

## SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

Product name : KONSTRUKT® BRAKE & PARTS CLEANER NON CHLORINATED  
Product code : KONS-BRAKEC-400G  
Proper shipping name : AEROSOLS

### Manufacturer or supplier's details

Company : Synergy Business Systems Pty Ltd  
Address : Suite C, Level 1/225 Montague Road, West End, QLD 4101  
Telephone : 1300 161 872  
Emergency telephone number : 131 126  
Website : [www.synergysystems.com.au](http://www.synergysystems.com.au)  
Poisons Information Centre : 131 126

### Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses : Application is by spray atomisation from a hand held aerosol pack  
Restrictions on use : Use according to manufacturer's directions.

## SECTION 2 HAZARDS IDENTIFICATION

Classification : HAZARDOUS CHEMICAL. DANGEROUS GOODS.  
According to the WHS Regulations and the ADG Code.





Chemwatch Hazard Ratings : Flammability (3) = High  
Toxicity (1) = Low  
Body Contact (2) = Moderate  
Reactivity (1) = Low  
Chronic (0) = Minimum

Poisons Schedule : Not applicable

Classification (1) : Aerosols Category 1, Aspiration Hazard Category 1, Skin Corrosion/Irritation Category 2, Sensitisation (Skin) Category 1, Serious Eye Damage/Eye Irritation Category 2A, Sensitisation (Respiratory) Category 1, Specific Target Organ Toxicity - Single Exposure (Narcotic Effects) Category 3, Hazardous to the Aquatic Environment Long-Term Hazard Category 2

Legend : 1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI

Label elements

Hazard pictogram(s) :    

Signal word : **Danger**

<b>Hazard Statements</b>	: AUH044   Risk of explosion if heated under confinement. H222+H229   Extremely flammable aerosol. Pressurized container: may burst if heated. H304   May be fatal if swallowed and enters airways. H315   Causes skin irritation. H317   May cause an allergic skin reaction. H319   Causes serious eye irritation. H334   May cause allergy or asthma symptoms or breathing difficulties if inhaled. H336   May cause drowsiness or dizziness. H411   Toxic to aquatic life with long lasting effects.
<b>Precautionary Statements Prevention</b>	: P210   Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P211   Do not spray on an open flame or other ignition source. P251   Do not pierce or burn, even after use. P261   Avoid breathing mist/vapours/spray. P271   Use only outdoors or in a well-ventilated area. P280   Wear protective gloves, protective clothing, eye protection and face protection. P284   [In case of inadequate ventilation] wear respiratory protection. P273   Avoid release to the environment. P264   Wash all exposed external body areas thoroughly after handling. P272   Contaminated work clothing should not be allowed out of the workplace.
<b>Precautionary Statements Response</b>	: P301+P310   IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician/first aider. P331   Do NOT induce vomiting. P304+P340   IF INHALED: Remove person to fresh air and keep comfortable for breathing. P342+P311   If experiencing respiratory symptoms: Call a POISON CENTER/doctor/physician/first aider. P302+P352   IF ON SKIN: Wash with plenty of water and soap. P305+P351+P338   IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P312   Call a POISON CENTER/doctor/physician/first aider/if you feel unwell. P333+P313   If skin irritation or rash occurs: Get medical advice/attention. P337+P313   If eye irritation persists: Get medical advice/attention. P362+P364   Take off contaminated clothing and wash it before reuse. P391   Collect spillage.
<b>Precautionary Statements Storage</b>	: P405   Store locked up. P410+P412   Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. P403+P233   Store in a well-ventilated place. Keep container tightly closed.
<b>Precautionary Statements Disposal</b>	: P501   Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

### SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

**Substances** : See section below for composition of Mixtures

#### Mixtures

CAS No	%[weight]	Name
107-83-5	73-88	2-methylpentane
67-64-1	1-5	acetone

### SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS (CONTINUED)

CAS No	%[weight]	Name
64-17-5	1-8	ethanol
124-38-9	<6	carbon dioxide

### SECTION 4 FIRST AID MEASURES

#### Description of first aid measures

- Eye Contact** : If aerosols come in contact with the eyes:
- Immediately hold the eyelids apart and flush the eye continuously for at least 15 minutes with fresh running water.
  - Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
  - Transport to hospital or doctor without delay.
  - Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
- Skin Contact** : If solids or aerosol mists are deposited upon the skin:
- Flush skin and hair with running water (and soap if available).
  - Remove any adhering solids with industrial skin cleansing cream.
  - **DO NOT use solvents.**
  - Seek medical attention in the event of irritation.
- Inhalation** : If aerosols, fumes or combustion products are inhaled:
- Remove to fresh air.
  - Lay patient down. Keep warm and rested.
  - Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
  - If breathing is shallow or has stopped, ensure clear airway and apply resuscitation, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.
  - Transport to hospital, or doctor.
- Ingestion** :
- Avoid giving milk or oils.
  - Avoid giving alcohol.
  - Not considered a normal route of entry.
  - If vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus.

#### Indication of any immediate medical attention and special treatment needed

##### For acute or short term repeated exposures to petroleum distillates or related hydrocarbons:

- : Primary threat to life, from pure petroleum distillate ingestion and/or inhalation, is respiratory failure.
- : Patients should be quickly evaluated for signs of respiratory distress (e.g. cyanosis, tachypnoea, intercostal retraction, obtundation) and given oxygen. Patients with inadequate tidal volumes or poor arterial blood gases (pO<sub>2</sub> 50 mm Hg) should be intubated.
- : Arrhythmias complicate some hydrocarbon ingestion and/or inhalation and electrocardiographic evidence of myocardial injury has been reported; intravenous lines and cardiac monitors should be established in obviously symptomatic patients. The lungs excrete inhaled solvents, so that hyperventilation improves clearance.
- : A chest x-ray should be taken immediately after stabilisation of breathing and circulation to document aspiration and detect the presence of pneumothorax.

