

Revision Date: 20/10/2022

Safety data sheet according to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

<b>Product name</b>	Timbond Professional Spray Contact Adhesive
<b>Product code</b>	AD02PORT
<b>Proper shipping name</b>	CHEMICAL UNDER PRESSURE, FLAMMABLE, N.O.S. (contains propane)
<b>Chemical formula</b>	Not Applicable
<b>Other means of identification</b>	UFI:AQQX-X1KD-T00P-5PYR

**1.2. Relevant identified uses of the substance or mixture and uses advised against**

<b>Chemical Product Category</b>	PC1	Adhesives, sealants
<b>Sectors of Use</b>	SU22	Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
	SU3	Industrial uses: Uses of substances as such or in preparations* at industrial sites
<b>Sector of Use - Sub Category</b>	SU0	Other
	SU18	Manufacture of furniture
	SU19	Building and construction work
	SU6a	Manufacture of wood and wood products
<b>Relevant identified uses</b>		The use of a quantity of material in an unventilated or confined space may result in increased exposure and an irritating atmosphere developing. Before starting consider control of exposure by mechanical ventilation.
<b>Uses advised against</b>		Not Applicable

**1.3. Details of the supplier of the safety data sheet**

<b>Supplier</b>	Adkwik Ltd Unit F Dales Manor Business Park Grove Road Sawston Cambridge CB22 3TJ T: +44 (0) 01223 412373 E: technical@adkwik.co.uk
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**1.4. Emergency telephone number**

<b>Emergency telephone</b>	+44 (0) 01223 412373 (NOT 24HRS) Working Hours: Weekdays: 8am- 4.30pm (GMT)
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**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture**

<b>Classified according to GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567 [1]</b>	H315	Skin Corrosion/Irritation Category 2, H351 - Carcinogenicity Category 2, H222+H229 - Aerosols Category 1
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<b>Legend:</b>	1. Classified by Chemwatch; 2. Classification drawn from GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567
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## 2.2. Label elements

### Hazard pictograms



<b>Signal word</b>	Danger
<b>Hazard statements</b>	H315 Causes skin irritation. H351 Suspected of causing cancer. H335 May cause respiratory irritation. H222+H229 Extremely flammable aerosol. Pressurized container: may burst if heated.
<b>Supplementary statement(s)</b>	Not Applicable
<b>Precautionary statement(s) Prevention</b>	P201 Obtain special instructions before use. 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. P280 Wear protective gloves and protective clothing.
<b>Precautionary statement(s) Response</b>	P308+P313 IF exposed or concerned: Get medical advice/ attention. P302+P352 IF ON SKIN: Wash with plenty of water and soap. P332+P313 If skin irritation occurs: Get medical advice/attention. P362+P364 Take off contaminated clothing and wash it before reuse.
<b>Precautionary statement(s) Storage</b>	P405 Store locked up. P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
<b>Precautionary statement(s) Disposal</b>	P501 Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

## 2.3. Other hazards

Inhalation and/or skin contact may produce health damage\*.  
 Cumulative effects may result following exposure\*.  
 May produce discomfort of the eyes and respiratory tract\*.  
 May affect fertility\*.  
 Repeated exposure potentially causes skin dryness and cracking\*.  
 Vapours potentially cause drowsiness and dizziness\*.

<b>methylene chloride</b>	Listed in the Europe Regulation (EC) No 1907/2006 - Annex XVII (Restrictions may apply)
<b>butane</b>	Listed in the Europe Regulation (EC) No 1907/2006 - Annex XVII (Restrictions may apply)
<b>propane</b>	Listed in the Europe Regulation (EC) No 1907/2006 - Annex XVII (Restrictions may apply)
<b>iso-butane</b>	Listed in the Europe Regulation (EC) No 1907/2006 - Annex XVII (Restrictions may apply)
Not Applicable	

