammability (solid, gas)	: Flammable
Flammability (liquids)	: Static-accumulating flammable liquid.
Self-ignition	: 280 °C
Upper explosion limit	: 6.0 %(V)
Lower explosion limit	: 1.0 %(V)
Vapour pressure	: > 30 hPa
Relative vapour density	: 4.8
Relative density	: 0.7 (20 °C)
Density	: 0.72 g/cm3
Solubility(ies)	
Water solubility	: insoluble
Partition coefficient: n-octanol/water	: Not applicable
Auto-ignition temperature	: > 200 °C
Decomposition temperature	: No data available
Viscosity	
Viscosity, dynamic	: No data available
Viscosity, kinematic	: No data available
Explosive properties	: Not explosive
Oxidizing properties	: The substance or mixture is not classified as oxidizing.
Particle size	: Not applicable

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### SECTION 10. STABILITY AND REACTIVITY

Reactivity	: Not classified as a reactivity hazard.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: Highly flammable liquid and vapour. Vapours may form explosive mixture with air. Can react with strong oxidizing agents.
Conditions to avoid	: Handling operations that can promote accumulation of static charges. Heat, flames and sparks.



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Incompatible materials : Oxidizing agents  
Water

Hazardous decomposition products : No hazardous decomposition products are known.

### SECTION 11. TOXICOLOGICAL INFORMATION

Exposure routes : Inhalation  
Skin contact  
Ingestion  
Eye contact

#### Acute toxicity

Not classified based on available information.

#### Components:

##### Heptane:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg  
Method: OECD Test Guideline 401  
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : LC50 (Rat): > 29.29 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour  
Method: OECD Test Guideline 403  
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg  
Method: OECD Test Guideline 402  
Assessment: The substance or mixture has no acute dermal toxicity

##### Cyclohexane:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 32.88 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour  
Method: OECD Test Guideline 403  
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg  
Assessment: The substance or mixture has no acute dermal toxicity

##### Propan-2-ol:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): 72.6 mg/l

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Exposure time: 4 h  
Test atmosphere: vapour

Acute dermal toxicity : LD50 (Rat): > 5,000 mg/kg

### **Methylcyclohexane:**

Acute oral toxicity : LD50 (Rabbit): 4,000 - 4,500 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 26.3 mg/l  
Exposure time: 1 h  
Test atmosphere: vapour  
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg  
Assessment: The substance or mixture has no acute dermal toxicity  
Remarks: Based on data from similar materials

### **n-Hexane:**

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg  
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): > 31.86 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour  
Method: OECD Test Guideline 403  
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg

### **Skin corrosion/irritation**

Causes skin irritation.

### **Components:**

#### **Heptane:**

Species: Rabbit  
Method: OECD Test Guideline 404  
Result: Skin irritation

#### **Cyclohexane:**

Result: Skin irritation

#### **Propan-2-ol:**

Species: Rabbit  
Result: No skin irritation

#### **Methylcyclohexane:**

Result: Skin irritation  
Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI

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### **n-Hexane:**

Species: Rabbit  
Result: Skin irritation

### **Serious eye damage/eye irritation**

Causes serious eye irritation.

### **Components:**

#### **Heptane:**

Species: Rabbit  
Result: No eye irritation  
Method: OECD Test Guideline 405  
Remarks: Based on data from similar materials

#### **Propan-2-ol:**

Species: Rabbit  
Result: Irritation to eyes, reversing within 21 days

#### **Methylcyclohexane:**

Species: Rabbit  
Result: No eye irritation  
Method: Draize Test

#### **n-Hexane:**

Species: Rabbit  
Result: No eye irritation

### **Respiratory or skin sensitisation**

#### **Skin sensitisation**

Not classified based on available information.

#### **Respiratory sensitisation**

Not classified based on available information.

### **Components:**

#### **Heptane:**

Test Type: Maximisation Test  
Exposure routes: Skin contact  
Species: Guinea pig  
Method: OECD Test Guideline 406  
Result: negative

#### **Cyclohexane:**

Test Type: Buehler Test  
Exposure routes: Skin contact  
Species: Guinea pig  
Method: Directive 67/548/EEC, Annex V, B.6.  
Result: negative

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### Propan-2-ol:

Test Type: Buehler Test  
Exposure routes: Skin contact  
Species: Guinea pig  
Method: OECD Test Guideline 406  
Result: negative

### Methylcyclohexane:

Test Type: Buehler Test  
Exposure routes: Skin contact  
Species: Guinea pig  
Method: OECD Test Guideline 406  
Result: negative  
Remarks: Based on data from similar materials

### n-Hexane:

Test Type: Local lymph node assay (LLNA)  
Exposure routes: Skin contact  
Species: Mouse  
Result: negative

### Chronic toxicity

#### Germ cell mutagenicity

Not classified based on available information.