## SECTION 4 FIRST AID MEASURES (CONTINUED)

- : Epinephrine (adrenalin) is not recommended for treatment of bronchospasm because of potential myocardial sensitisation to catecholamines. Inhaled cardioselective bronchodilators (e.g. Alupent, Salbutamol) are the preferred agents, with aminophylline a second choice.
- : Lavage is indicated in patients who require decontamination; ensure use of cuffed endotracheal tube in adult patients. *[Ellenhorn and Barceloux: Medical Toxicology]*

**Treat symptomatically.**

## SECTION 5 FIREFIGHTING MEASURES

- Extinguishing media**
- : SMALL FIRE: Water spray, dry chemical or CO2
  - : LARGE FIRE: Water spray or fog.

### Special hazards arising from the substrate or mixture

- Fire Incompatibility**
- : Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

### Advice for firefighters

- Fire Fighting**
- : Alert Fire Brigade and tell them location and nature of hazard.
  - : May be violently or explosively reactive.
  - : Wear breathing apparatus plus protective gloves.
  - : Prevent, by any means available, spillage from entering drains or water course.
  - : If safe, switch off electrical equipment until vapour fire hazard removed.
  - : Use water delivered as a fine spray to control fire and cool adjacent area.
  - : DO NOT approach containers suspected to be hot.
  - : Cool fire exposed containers with water spray from a protected location.
  - : If safe to do so, remove containers from path of fire.
  - : Equipment should be thoroughly decontaminated after use.

- Fire/Explosion Hazard**
- : Liquid and vapour are highly flammable.
  - : Severe fire hazard when exposed to heat or flame.
  - : Vapour forms an explosive mixture with air.
  - : Severe explosion hazard, in the form of vapour, when exposed to flame or spark.
  - : Vapour may travel a considerable distance to source of ignition.
  - : Heating may cause expansion or decomposition with violent container rupture.
  - : Aerosol cans may explode on exposure to naked flames.
  - : Rupturing containers may rocket and scatter burning materials.
  - : Hazards may not be restricted to pressure effects.
  - : May emit acrid, poisonous or corrosive fumes.
  - : On combustion, may emit toxic fumes of carbon monoxide (CO).
  - : Combustion products include:
    - carbon dioxide (CO2)
    - other pyrolysis products typical of burning organic material.
  - : Contains low boiling substance: Closed containers may rupture due to pressure buildup under fire conditions.
  - : May emit clouds of acrid smoke

**HAZCHEM:** Not applicable

## SECTION 6 ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

See section 8

### Environmental precautions

See section 12

### Methods and material for containment and cleaning up

#### Minor Spills

- : Clean up all spills immediately.
- : Avoid breathing vapours and contact with skin and eyes.
- : Wear protective clothing, impervious gloves and safety glasses.
- : Shut off all possible sources of ignition and increase ventilation.
- : Wipe up.
- : If safe, damaged cans should be placed in a container outdoors, away from all ignition sources, until pressure has dissipated.
- : Undamaged cans should be gathered and stowed safely.

#### Major Spills

- : **DO NOT exert excessive pressure on valve; DO NOT attempt to operate damaged valve.**
- : Clear area of personnel and move upwind.
- : Alert Fire Brigade and tell them location and nature of hazard.
- : May be violently or explosively reactive.
- : Wear breathing apparatus plus protective gloves.
- : Prevent, by any means available, spillage from entering drains or water courses
- : No smoking, naked lights or ignition sources.
- : Increase ventilation.
- : Stop leak if safe to do so.
- : Water spray or fog may be used to disperse / absorb vapour.
- : Absorb or cover spill with sand, earth, inert materials or vermiculite.
- : If safe, damaged cans should be placed in a container outdoors, away from ignition sources, until pressure has dissipated.
- : Undamaged cans should be gathered and stowed safely.
- : Collect residues and seal in labelled drums for disposal.
- : Clear area of all unprotected personnel and move upwind.
- : Alert Emergency Authority and advise them of the location and nature of hazard.
- : May be violently or explosively reactive.
- : Wear full body clothing with breathing apparatus.
- : Prevent by any means available, spillage from entering drains and water-courses.
- : Consider evacuation.
- : Shut off all possible sources of ignition and increase ventilation.
- : No smoking or naked lights within area.
- : Use extreme caution to prevent violent reaction.
- : Stop leak only if safe to do so.
- : Water spray or fog may be used to disperse vapour.
- : **DO NOT enter confined space where gas may have collected.**
- : Keep area clear until gas has dispersed.
- : Remove leaking cylinders to a safe place if possible.
- : Release pressure under safe, controlled conditions by opening the valve.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

## SECTION 7 HANDLING AND STORAGE

### Precautions for safe handling Safe handling

- : The conductivity of this material may make it a static accumulator., A liquid is typically considered nonconductive if its conductivity is below 100 pS/m and is considered semi-conductive if its conductivity is below 10 000 pS/m., Whether a liquid is nonconductive or semi-conductive, the precautions are the same., A number of factors, for example liquid temperature, presence of contaminants, and anti-static additives can greatly influence the conductivity of a liquid.

## SECTION 7 HANDLING AND STORAGE (CONTINUED)

- : Avoid all personal contact, including inhalation.
- : Wear protective clothing when risk of exposure occurs.
- : Use in a well-ventilated area.
- : Prevent concentration in hollows and sumps.
- : **DO NOT enter confined spaces until atmosphere has been checked.**
- : Avoid smoking, naked lights or ignition sources.
- : Avoid contact with incompatible materials.
- : **When handling, DO NOT eat, drink or smoke.**
- : **DO NOT incinerate or puncture aerosol cans.**
- : **DO NOT spray directly on humans, exposed food or food utensils.**
- : Avoid physical damage to containers.
- : Always wash hands with soap and water after handling.
- : Work clothes should be laundered separately.
- : Use good occupational work practice.
- : Observe manufacturer's storage and handling recommendations contained within this SDS.
- : Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.
- : **DO NOT allow clothing wet with material to stay in contact with skin**

### Other information

- : Keep dry to avoid corrosion of cans. Corrosion may result in container perforation and internal pressure may eject contents of can
- : Store in original containers in approved flammable liquid storage area.
- : **DO NOT store in pits, depressions, basements or areas where vapours may be trapped.**
- : No smoking, naked lights, heat or ignition sources.
- : Keep containers securely sealed. Contents under pressure.
- : Store away from incompatible materials.
- : Store in a cool, dry, well ventilated area.
- : Avoid storage at temperatures higher than 40 deg C.
- : Store in an upright position.
- : Protect containers against physical damage.
- : Check regularly for spills and leaks.
- : Observe manufacturer's storage and handling recommendations contained within this SDS.