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

See 'Composition on ingredients' in Section 3.2

#### 3.2. Mixtures

1.CAS No 2.EC No 3.Index No 4.REACH No	%[weight]	Name	Classified according to GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567	SCL / M-Factor	Nanoform Particle Characteristics
1.75-09-2 2.200-838-9	40-60	methylene chloride *	Carcinogenicity Category 2; H351 <sup>[2]</sup>	Not Available	Not Available
1.CAS No 2.EC No 3.Index No 4.REACH No	%[weight]	Name	Classified according to GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567	SCL / M-Factor	Nanoform Particle Characteristics
3.602-004-00-3 4.Not Available					
1.106-97-8. 2.203-448-7 3.601-004-00-0 601-004-01-8 4.Not Available	10-20	butane	Flammable Gases Category 1A, Gases Under Pressure (Liquefied Gas); H220, H280, EUH044 <sup>[1]</sup>	Not Available	Not Available
1.74-98-6 2.200-827-9 3.601-003-00-5 4.Not Available	10-20	propane	Flammable Gases Category 1, Gases Under Pressure; H220, H280 <sup>[2]</sup>	Not Available	Not Available
1.75-28-5. 2.200-857-2 3.601-004-00-0 601-004-01-8 4.Not Available	5-10	iso-butane	Flammable Gases Category 1A, Gases Under Pressure (Liquefied Gas); H220, H280, EUH044 <sup>[1]</sup>	Not Available	Not Available

#### Legend:

1. Classified by Chemwatch; 2. Classification drawn from GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567; 3. Classification drawn from C&L; \* EU IOELVs available; [e] Substance identified as having endocrine disrupting properties

**SECTION 4: First aid measures****4.1. Description of first aid measures****Eye contact**

- If product comes in contact with eyes remove the patient from gas source or contaminated area.
- Take the patient to the nearest eye wash, shower or other source of clean water.
- Open the eyelid(s) wide to allow the material to evaporate.
- Gently rinse the affected eye(s) with clean, cool water for at least 15 minutes. Have the patient lie or sit down and tilt the head back. Hold the
- eyelid(s) open and pour water slowly over the eyeball(s) at the inner corners, letting the water run out of the outer corners.
- The patient may be in great pain and wish to keep the eyes closed. It is important that the material is rinsed from the eyes to prevent further
- damage.
- Ensure that the patient looks up, and side to side as the eye is rinsed in order to better reach all parts of the eye(s)
- Transport to hospital or doctor.
- Even when no pain persists and vision is good, a doctor should examine the eye as delayed damage may occur.
- If the patient cannot tolerate light, protect the eyes with a clean, loosely tied bandage.
- Ensure verbal communication and physical contact with the patient.

**DO NOT** allow the patient to rub the eyes

**DO NOT** allow the patient to tightly shut the eyes

**DO NOT** introduce oil or ointment into the eye(s) without medical advice

**DO NOT** use hot or tepid water.

**Skin contact**

If skin or hair contact occurs:

- Immediately flush body and clothes with large amounts of water, using safety shower if available.
- Quickly remove all contaminated clothing, including footwear.
- Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre.
- Transport to hospital, or doctor.

**Inhalation**

- Following exposure to gas, remove the patient from the gas source or contaminated area.
- NOTE: Personal Protective Equipment (PPE), including positive pressure self-contained breathing apparatus may be required to assure the safety of the rescuer.
- Prostheses such as false teeth, which may block the airway, should be removed, where possible, prior to initiating first aid procedures.
- If the patient is not breathing spontaneously, administer rescue breathing.
- If the patient does not have a pulse, administer CPR.
- If medical oxygen and appropriately trained personnel are available, administer 100% oxygen.
- Summon an emergency ambulance. If an ambulance is not available, contact a physician, hospital, or Poison Control Centre for further instruction.
- Keep the patient warm, comfortable and at rest while awaiting medical care.
- **MONITOR THE BREATHING AND PULSE, CONTINUOUSLY.**
- Administer rescue breathing (preferably with a demand-valve resuscitator, bag-valve mask-device, or pocket mask as trained) or CPR if necessary.

**Ingestion**

Not considered a normal route of entry.

- Avoid giving milk or oils.
- Avoid giving alcohol.