### Components:

#### Heptane:

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro  
Method: OECD Test Guideline 473  
Result: negative

#### Cyclohexane:

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test  
Method: OECD Test Guideline 476  
Result: negative

Genotoxicity in vivo : Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)  
Species: Rat  
Application Route: inhalation (vapour)  
Result: negative

#### Propan-2-ol:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)  
Species: Mouse

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Application Route: Intraperitoneal injection  
Result: negative

### **Methylcyclohexane:**

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro  
Method: OECD Test Guideline 473  
Result: negative

### **n-Hexane:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Result: negative

: Test Type: In vitro mammalian cell gene mutation test  
Result: positive

Genotoxicity in vivo : Test Type: Rodent dominant lethal test (germ cell) (in vivo)  
Species: Mouse  
Application Route: inhalation (vapour)  
Result: negative

Germ cell mutagenicity - Assessment : Weight of evidence does not support classification as a germ cell mutagen.

### **Carcinogenicity**

Not classified based on available information.

### **Components:**

#### **Propan-2-ol:**

Species: Rat  
Application Route: inhalation (vapour)  
Exposure time: 104 weeks  
Method: OECD Test Guideline 451  
Result: negative

#### **n-Hexane:**

Species: Rat  
Application Route: inhalation (vapour)  
Exposure time: 2 Years  
Method: OECD Test Guideline 451  
Result: negative

### **Reproductive toxicity**

Not classified based on available information.

### **Components:**

#### **Heptane:**

Effects on fertility : Test Type: Two-generation reproduction toxicity study  
Species: Rat  
Application Route: inhalation (vapour)  
Result: negative  
Remarks: Based on data from similar materials

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Effects on foetal development : Test Type: Embryo-foetal development  
Species: Mouse  
Application Route: inhalation (vapour)  
Result: negative  
Remarks: Based on data from similar materials

### **Cyclohexane:**

Effects on fertility : Test Type: Two-generation reproduction toxicity study  
Species: Rat  
Application Route: inhalation (vapour)  
Method: OECD Test Guideline 416  
Result: negative

Effects on foetal development : Test Type: Embryo-foetal development  
Species: Rat  
Application Route: inhalation (vapour)  
Result: negative

### **Propan-2-ol:**

Effects on fertility : Test Type: Two-generation reproduction toxicity study  
Species: Rat  
Application Route: Ingestion  
Result: negative

Effects on foetal development : Test Type: Embryo-foetal development  
Species: Rat  
Application Route: Ingestion  
Result: negative

### **Methylcyclohexane:**

Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test  
Species: Rat  
Application Route: Ingestion  
Method: OECD Test Guideline 422  
Result: negative

Effects on foetal development : Test Type: Embryo-foetal development  
Species: Rat  
Application Route: inhalation (vapour)  
Method: OECD Test Guideline 414  
Result: negative  
Remarks: Based on data from similar materials

### **n-Hexane:**

Reproductive toxicity - Assessment : Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments.

### **STOT - single exposure**

May cause drowsiness or dizziness.

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### **Components:**

#### **Heptane:**

Assessment: May cause drowsiness or dizziness.

#### **Cyclohexane:**

Assessment: May cause drowsiness or dizziness.

#### **Propan-2-ol:**

Assessment: May cause drowsiness or dizziness.

#### **Methylcyclohexane:**

Assessment: May cause drowsiness or dizziness.

#### **n-Hexane:**

Assessment: May cause drowsiness or dizziness.

### **STOT - repeated exposure**

Not classified based on available information.

### **Components:**

#### **n-Hexane:**

Target Organs: Central nervous system

Assessment: May cause damage to organs through prolonged or repeated exposure.

### **Repeated dose toxicity**

### **Components:**

#### **Heptane:**

Species: Rat

NOAEL: 12.47 mg/l

Application Route: inhalation (vapour)

Exposure time: 16 Weeks

#### **Propan-2-ol:**

Species: Rat

NOAEL: 5000 ppm

Application Route: inhalation (vapour)

Exposure time: 104 Weeks

Method: OECD Test Guideline 413

#### **Methylcyclohexane:**

Species: Rat

NOAEL: 1,600 mg/m<sup>3</sup>

Application Route: inhalation (vapour)

Exposure time: 12 Months

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### **n-Hexane:**

Species: Rat  
LOAEL: 10.6 mg/l  
Application Route: inhalation (vapour)  
Exposure time: 16 Weeks

### **Aspiration toxicity**

May be fatal if swallowed and enters airways.

### **Components:**

#### **Heptane:**

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

#### **Cyclohexane:**

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

#### **Methylcyclohexane:**

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

### **n-Hexane:**

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

### **Experience with human exposure**

### **Components:**

#### **n-Hexane:**

Inhalation : Target Organs: Central nervous system

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## SECTION 12. ECOLOGICAL INFORMATION

### **Ecotoxicity**

### **Components:**

#### **Heptane:**

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.2 mg/l  
Exposure time: 48 h

M-Factor (Acute aquatic toxicity) : 1

#### **Cyclohexane:**

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 4.53 mg/l  
Exposure time: 96 h



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- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.9 mg/l  
Exposure time: 48 h
- Toxicity to algae : NOEC (Pseudokirchneriella subcapitata (green algae)): 0.94 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201
- EC50 (Pseudokirchneriella subcapitata (green algae)): 9.32 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201
- M-Factor (Acute aquatic toxicity) : 1