### Conditions for safe storage, including any incompatibilities

#### Suitable container

- : Aerosoliser.
- : Check that containers are clearly labelled.

#### Storage incompatibility

- : Avoid strong acids, bases.
- : Avoid reaction with oxidising agents

						
+	X	+	X	+	+	+

**X** - Must not be stored together

**0** - May be stored together with specific precautions

**+** - May be stored together

Note: Depending on other risk factors, compatibility assessment based on the table above may not be relevant to storage situations, particularly where large volumes of dangerous goods are stored and handled. Reference should be made to the Safety Data Sheets for each substance or article and risks assessed accordingly.

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

### Control parameters

#### Occupational Exposure Limits (OEL)

#### Ingredient Data

Source	Ingredient	Material name	TWA	STEL
Australia Exposure Standards	2-methylpentane	Hexane, other isomers	500 ppm / 1760 mg/m <sup>3</sup>	3500 mg/m <sup>3</sup> / 1000 ppm
	acetone	Acetone	500 ppm / 1185 mg/m <sup>3</sup>	2375 mg/m <sup>3</sup> / 1000 ppm
	ethanol	Ethyl alcohol	1000 ppm / 1880 mg/m <sup>3</sup>	Not Available
	carbon dioxide	Carbon dioxide in coal mines	12500 ppm / 22500 mg/m <sup>3</sup>	54000 mg/m <sup>3</sup> / 30000 ppm
	carbon dioxide	Carbon dioxide	5000 ppm / 9000 mg/m <sup>3</sup>	54000 mg/m <sup>3</sup> / 30000 ppm

#### Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
2-methylpentane	1,000 ppm	11000** ppm	66000*** ppm
acetone	Not Available	Not Available	Not Available
ethanol	Not Available	Not Available	15000* ppm

Ingredient	Original IDLH	Revised IDLH
2-methylpentane	Not Available	Not Available
acetone	2,500 ppm	Not Available
ethanol	3,300 ppm	Not Available
carbon dioxide	40,000 ppm	Not Available

### Exposure controls

#### Appropriate engineering controls

- : **CARE:** Use of a quantity of this material in confined space or poorly ventilated area, where rapid build up of concentrated atmosphere may occur, could require increased ventilation and/or protective gear
- : Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.
- : The basic types of engineering controls are:
  - Process controls which involve changing the way a job activity or process is done to reduce the risk.
  - Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use.
- : Employers may need to use multiple types of controls to prevent employee overexposure.
- : General exhaust is adequate under normal conditions. If risk of overexposure exists, wear SAA approved respirator. Correct fit is essential to obtain adequate protection.
- : Provide adequate ventilation in warehouse or closed storage areas.
- : Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.



## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION (CONTINUED)

Type of Containment	Speed:
aerosols, (released at low velocity into zone of active generation)	0.5-1 m/s
direct spray, spray painting in shallow booths, gas discharge (active generation into zone of rapid air motion)	1-2.5 m/s (200-500 f/min.)

Within each range the appropriate value depends on:

Lower end of the range	Upper end of the range
1: Room air currents minimal or favourable to capture	1: Disturbing room air currents
2: Contaminants of low toxicity or of nuisance value only	2: Contaminants of high toxicity
3: Intermittent, low production	3: High production, heavy use
4: Large hood or large air mass in motion	4: Small hood-local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min.) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

### Personal protection



### Eye and face protection

- : Safety glasses with side shields.
- : Chemical goggles.
- : Close fitting gas tight goggles
- : **DO NOT wear contact lenses**
- : Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]

### Skin/Hands/Feet Protection

- : **NOTE**
- : The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.
- : Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed.



## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION (CONTINUED)

- : No special equipment needed when handling small quantities.
- : **OTHERWISE**
- : For potentially moderate exposures:
- : Wear general protective gloves, eg. light weight rubber gloves.
- : For potentially heavy exposures:
- : Wear chemical protective gloves, eg. PVC. and safety footwear.

### Body/Other Protection

- : No special equipment needed when handling small quantities.
  - : **OTHERWISE**
  - : For potentially moderate exposures:
  - : Overalls.
  - : Skin cleansing cream.
  - : Eyewash unit.
  - : Do not spray on hot surfaces.
  - : The clothing worn by process operators insulated from earth may develop static charges far higher (up to 100 times) than the minimum ignition energies for various flammable gas-air mixtures. This holds true for a wide range of clothing materials including cotton.
  - : Avoid dangerous levels of charge by ensuring a low resistivity of the surface material worn outermost.
- BREThERICK: Handbook of Reactive Chemical Hazards.*

### Recommended materials Glove Selection Index

- : Glove selection is based on a modified presentation of the **"Forsberg Clothing Performance Index"**.
- : The effect(s) of the following substance(s) are taken into account in the computer-generated selection: Brake & Parts Cleaner Non Chlorinated

Material	CPI	Material	CPI
BUTYL	A	NITRILE	C
PE/EVAL/PE	A	NITRILE+PVC	C
BUTYL/NEOPRENE	C	PVA	C
CPE	C	PVC	C
HYPALON	C	PVDC/PE/PVDC	C
NAT+NEOPR+NITRILE	C	SARANEX-23	C
NATURAL RUBBER	C	SARANEX-23 2-PLY	C
NATURAL+NEOPRENE	C	TEFLON	C
NEOPRENE	C	VITON	C
NEOPRENE/NATURAL	C	VITON/NEOPRENE	C

\* CPI - Chemwatch Performance Index

**A:** Best Selection

**B:** Satisfactory; may degrade after 4 hours continuous immersion

**C:** Poor to Dangerous Choice for other than short term immersion

**NOTE:** As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. - Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION (CONTINUED)

- Respiratory protection** :
- Type AX Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent).
  - Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required. Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	Air-line*	AX-2	AX-PAPR-2^
up to 20 x ES	-	AX-3-	-
20+ x ES	-	Air-line**	-

\* - Continuous-flow; \*\* - Continuous-flow or positive pressure demand

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO<sub>2</sub>), G = Agricultural chemicals, K = Ammonia(NH<sub>3</sub>), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content.