**4.2. Most important symptoms and effects, both acute and delayed**

See Section 11

**4.3. Indication of any immediate medical attention and special treatment needed**

for intoxication due to Freons/ Halons;

**A: Emergency and Supportive Measures**

- Maintain an open airway and assist ventilation if necessary
- Treat coma and arrhythmias if they occur. Avoid (adrenaline) epinephrine or other sympathomimetic amines that may precipitate ventricular arrhythmias. Tachyarrhythmias caused by increased myocardial sensitisation may be treated with propranolol, 1-2 mg IV or esmolol 25-100 microgm/kg/min IV.
- Monitor the ECG for 4-6 hours

**B: Specific drugs and antidotes:**

- There is no specific antidote

**C: Decontamination**

- Inhalation; remove victim from exposure, and give supplemental oxygen if available.
- Ingestion; (a) Prehospital: Administer activated charcoal, if available. DO NOT induce vomiting because of rapid absorption and the risk of abrupt onset CNS depression. (b) Hospital: Administer activated charcoal, although the efficacy of charcoal is unknown. Perform gastric lavage only if the ingestion was very large and recent (less than 30 minutes)

**D: Enhanced elimination:**

- There is no documented efficacy for diuresis, haemodialysis, haemoperfusion, or repeat-dose charcoal.
- POISONING and DRUG OVERDOSE, Californian Poison Control System Ed. Kent R Olson; 3rd Edition  
Do not administer sympathomimetic drugs unless absolutely necessary as material may increase myocardial irritability.
- No specific antidote.
- Because rapid absorption may occur through lungs if aspirated and cause systematic effects, the decision of whether to induce vomiting or not should be made by an attending physician.
- If lavage is performed, suggest endotracheal and/or esophageal control.
- Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach.
- Treatment based on judgment of the physician in response to reactions of the patient

**For frost-bite caused by liquefied petroleum gas:**

- If part has not thawed, place in warm water bath (41-46 C) for 15-20 minutes, until the skin turns pink or red.
- Analgesia may be necessary while thawing.
- If there has been a massive exposure, the general body temperature must be depressed, and the patient must be immediately rewarmed by whole-body immersion, in a bath at the above temperature.
- Shock may occur during rewarming.
- Administer tetanus toxoid booster after hospitalization.
- Prophylactic antibiotics may be useful.
- The patient may require anticoagulants and oxygen.

[Shell Australia 22/12/87]

**BASIC TREATMENT**

- Establish a patent airway with suction where necessary.
- Watch for signs of respiratory insufficiency and assist ventilation as necessary.
- Administer oxygen by non-rebreather mask at 10 to 15 l/min.
- Monitor and treat, where necessary, for pulmonary oedema .
- Monitor and treat, where necessary, for shock.
- Anticipate seizures.

**ADVANCED TREATMENT**

- Consider orotracheal or nasotracheal intubation for airway control in unconscious patient or where respiratory arrest has occurred.
- Positive-pressure ventilation using a bag-valve mask might be of use.
- Monitor and treat, where necessary, for arrhythmias.
- Start an IV D5W TKO. If signs of hypovolaemia are present use lactated Ringers solution. Fluid overload might create complications.
- Drug therapy should be considered for pulmonary oedema.
- Hypotension with signs of hypovolaemia requires the cautious administration of fluids. Fluid overload might create complications.
- Treat seizures with diazepam.
- Proparacaine hydrochloride should be used to assist eye irrigation.

BRONSTEIN, A.C. and CURRANCE, P.L.

EMERGENCY CARE FOR HAZARDOUS MATERIALS EXPOSURE: 2nd Ed. 1994

As in all cases of suspected poisoning, follow the ABCDEs of emergency medicine (airway, breathing, circulation, disability, exposure), then the ABCDEs of toxicology (antidotes, basics, change absorption, change distribution, change elimination). For poisons (where specific treatment regime is absent):

**BASIC TREATMENT**

- Establish a patent airway with suction where necessary.
- Watch for signs of respiratory insufficiency and assist ventilation as necessary.
- Administer oxygen by non-rebreather mask at 10 to 15 L/min.
- Monitor and treat, where necessary, for pulmonary oedema.
- Monitor and treat, where necessary, for shock.
- Anticipate seizures.
- **DO NOT** use emetics. Where ingestion is suspected rinse mouth and give up to 200 ml water (5 ml/kg recommended) for dilution where patient is able to swallow, has a strong gag reflex and does not drool.