### Ecotoxicology Assessment

- Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

### Propan-2-ol:

- Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 10,000 mg/l  
Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 10,000 mg/l  
Exposure time: 24 h
- Toxicity to microorganisms : EC50 (Pseudomonas putida): > 1,050 mg/l  
Exposure time: 16 h

### Methylcyclohexane:

- Toxicity to fish : LC50 (Oryzias latipes (Orange-red killifish)): 2.07 mg/l  
Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.326 mg/l  
Exposure time: 48 h
- Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 0.134 mg/l  
Exposure time: 72 h
- NOEC (Pseudokirchneriella subcapitata (green algae)): 0.0221 mg/l  
Exposure time: 72 h
- M-Factor (Acute aquatic toxicity) : 1
- M-Factor (Chronic aquatic toxicity) : 1
- Toxicity to microorganisms : IC50: 97 mg/l  
Exposure time: 24 h

### n-Hexane:

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- Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 2.5 mg/l  
Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 3.88 mg/l  
Exposure time: 48 h
- Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 55 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
Remarks: Based on data from similar materials

### Persistence and degradability

#### Components:

##### **Cyclohexane:**

- Biodegradability : Result: Readily biodegradable.  
Biodegradation: 77 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301F

##### **Propan-2-ol:**

- Biodegradability : Result: rapidly degradable

##### **Methylcyclohexane:**

- Biodegradability : Result: Not readily biodegradable.  
Biodegradation: 0 %  
Exposure time: 28 d  
Method: OECD Test Guideline 310

##### **n-Hexane:**

- Biodegradability : Result: Readily biodegradable.  
Biodegradation: 98 %  
Exposure time: 28 d  
Remarks: Based on data from similar materials

### Bioaccumulative potential

#### Components:

##### **Heptane:**

- Partition coefficient: n-octanol/water : log Pow: 4.5

##### **Cyclohexane:**

- Partition coefficient: n-octanol/water : log Pow: 3.44

##### **Propan-2-ol:**

- Partition coefficient: n-octanol/water : log Pow: 0.05

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### Methylcyclohexane:

Bioaccumulation : Species: Cyprinus carpio (Carp)  
Bioconcentration factor (BCF): 134 - 237

Partition coefficient: n-octanol/water : log Pow: 3.88

### n-Hexane:

Partition coefficient: n-octanol/water : log Pow: 4

### Mobility in soil

No data available

### Other adverse effects

No data available

## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal methods

Waste from residues : Dispose of in accordance with local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.  
Empty containers retain residue and can be dangerous.  
Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death.  
If not otherwise specified: Dispose of as unused product.

## SECTION 14. TRANSPORT INFORMATION

### International Regulations

#### UNRTDG

UN number : UN 1993  
Proper shipping name : FLAMMABLE LIQUID, N.O.S.  
(Heptane, Propan-2-ol)  
Class : 3  
Packing group : II  
Labels : 3

#### IATA-DGR

UN/ID No. : UN 1993  
Proper shipping name : Flammable liquid, n.o.s.  
(Heptane, Propan-2-ol)  
Class : 3  
Packing group : II  
Labels : Flammable Liquids  
Packing instruction (cargo aircraft) : 364  
Packing instruction (passenger aircraft) : 353

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### IMDG-Code

UN number : UN 1993  
Proper shipping name : FLAMMABLE LIQUID, N.O.S.  
(Heptane, Propan-2-ol, Cyclohexane)  
Class : 3  
Packing group : II  
Labels : 3  
EmS Code : F-E, S-E  
Marine pollutant : yes

### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

### National Regulations

#### NZS 5433

UN number : UN 1993  
Proper shipping name : FLAMMABLE LIQUID, N.O.S.  
(Heptane, Propan-2-ol)  
Class : 3  
Packing group : II  
Labels : 3  
Hazchem Code : 3YE

## SECTION 15. REGULATORY INFORMATION

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

#### HSNO Approval Number

HSR002528

#### HSNO Controls

Approved handler certificate required  
HSNO tracking required  
Refer to EPA user guide to the HSNO control regulations for further information.

### The components of this product are reported in the following inventories:

NZIoC : All ingredients listed or exempt.

## SECTION 16. OTHER INFORMATION

### Further information

Sources of key data used to compile the Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

Date format : dd.mm.yyyy

### Full text of other abbreviations

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ACGIH	: USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI	: ACGIH - Biological Exposure Indices (BEI)
NZ BEI	: New Zealand. Biological Exposure Indices
NZ OEL	: New Zealand. Workplace Exposure Standards for Atmospheric Contaminants
ACGIH / TWA	: 8-hour, time-weighted average
ACGIH / STEL	: Short-term exposure limit
NZ OEL / WES-TWA	: Workplace Exposure Standard - Time Weighted average
NZ OEL / WES-STEEL	: Workplace Exposure Standard - Short-Term Exposure Limit

AICS - Australian Inventory of Chemical Substances; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; CPR - Controlled Products Regulations; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

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