The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.

Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used

Aerosols, in common with most vapours/ mists, should never be used in confined spaces without adequate ventilation. Aerosols, containing agents designed to enhance or mask smell, have triggered allergic reactions in predisposed individuals.

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

- Appearance** : Colourless flammable liquid with a solvent odour; not miscible with water.
- Physical state** : Liquid Relative density (Water = 1) 0.74-0.80
- Odour** : Not Available
- Partition coefficient n-octanol/ water** : Not Available
- Odour threshold** : Not Available
- Auto-ignition temperature (°C)** : Not Available
- pH (as supplied)** : Not Applicable
- Decomposition temperature (°C)** : Not Available
- Melting point / freezing point (°C)** : Not Available
- Viscosity (cSt)** : Not Available
- Initial boiling point and boiling range (°C)** : Not Available
- Molecular weight (g/mol)** : Not Applicable
- Flash point (°C)** : \*-23.33 (2-methylpentane)
- Taste** : Not Available

**SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES (CONTINUED)**

Evaporation rate	: Not Available
Explosive properties	: Not Available
Flammability	: HIGHLY FLAMMABLE.
Oxidising properties	: Not Available
Upper Explosive Limit (%)	: Not Available
Surface Tension (dyn/cm or mN/m)	: Not Available
Lower Explosive Limit (%)	: Not Available
Volatile Component (%vol)	: Not Available
Vapour pressure (kPa)	: Not Available
Gas group	: Not Available
Solubility in water	: Immiscible
pH as a solution (Not Available%)	: Not Applicable
Vapour density (Air = 1)	: Not Available
VOC g/L	: Not Available

**SECTION 10 STABILITY AND REACTIVITY**

Reactivity	: See section 7
Chemical stability	: Elevated temperatures. : Presence of open flame. : Product is considered stable. : Hazardous polymerisation will not occur. : Presence of heat source and direct sunlight
Possibility of hazardous reactions	: See section 7
Conditions to avoid	: See section 7
Incompatible materials	: See section 7
Hazardous decomposition products	: See section 5

**SECTION 11 TOXICOLOGICAL INFORMATION****Information on toxicological effects**

Inhaled	: Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by sleepiness, reduced alertness, loss of reflexes, lack of co-ordination, and vertigo. : Inhalation of aerosols (mists, fumes), generated by the material during the course of normal handling, may be damaging to the health of the individual. : There is some evidence to suggest that the material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. : Animal testing shows that the most common signs of inhalation overdose is inco-ordination and drowsiness. : Carbon dioxide is an odourless gas, which gives very poor warning of exposure. It can cause rapid loss of consciousness, and death from lack of oxygen at concentrations of 10% in air. : Carbon dioxide is the most powerful dilator of brain vessels known.
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## SECTION 11 TOXICOLOGICAL INFORMATION (CONTINUED)

- : Inhalation of toxic gases may cause:
  - Central Nervous System effects including depression, headache, confusion, dizziness, stupor, coma and seizures;
  - respiratory: acute lung swellings, shortness of breath, wheezing, rapid breathing, other symptoms and respiratory arrest;
  - heart: collapse, irregular heartbeats and cardiac arrest;
  - gastrointestinal: irritation, ulcers, nausea and vomiting (may be bloody), and abdominal pain.
- : Inhalation of high concentrations of gas/vapour causes lung irritation with coughing and nausea, central nervous depression with headache and dizziness, slowing of reflexes, fatigue and inco-ordination.
- : Central nervous system (CNS) depression may include general discomfort, symptoms of giddiness, headache, dizziness, nausea, anaesthetic effects, slowed reaction time, slurred speech and may progress to unconsciousness. Serious poisonings may result in respiratory depression and may be fatal.
- : Material is highly volatile and may quickly form a concentrated atmosphere in confined or unventilated areas. The vapour may displace and replace air in breathing zone, acting as a simple asphyxiant. This may happen with little warning of overexposure.
- : **WARNING: Intentional misuse by concentrating/inhaling contents may be lethal.**

### Ingestion

- : Accidental ingestion of the material may be damaging to the health of the individual.
- : Ingestion of ethanol (ethyl alcohol, "alcohol") may produce nausea, vomiting, bleeding from the digestive tract, abdominal pain, and diarrhoea.
- : Effects on the body:

Blood concentration	Effects
<1.5 g/L	Mild: impaired vision, co-ordination and reaction time; emotional instability
1.5-3.0 g/L	Moderate: Slurred speech, confusion, inco-ordination, emotional instability, disturbances in perception and senses, possible blackouts, and impaired objective performance in standardized tests. Possible double vision, flushing, fast heart rate, sweating and incontinence. Slow breathing may occur rarely and fast breathing may develop in cases of metabolic acidosis, low blood sugar and low blood potassium. Central nervous system depression may progress to coma.
3-5 g/L	Severe: cold clammy skin, low body temperature and low blood pressure. Atrial fibrillation and heart block have been reported. Depression of breathing may occur, respiratory failure may follow serious poisoning, choking on vomit may result in lung inflammation and swelling. Convulsions due to severe low blood sugar may also occur. Acute liver inflammation may develop.

- : Not normally a hazard due to physical form of product.
- : Considered an unlikely route of entry in commercial/industrial environments
- : Central nervous system (CNS) depression may include general discomfort, symptoms of giddiness, headache, dizziness, nausea, anaesthetic effects, slowed reaction time, slurred speech and may progress to unconsciousness. Serious poisonings may result in respiratory depression and may be fatal.