**ADVANCED TREATMENT**

- Consider orotracheal or nasotracheal intubation for airway control in unconscious patient or where respiratory arrest has occurred.
- Positive-pressure ventilation using a bag-valve mask might be of use.
- Monitor and treat, where necessary, for arrhythmias.
- Start an IV D5W TKO. If signs of hypovolaemia are present use lactated Ringers solution. Fluid overload might create complications.
- Drug therapy should be considered for pulmonary oedema.
- Hypotension with signs of hypovolaemia requires the cautious administration of fluids. Fluid overload might create complications.
- Treat seizures with diazepam.
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**SECTION 5: Firefighting measures****5.1. Extinguishing media**

- 5.1. Extinguishing media
- Water spray or fog.
- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.

## 5.2. Special hazards arising from the substance or mixture

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

## 5.3. Advice for firefighters

### Fire Fighting

General

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear full body protective clothing with breathing apparatus.
- Fight fire from a safe distance, with adequate cover.
- 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.

### Fire/Explosion Hazard

- Containers may explode when heated - Ruptured cylinders may rocket
- May burn but does not ignite easily.
- Fire exposed cylinders may vent contents through pressure relief devices thereby increasing vapour concentration..
- Fire may produce irritating, poisonous or corrosive gases.
- Runoff may create fire or explosion hazard.
- May decompose explosively when heated or involved in fire.

Decomposition may produce toxic fumes of: ,carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), hydrogen chloride, phosgene, other pyrolysis products typical of burning organic material.

**Contains low boiling substance: Closed containers may rupture due to pressure build up under fire conditions.**

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

See section 8

### 6.2. Environmental precautions

See section 12

### 6.3. Methods and material for containment and cleaning up

#### Minor Spills

- Avoid breathing vapour and any contact with liquid or gas. Protective equipment including respirator should be used.
- **DO NOT enter confined spaces where gas may have accumulated.**
- Increase ventilation.
- Clear area of personnel.

#### Major Spills

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- Wear full body protective clothing with breathing apparatus.
- Prevent, by all means available, spillage from entering drains or water courses.
- Consider evacuation (or protect in place).
- Clear area of all unprotected personnel and move upwind.
- Alert Emergency Authority and advise them of the location and nature of hazard.
- Wear full body clothing with breathing apparatus.
- Prevent by any means available, spillage from entering drains and water-courses.
- Consider evacuation.
- Remove leaking cylinders to a safe place.
- Fit vent pipes. Release pressure under safe, controlled conditions
- Burn issuing gas at vent pipes.
- **DO NOT exert excessive pressure on valve; DO NOT attempt to operate damaged valve.**

### 6.4. Reference to other sections

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

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

#### Safe handling

- Radon and its radioactive decay products are hazardous if inhaled or ingested
- Consider use in closed pressurised systems, fitted with temperature, pressure and safety relief valves which are vented for safe dispersal.
- Use only properly specified equipment which is suitable for this product, its supply pressure and temperature
- The tubing network design connecting gas cylinders to the delivery system should include appropriate pressure indicators and vacuum or suction lines.
  - Fully-welded types of pressure gauges, where the bourdon tube sensing element is welded to the gauge body, are recommended.
  - Before connecting gas cylinders, ensure manifold is mechanically secure and does not contain another gas. Before disconnecting gas cylinder, isolate supply line segment proximal to cylinder, remove trapped gas in supply line with aid of vacuum pump
  - When connecting or replacing cylinders take care to avoid airborne particulates violently ejected when system pressurises.
- DO NOT transfer gas from one cylinder to another.**

#### Fire and explosion protection

See section 5

#### Other information

- Cylinders should be stored in a purpose-built compound with good ventilation, preferably in the open.
- Such compounds should be sited and built in accordance with statutory requirements.
- The storage compound should be kept clear and access restricted to authorised personnel only.
- Cylinders stored in the open should be protected against rust and extremes of weather.
- Cylinders in storage should be properly secured to prevent toppling or rolling.

### 7.2. Conditions for safe storage, including any incompatibilities

#### Suitable container

- **DO NOT use aluminium or galvanised containers**
- Cylinder:
- Ensure the use of equipment rated for cylinder pressure.
- Ensure the use of compatible materials of construction.
- Valve protection cap to be in place until cylinder is secured, connected.
- Cylinder must be properly secured either in use or in storage.
- Cylinder valve must be closed when not in use or when empty.

#### Storage incompatibility

Methylene chloride

- is a combustible liquid under certain circumstances even though there is no measurable flash point and it is difficult to ignite
- it is flammable in ambient air in the range 12-23%; increased oxygen content can greatly enhance fire and explosion potential
- contact with hot surfaces and elevated temperatures can form fumes of hydrogen chloride and phosgene
- reacts violently with active metals, aluminium, lithium, methanol,, peroxydisulfuryl difluoride, potassium, potassium tert-butoxide, sodium
- forms explosive mixtures with nitric acid
- is incompatible with strong oxidisers, strong caustics, alkaline earths and alkali metals
- attacks some plastics, coatings and rubber
- may generate electrostatic charge due to low conductivity

Butane/ isobutane

- reacts violently with strong oxidisers
- reacts with acetylene, halogens and nitrous oxides
- is incompatible with chlorine dioxide, conc. nitric acid and some plastics
- may generate electrostatic charges, due to low conductivity, in flow or when agitated - these may ignite the vapour.



**Storage incompatibility (continued)**

Segregate from nickel carbonyl in the presence of oxygen, heat (20-40 C)

Propane:

- reacts violently with strong oxidisers, barium peroxide, chlorine dioxide, dichlorine oxide, fluorine etc.
- liquid attacks some plastics, rubber and coatings
- may accumulate static charges which may ignite its vapours
- Segregate from alcohol, water.
- Avoid reaction with oxidising agents
- Compressed gases may contain a large amount of kinetic energy over and above that potentially available from the energy of reaction
- produced by the gas in chemical reaction with other substances

**7.3. Specific end use(s)**
**Specific end use(s)** See section 1.2

**SECTION 8: Exposure controls/Personal protection**
**8.1. Control parameters**

Ingredient	DNELs Exposure Pattern Worker	PNECs Compartment
methylene chloride	Dermal 12 mg/kg bw/day (Systemic, Chronic) Inhalation 176 mg/m <sup>3</sup> (Systemic, Chronic) Dermal 5.82 mg/kg bw/day (Systemic, Chronic) * Inhalation 44 mg/m <sup>3</sup> (Systemic, Chronic) * Oral 0.06 mg/kg bw/day (Systemic, Chronic) *	0.31 mg/L (Water (Fresh)) 0.031 mg/L (Water - Intermittent release) 0.27 mg/L (Water (Marine)) 2.57 mg/kg sediment dw (Sediment (Fresh Water)) 0.26 mg/kg sediment dw (Sediment (Marine)) 0.33 mg/kg soil dw (Soil) 26 mg/L (STP)

\* Values for General Population

**Occupational Exposure Limits (OEL)**
**INGREDIENT DATA**

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
EU Consolidated List of Indicative Occupational Exposure Limit Values (IOELVs)	methylene chloride	Methylene chloride; Dichloromethane	100 ppm / 353 mg/m <sup>3</sup>	706 mg/m <sup>3</sup> / 200 ppm	Not Available	Skin

**Emergency Limits**

Ingredient	TEEL-1	TEEL-2	TEEL-3
methylene chloride	Not Available	Not Available	Not Available
butane	Not Available	Not Available	Not Available
propane	Not Available	Not Available	Not Available
iso-butane	5500* ppm	17000** ppm	53000*** ppm

Ingredient	Original IDLH	Revised IDLH
methylene chloride	2,300 ppm	Not Available
butane	Not Available	1,600 ppm
propane	2,100 ppm	Not Available
iso-butane	Not Available	Not Available

## 8.2. Exposure controls

### 8.2.1. Appropriate engineering controls

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.

### 8.2.2. Personal protection



#### Eye and face protection

- Safety glasses with side shields.
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses 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.

#### Skin protection

See Hand protection below

#### Hands/feet protection

When handling sealed and suitably insulated cylinders wear cloth or leather gloves.