### Skin Contact

- : Repeated exposure may cause skin cracking, flaking or drying following normal handling and use.
- : Skin contact with the material may damage the health of the individual; systemic effects may result following absorption.

## SECTION 11 TOXICOLOGICAL INFORMATION (CONTINUED)

	<ul style="list-style-type: none"> <li>: This material can cause inflammation of the skin on contact in some persons. Spray mist may produce discomfort</li> <li>: Open cuts, abraded or irritated skin should not be exposed to this material</li> <li>: The material may accentuate any pre-existing dermatitis condition</li> </ul>																
<b>Eye</b>	<ul style="list-style-type: none"> <li>: This material can cause eye irritation and damage in some persons.</li> <li>: Direct contact of the eye with ethanol (alcohol) may cause an immediate stinging and burning sensation, with reflex closure of the lid, and a temporary, tearing injury to the cornea together with redness of the conjunctiva. Discomfort may last 2 days but usually the injury heals without treatment.</li> <li>: Not considered to be a risk because of the extreme volatility of the gas.</li> </ul>																
<b>Chronic</b>	<ul style="list-style-type: none"> <li>: Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.</li> <li>: There is some evidence that inhaling this product is more likely to cause a sensitisation reaction in some persons compared to the general population.</li> <li>: There is limited evidence that, skin contact with this product is more likely to cause a sensitisation reaction in some persons compared to the general population.</li> <li>: There is some evidence from animal testing that exposure to this material may result in reduced fertility.</li> <li>: There is some evidence from animal testing that exposure to this material may result in toxic effects to the unborn baby.</li> <li>: Prolonged exposure to ethanol may cause damage to the liver and cause scarring. It may also worsen damage caused by other agents.</li> <li>: Main route of exposure to the gas in the workplace is by inhalation.</li> </ul>																
<b>Brake &amp; Parts Cleaner Non Chlorinated</b>	<table> <tr> <th><b>Toxicity</b></th><th><b>Irritation</b></th></tr> <tr> <td>Not Available</td><td>Not Available</td></tr> </table>	<b>Toxicity</b>	<b>Irritation</b>	Not Available	Not Available												
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<b>2-methylpentane</b>	<table> <tr> <th><b>Toxicity</b></th><th><b>Irritation</b></th></tr> <tr> <td>Oral (Rat) LD50; ~15.84 mg/kg<sup>[1]</sup></td><td>Not Available</td></tr> </table>	<b>Toxicity</b>	<b>Irritation</b>	Oral (Rat) LD50; ~15.84 mg/kg <sup>[1]</sup>	Not Available												
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Oral (Rat) LD50; ~15.84 mg/kg <sup>[1]</sup>	Not Available																
<b>acetone</b>	<table> <tr> <th><b>Toxicity</b></th><th><b>Irritation</b></th></tr> <tr> <td>Dermal (rabbit) LD50: 20000 mg/kg<sup>[2]</sup></td><td>Eye (human): 500 ppm - irritant</td></tr> <tr> <td>Inhalation(Mouse) LC50; 44 mg/L4h<sup>[2]</sup></td><td>Eye (rabbit): 20mg/24hr -moderate</td></tr> <tr> <td>Oral (rat) LD50; 5800 mg/kg<sup>[2]</sup></td><td>Eye (rabbit): 3.95 mg - SEVERE</td></tr> <tr> <td></td><td>Eye: adverse effect observed (irritating)<sup>[1]</sup></td></tr> <tr> <td></td><td>Skin (rabbit): 500 mg/24hr - mild</td></tr> <tr> <td></td><td>Skin (rabbit):395mg (open) - mild</td></tr> <tr> <td></td><td>Skin: no adverse effect observed (not irritating)<sup>[1]</sup></td></tr> </table>	<b>Toxicity</b>	<b>Irritation</b>	Dermal (rabbit) LD50: 20000 mg/kg <sup>[2]</sup>	Eye (human): 500 ppm - irritant	Inhalation(Mouse) LC50; 44 mg/L4h <sup>[2]</sup>	Eye (rabbit): 20mg/24hr -moderate	Oral (rat) LD50; 5800 mg/kg <sup>[2]</sup>	Eye (rabbit): 3.95 mg - SEVERE		Eye: adverse effect observed (irritating) <sup>[1]</sup>		Skin (rabbit): 500 mg/24hr - mild		Skin (rabbit):395mg (open) - mild		Skin: no adverse effect observed (not irritating) <sup>[1]</sup>
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	Skin (rabbit):395mg (open) - mild																
	Skin: no adverse effect observed (not irritating) <sup>[1]</sup>																

## SECTION 11 TOXICOLOGICAL INFORMATION (CONTINUED)

<b>ethanol</b>	:	<b>Toxicity</b>	<b>Irritation</b>
		Dermal (rabbit) LD50: 17100 mg/kg <sup>[1]</sup>	Eye (rabbit): 500 mg SEVERE
		Inhalation(Rat) LC50; 64000 ppm4h <sup>[2]</sup>	Eye (rabbit):100mg/24hr-moderate
		Oral (Rat) LD50; 7060 mg/kg <sup>[2]</sup>	Eye: adverse effect observed (irritating) <sup>[1]</sup>
			Skin (rabbit):20 mg/24hr-moderate
			Skin (rabbit):400 mg (open)-mild
			Skin: no adverse effect observed (not irritating) <sup>[1]</sup>

<b>carbon dioxide</b>	<b>Toxicity</b>	<b>Irritation</b>
	Not Available	Not Available

### Legend

1. Value obtained from Europe ECHA Registered Substances - Acute toxicity
2. \* Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

<b>Brake &amp; Parts Cleaner Non Chlorinated</b>	:	Animal studies indicate that normal, branched and cyclic paraffins are absorbed from the gastrointestinal tract and that the absorption of n-paraffins is inversely proportional to the carbon chain length, with little absorption above C30. With respect to the carbon chain lengths likely to be present in mineral oil, n-paraffins may be absorbed to a greater extent than iso- or cyclo-paraffins.
	:	The major classes of hydrocarbons are well absorbed into the gastrointestinal tract in various species. In many cases, the hydrophobic hydrocarbons are ingested in association with fats in the diet. Some hydrocarbons may appear unchanged as in the lipoprotein particles in the gut lymph, but most hydrocarbons partly separate from fats and undergo metabolism in the gut cell. The gut cell may play a major role in determining the proportion of hydrocarbon that becomes available to be deposited unchanged in peripheral tissues such as in the body fat stores or the liver.