#### Body protection

See Other protection below

#### Other protection

- Employees working with confirmed human carcinogens should be provided with, and be required to wear, clean, full body protective clothing (smocks, coveralls, or long-sleeved shirt and pants), shoe covers and gloves prior to entering the regulated area. [AS/NZS ISO 6529:2006 or national equivalent]
- Employees engaged in handling operations involving carcinogens should be provided with, and required to wear and use half-face filter-type respirators with filters for dusts, mists and fumes, or air purifying canisters or cartridges. A respirator affording higher levels of protection may be substituted. [AS/NZS 1715 or national equivalent]
- Emergency deluge showers and eyewash fountains, supplied with potable water, should be located near, within sight of, and on the same level with locations where direct exposure is likely.
- Prior to each exit from an area containing confirmed human carcinogens, employees should be required to remove and leave protective clothing and equipment at the point of exit and at the last exit of the day, to place used clothing and equipment in impervious containers at the point of exit for purposes of decontamination or disposal. The contents of such impervious containers must be identified with suitable labels. For maintenance and decontamination activities, authorized employees entering the area should be provided with and required to wear clean, impervious garments, including gloves, boots and continuous-air supplied hood.
- Prior to removing protective garments the employee should undergo decontamination and be required to shower upon removal of the garments and hood.
- Protective overalls, closely fitted at neck and wrist.
- Eye-wash unit.
- Ensure availability of lifeline in confined spaces.
- Staff should be trained in all aspects of rescue work.
- Rescue gear: Two sets of SCBA breathing apparatus Rescue Harness, lines etc.

**Recommended material(s)**
**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:  
 TIMBOND SPRAY ADHESIVE CANISTER

Material	CPI
PE/EVAL/PE	A
PVA	A
TEFLON	B
BUTYL	C
CPE	C
NATURAL RUBBER	C
NEOPRENE	C
VITON	C
VITON/BUTYL	C
VITON/CHLOROBUTYL	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.

**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	AX-AUS / Class 1	-	AX-PAPR-AUS / Class 1
up to 50 x ES	Air-line*	-	-
up to 100 x ES	-	AX-3	-
100+ 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
- Positive pressure, full face, air-supplied breathing apparatus should be used for work in enclosed spaces if a leak is suspected or the primary containment is to be opened (e.g. for a cylinder change)
- Air-supplied breathing apparatus is required where release of gas from primary
- containment is either suspected or demonstrated.

Selection of the Class and Type of respirator will depend upon the level of breathing zone contaminant and the chemical nature of the contaminant. Protection Factors (defined as the ratio of contaminant outside and inside the mask) may also be important.

Required minimum protection factor	Maximum gas/vapour concentration present in air p.p.m. (by volume)	Half-face Respirator	Full-Face Respirator
up to 10	1000	AX-AUS / Class 1	-
up to 50	1000	-	AX-AUS / Class 1
up to 50	5000	Airline *	-
up to 100	5000	-	AX-2
up to 100	10000	-	AX-3
100+		-	Air-line**

\*\* - 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 deg C)

### 8.2.3. Environmental exposure controls

See section 12

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

<b>Appearance</b>	Coloured	<b>Partition coefficient n-octanol / water</b>	Not available
<b>Physical state</b>	Dissolved Gas	<b>Auto-ignition temperature (°C)</b>	Not Available
<b>Odour</b>	Not Available	<b>Decomposition temperature (°C)</b>	Not available
<b>Odour threshold</b>	Not available	<b>Viscosity (cSt)</b>	>20.5
<b>pH (as supplied)</b>	Not available	<b>Molecular weight (g/mol)</b>	Not available
<b>Melting point / freezing point (°C)</b>	Not available	<b>Initial boiling point and boiling range (°C)</b>	Not available
<b>Initial boiling point and boiling range (°C)</b>	40	<b>Taste</b>	Not available
<b>Flash point (°C)</b>	Not available	<b>Explosive properties</b>	Not available
<b>Evaporation rate</b>	Not available	<b>Oxidising properties</b>	Not available
<b>Flammability</b>	Not available	<b>Surface Tension (dyn/cm or mN/m)</b>	Not available
<b>Upper Explosive Limit (%)</b>	Not available	<b>Volatile Component (%vol)</b>	Not available
<b>Lower Explosive Limit (%)</b>	Not available	<b>Gas group</b>	Not available
<b>Vapour pressure (kPa)</b>	Not available	<b>pH as a solution (Not Available%)</b>	Immiscible
<b>Solubility in water</b>	Immiscible	<b>VOC g/L</b>	716.28
<b>Vapour density (Air = 1)</b>	Not available	<b>Nanoform Particle Characteristics</b>	Not available
<b>Nanoform Solubility</b>	Not available		
<b>Relative density (Water = 1)</b>	1.20		
<b>Particle Size</b>	Not available		