<b>Acetone</b>	:	The acute toxicity of acetone is low. Acetone is not a skin irritant or sensitizer, but it removes fat from the skin, and it also irritates the eye. Animal testing shows acetone may cause macrocytic anaemia. Studies in humans have shown that exposure to acetone at a level of 2375 mg/cubic metre has not caused neurobehavioural deficits.
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<b>Brake &amp; Parts Cleaner Non Chlorinated &amp; 2-methylpentane</b>	:	No significant acute toxicological data identified in literature search.
--	---	--

<b>Acetone &amp; Ethanol</b>	The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.
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<b>Acute Toxicity</b>	✗	<b>Carcinogenicity</b>	✗
<b>Skin Irritation/Corrosion</b>	✓	<b>Reproductivity</b>	✗
<b>Serious Eye Damage/Irritation</b>	✓	<b>STOT - Single Exposure</b>	✓
<b>Respiratory or Skin sensitisation</b>	✗	<b>STOT - Repeated Exposure</b>	✗
<b>Mutagenicity</b>	✗	<b>Aspiration Hazard</b>	✗
Legend			
✗ - Data either not available or does not fill the criteria for classification			
✓ - Data available to make classification			

## SECTION 12 ECOLOGICAL INFORMATION

### Toxicity

#### Brake & Parts Cleaner Non Chlorinated

Endpoint	Test Duration (hr)	Species	Value	Source
Not Available	Not Available	Not Available	Not Available	Not Available

#### 2-methylpentane

Endpoint	Test Duration (hr)	Species	Value	Source
EC50(ECx)	96	Algae or other aquatic plants	4.321mg/l	2
EC50	96	Algae or other aquatic plants	4.321mg/l	2

#### acetone

Endpoint	Test Duration (hr)	Species	Value	Source
NOEC(ECx)	12	Fish	0.001mg/L	4
EC50	48	Crustacea	6098.4mg/L	5
EC50	96	Algae or other aquatic plants	9.873-27.684mg/l	4
LC50	96	Fish	3744.6-5000.7mg/L	4

#### ethanol

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	72	Algae or other aquatic plants	275mg/l	2
EC50(ECx)	96	Algae or other aquatic plants	<0.001mg/L	4
EC50	48	Crustacea	>79mg/L	4
EC50	96	Algae or other aquatic plants	<0.001mg/L	4
LC50	96	Fish	>100mg/l	2

#### carbon dioxide

Endpoint	Test Duration (hr)	Species	Value	Source
LC50	96	Fish	35mg/l	1

#### Legend

Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

When spilled this product may act as a typical oil, causing a film, sheen, emulsion or sludge at or beneath the surface of the body of water. The oil film on water surface may physically affect the aquatic organisms, due to the interruption of the oxygen transfer between the air and the water

Oils of any kind can cause:

- drowning of water-fowl due to lack of buoyancy, loss of insulating capacity of feathers, starvation and vulnerability to predators due to lack of mobility
- lethal effects on fish by coating gill surfaces, preventing respiration
- asphyxiation of benthic life forms when floating masses become engaged with surface debris and settle on the bottom and
- adverse aesthetic effects of fouled shoreline and beaches

In case of accidental releases on the soil, a fine film is formed on the soil, which prevents the plant respiration process and the soil particle saturation. It may cause deep water infestation.



## SECTION 12 ECOLOGICAL INFORMATION (CONTINUED)

### For Ethanol:

log Kow: -0.31 to -0.32;  
Koc 1: Estimated BCF= 3;  
Half-life (hr) air: 144;  
Half-life (hr) H<sub>2</sub>O surface water: 144;  
Henry's atm m<sup>3</sup> /mol: 6.29E-06;  
BOD 5 if unstated: 0.93-1.67,63%  
COD: 1.99-2.11,97%;  
ThOD : 2.1.

### Environmental Fate:

#### Terrestrial Fate:

Ethanol quickly biodegrades in soil but may leach into ground water; most is lost by evaporation. Ethanol is expected to have very high mobility in soil.

Volatilization of ethanol from moist soil surfaces is expected to be an important fate process. The potential for volatilization of ethanol from dry soil surfaces may exist. Biodegradation is expected to be an important fate process for ethanol based on half-lives on the order of a few days for ethanol in sandy soil/groundwater microcosms.

#### Atmospheric Fate:

Ethanol is expected to exist solely as a vapour in the ambient atmosphere. Vapour-phase ethanol is degraded in the atmosphere by reaction with photochemically produced hydroxyl radicals; the half-life for this reaction in air is estimated to be 5 days. Ethanol readily degraded by reaction with photochemically produced hydroxy radicals; release into air will result in photodegradation and wet deposition.

#### Aquatic Fate:

When released into water ethanol readily evaporates and is biodegradable. Ethanol is not expected to adsorb to suspended solids and sediment. Volatilization from water surfaces is expected and volatilization half-lives for a model river and model lake are 3 and 39 days, respectively. Bioconcentration in aquatic organisms is considered to be low.

Hydrolysis and photolysis in sunlit surface waters is not expected to be an important environmental fate process for ethanol and is unlikely to be persistent in aquatic environments.

### For carbon dioxide:

#### Environmental Fate:

Carbon dioxide in earth's atmosphere is considered a trace gas. There are seasonal fluctuations of atmospheric concentrations of carbon dioxide primarily due to CO<sub>2</sub> absorbed during seasonal plant growth. Due to human activities such as the combustion of fossil fuels and deforestation, the concentration of atmospheric carbon dioxide has increased by about 35% since preindustrial times. Carbon dissolved in the oceans is about 50 times greater than CO<sub>2</sub> found in the atmosphere. The oceans act as an enormous carbon sink, having "absorbed about one-third of all human-generated CO<sub>2</sub> emissions to date." Generally, gas solubility decreases as water temperature increases. Accordingly the ability of the oceans to absorb carbon dioxide from the atmosphere decreases as ocean temperatures rise. Carbon dioxide is soluble in water, where it spontaneously interconverts between CO<sub>2</sub> and H<sub>2</sub>CO<sub>3</sub> (carbonic acid). The relative concentrations of CO<sub>2</sub>, H<sub>2</sub>CO<sub>3</sub>, and the deprotonated forms HCO<sub>3</sub><sup>-</sup> (bicarbonate) and CO<sub>3</sub><sup>2-</sup> (carbonate) depend on the pH. In neutral or slightly alkaline water (pH > 6.5), bicarbonate predominates (>50%) becoming most prevalent (>95%) at the pH of seawater, while in very alkaline water (pH > 10.4) carbonate predominates (>50%). The bicarbonate and carbonate forms are very soluble, such that air-equilibrated ocean water (mildly alkaline with typical pH = 8.2 - 8.5) contains about 120 mg of bicarbonate per litre. Most of the CO<sub>2</sub> taken up by the ocean forms carbonic acid. Some is consumed in photosynthesis by organisms in the water, and a small proportion of that sinks and leaves the carbon cycle. There is considerable concern that as a result of increased CO<sub>2</sub> in the atmosphere the acidity of seawater has been increasing. This may adversely affect organisms living in the water, as with increasing acidity the availability of carbonates, necessary for forming shells, decreases.

### For n-Hexane:

Log Kow: 3.17-3.94;  
Henry's Law Constant: 1.69 atm-m<sup>3</sup> mol;  
Vapor Pressure: 150 mm Hg @ 25 C;  
Log Koc: 2.90 to 3.61.  
BOD 5, (if unstated): 2.21;  
COD: 0.04;  
ThOD: 3.52.

## SECTION 12 ECOLOGICAL INFORMATION (CONTINUED)

### Atmospheric Fate:

n-Hexane is not expected to be directly broken down by sunlight. The main atmospheric removal mechanism is through reactions with hydroxyl radicals, with an approximate half-life of 2.9 days. The smog-producing potential of n-hexane is very low, compared to other alkanes, or chlorinated VOCs. Hydroxyl ion reactions in the upper troposphere, therefore, are probably the primary mechanisms for n-hexane degradation in the atmosphere.

### Terrestrial Fate:

Surface evaporation is expected to be the main fate process of this substance in soil. The substance has a moderate ability to sorb to soil particles but, is expected to have low potential for leaching into the lower soil depths. n-Hexane is expected to generally stay near the soil surface and, if not appreciably sorbed into the soil matrix, will eventually evaporate. Exceptions would involve locations with shallow groundwater tables where large spills occur - in such cases, n-hexane would spread out to contaminate a large volume of soil. Once introduced into groundwater, n-hexane may be fairly persistent, since its degradation by water is slow and opportunities for biodegradation may be limited, (due to low oxygen conditions), or, where nutrients, such as nitrogen or phosphorus, are in limited supply. Biological breakdown is probably the most significant degradation mechanism in groundwater. *Pseudomonas mendocina* bacteria have been shown to break the substance down in groundwater and mixed/pure bacterial cultures can utilize the substance, in the presence of oxygen. The most important biological breakdown process involves the conversion of n-hexane to primary alcohols, aldehydes and, ultimately, into fatty acids. In general, unless the n-hexane is buried at some depth within a soil or sediment, evaporation is generally assumed to occur at a much more rapid rate than chemical or biochemical degradation processes.

### Aquatic Fate:

The dominant transport process from water is evaporation, with an estimated half-life of <3 hours. For standing bodies of water, a half-life no longer than 6.8 days is estimated. The substance has very low water solubility and is resistant to breakdown by water. Few data exist for the biological breakdown of n-hexane in water, however; this process is not considered to be as rapid as evaporation. N-Hexane may be persistent if released to deep sediment.

### Ecotoxicity:

This substance is not expected to concentrate/accumulate in aquatic organisms or the food chain. These substances are considered to be the most readily biodegradable fractions in petroleum, particularly when oxygen is present in solution. The substance is moderately toxic to rainbow trout, fathead minnow, bluegill, and *Daphnia* water fleas.

**DO NOT discharge into sewer or waterways.**

### Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
2-methylpentane	LOW	LOW
acetone	LOW (Half-life = 14 days)	MEDIUM (Half-life = 116.25 days)
ethanol	LOW (Half-life = 2.17 days)	LOW (Half-life = 5.08 days)
carbon dioxide	LOW	LOW

### Bioaccumulative potential

Ingredient	Bioaccumulation
2-methylpentane	LOW (LogKOW = 3.2145)
acetone	LOW (BCF = 0.69)
ethanol	LOW (LogKOW = -0.31)
carbon dioxide	LOW (LogKOW = 0.83)

## SECTION 12 ECOLOGICAL INFORMATION (CONTINUED)

### Mobility in soil

Ingredient	Mobility
2-methylpentane	LOW (KOC = 124.9)
acetone	HIGH (KOC = 1.981)
ethanol	HIGH (KOC = 1)
carbon dioxide	HIGH (KOC = 1.498)

## SECTION 13 DISPOSAL CONSIDERATIONS

### Waste treatment methods

- Product / Packaging disposal** :
- Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.
  - A Hierarchy of Controls seems to be common - the user should investigate:
    - Reduction
    - Reuse
    - Recycling
    - Disposal (if all else fails)
  - This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.
    - **DO NOT allow wash water from cleaning or process equipment to enter drains.**
    - It may be necessary to collect all wash water for treatment before disposal.
    - In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
    - Where in doubt contact the responsible authority.
    - Consult State Land Waste Management Authority for disposal.
    - Discharge contents of damaged aerosol cans at an approved site.
    - Allow small quantities to evaporate.
    - **DO NOT incinerate or puncture aerosol cans.**
    - Bury residues and emptied aerosol cans at an approved site.

## SECTION 14 TRANSPORT INFORMATION

### Labels Required



### Marine Pollutant



### HAZCHEM

Not Applicable

### Land Transport (ADG)

- UN number : 1950
- UN proper shipping name : AEROSOLS
- Transport hazard class(es) : Class I 2.1
- Subrisk I Not Applicable

## SECTION 14 TRANSPORT INFORMATION (CONTINUED)

Packing group : Not Applicable  
 Environmental hazard : Environmentally hazardous  
 Special precautions for user : Special provisions I 63 190 277 327 344 381  
 Limited quantity I 1000ml

### Air transport (ICAO-IATA / DGR)

UN number : 1950  
 UN proper shipping name : Aerosols, flammable  
 Transport hazard class(es) : ICAO/IATA I Class 2.1  
 ICAO / IATA Subrisk I Not Applicable  
 ERG Code I 10L  
 Packing group : Not Applicable  
 Environmental hazard : Environmentally hazardous  
 Special precautions for user : Special provisions I A145 A167 A802  
 Cargo Only Packing Instructions I 203  
 Cargo Only Maximum Qty / Pack I 150 kg  
 Passenger and Cargo Packing Instructions I 203  
 Passenger and Cargo Maximum Qty / Pack I 75 kg  
 Passenger and Cargo Limited Quantity Packing Instructions I Y203  
 Passenger and Cargo Limited Maximum Qty / Pack I 30 kg G

### Sea transport (IMDG-Code / GGVSee)

UN number : 1950  
 UN proper shipping name : AEROSOLS  
 Transport hazard class(es) : IMDG Class I 2.1  
 IMDG Subrisk I Not Applicable  
 Packing group : Not Applicable  
 Environmental hazard : Marine Pollutant  
 Special precautions for user : EMS Number I F-D , S-U  
 Special provisions I 63 190 277 327 344 381 959  
 Limited Quantities I 1000 ml

### Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

### Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product Name	Group
2-methylpentane	Not Available
acetone	Not Available
ethanol	Not Available
carbon dioxide	Not Available

### Transport in bulk in accordance with the ICG Code

Product Name	Ship Type
2-methylpentane	Not Available
acetone	Not Available
ethanol	Not Available
carbon dioxide	Not Available

## SECTION 15 REGULATORY INFORMATION

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

#### 2-METHYLPENTANE IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals  
Australian Inventory of Industrial Chemicals (AIIC)

#### ACETONE IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals  
Australian Inventory of Industrial Chemicals (AIIC)  
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5

#### ETHANOL IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals  
Australian Inventory of Industrial Chemicals (AIIC)

#### CARBON DIOXIDE IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australian Inventory of Industrial Chemicals (AIIC)  
FEI Equine Prohibited Substances List (EPSL)  
FEI Equine Prohibited Substances List - Controlled Medication

#### National Inventory Status

Australia - AICS	:	Yes
Canada - DSL	:	Yes
Canada - NDSL	:	No (2-methylpentane; acetone; ethanol; carbon dioxide)
China - IECSC	:	Yes
Europe - EINEC / ELINCS / NLP	:	Yes
Japan - ENCS	:	Yes
Korea - KECI	:	Yes
New Zealand - NZIoC	:	Yes
Philippines - PICCS	:	Yes
USA - TSCA	:	Yes
Taiwan - TCSI	:	Yes
Mexico - INSQ	:	No (zinc phosphate)
Vietnam - NCI	:	Yes
Russia - ARIPS	:	Yes
Legend	:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.

## SECTION 16 OTHER INFORMATION

Revision Date	:	28/4/2022
Initial Date	:	15/09/2014

#### SDS Version Summary

Version	Issue Date	Sections Updated
12.1	10/12/2021	Classification change due to full database hazard calculation/update.
13.1	28/04/2022	Ingredients

## SECTION 16 OTHER INFORMATION (CONTINUED)

### Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

### Definitions and abbreviations

<b>PC-TWA</b>	: Permissible Concentration-Time Weighted Average
<b>PC-STEL</b>	: Permissible Concentration-Short Term Exposure Limit
<b>IARC</b>	: International Agency for Research on Cancer
<b>ACGIH</b>	: American Conference of Governmental Industrial Hygienists
<b>STEL</b>	: Short Term Exposure Limit
<b>TEEL</b>	: Temporary Emergency Exposure Limit
<b>IDLH</b>	: Immediately Dangerous to Life or Health Concentrations
<b>ES</b>	: Exposure Standard
<b>OSF</b>	: Odour Safety Factor
<b>NOAEL</b>	: No Observed Adverse Effect Level
<b>LOAEL</b>	: Lowest Observed Adverse Effect Level
<b>TLV</b>	: Threshold Limit Value
<b>LOD</b>	: Limit Of Detection
<b>OTV</b>	: Odour Threshold Value
<b>BCF</b>	: BioConcentration Factors
<b>BEI</b>	: Biological Exposure Index
<b>AIIC</b>	: Australian Inventory of Industrial Chemicals
<b>DSL</b>	: Domestic Substances List
<b>NDSL</b>	: Non-Domestic Substances List
<b>IECSC</b>	: Inventory of Existing Chemical Substance in China
<b>EINECS</b>	: European INventory of Existing Commercial chemical Substances
<b>ELINCS</b>	: European List of Notified Chemical Substances
<b>NLP</b>	: No-Longer Polymers
<b>ENCS</b>	: Existing and New Chemical Substances Inventory
<b>KECI</b>	: Korea Existing Chemicals Inventory
<b>NZIoC</b>	: New Zealand Inventory of Chemicals
<b>PICCS</b>	: Philippine Inventory of Chemicals and Chemical Substances
<b>TSCA</b>	: Toxic Substances Control Act
<b>TCSI</b>	: Taiwan Chemical Substance Inventory
<b>INSQ</b>	: Inventario Nacional de Sustancias Químicas
<b>NCI</b>	: National Chemical Inventory
<b>FBEPH</b>	: Russian Register of Potentially Hazardous Chemical and Biological Substances

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