### 9.2. Other information

Not available

## SECTION 10: Stability and reactivity

<b>10.1. Reactivity</b>	See section 7.2
<b>10.2. Chemical stability</b>	<ul style="list-style-type: none"> <li>• Unstable in the presence of incompatible materials.</li> <li>• Product is considered stable.</li> <li>• Hazardous polymerisation will not occur.</li> </ul>
<b>10.3. Possibility of hazardous reactions</b>	See section 7.2
<b>10.4. Conditions to avoid</b>	See section 7.2
<b>10.5. Incompatible materials</b>	See section 7.2
<b>10.6. Hazardous decomposition products</b>	See section 5.3

**SECTION 11: Toxicological information****11.1. Information on toxicological effects****Inhaled**

The material is not thought to produce respiratory irritation (as classified by EC Directives using animal models). Nevertheless inhalation of the material, especially for prolonged periods, may produce respiratory discomfort and occasionally, distress.

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.

Isobutane produces a dose dependent action and at high concentrations may cause numbness, suffocation, exhilaration, dizziness, headache, nausea, confusion, incoordination and unconsciousness in severe cases.

The paraffin gases are practically not harmful at low doses. Higher doses may produce reversible brain and nerve depression and irritation.

Inhalation of the vapour is hazardous and may even be fatal

The use of a quantity of material in an unventilated or confined space may result in increased exposure and an irritating atmosphere developing.

Before starting consider control of exposure by mechanical ventilation.

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 hazard is increased at higher temperatures.

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.

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.

Inhalation exposure may cause susceptible individuals to show change in heart beat rhythm i.e. cardiac arrhythmia. Exposures must be terminated.

Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may be damaging to the health of the individual.

<b>Ingestion</b>	<p>Not normally a hazard due to physical form of product.          Considered an unlikely route of entry in commercial/industrial environments          Isoparaffinic hydrocarbons cause temporary lethargy, weakness, inco-ordination and diarrhoea.          Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual.</p>
<b>Skin Contact</b>	<p>The material may accentuate any pre-existing dermatitis condition          Open cuts, abraded or irritated skin should not be exposed to this material          Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.          Skin contact with the material may damage the health of the individual; systemic effects may result following absorption.          The material may cause severe inflammation of the skin either following direct contact or after a delay of some time. Repeated exposure can cause contact dermatitis which is characterised by redness, swelling and blistering.</p>
<b>Eye</b>	<p>Not considered to be a risk because of the extreme volatility of the gas.          There is some evidence that material may produce eye irritation in some persons and produce eye damage 24 hours or more after instillation.          Moderate inflammation may be expected with redness; conjunctivitis may occur with prolonged exposure.</p>
<b>Chronic</b>	<p>Strong evidence exists that this substance may cause irreversible mutations (though not lethal) even following a single exposure.          There is sufficient evidence to suggest that this material directly causes cancer in humans.          Toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.          This material can cause serious damage if one is exposed to it for long periods. It can be assumed that it contains a substance which can produce severe defects.          Ample evidence from experiments exists that there is a suspicion this material directly reduces fertility.          Main route of exposure to the gas in the workplace is by inhalation.</p>

**TIMBOND SPRAY  
 ADHESIVE CANISTER**
**TOXICITY**

Not Available

**IRRITATION**

Not Available

**methylene chloride**
**TOXICITY**

 dermal (rat) LD50: >2000 mg/kg<sup>[2]</sup>

 Inhalation(Rat) LC50; 76 mg/L4h<sup>[2]</sup>

 Oral (Rat) LD50; 1600 mg/kg<sup>[2]</sup>
**IRRITATION**

Eye(rabbit): 162 mg - moderate

Eye(rabbit): 500 mg/24hr - mild

Skin (rabbit): 100mg/24hr-moderate

Skin (rabbit): 810 mg/24hr-SEVERE

**butane**
**TOXICITY**

 Not Av Inhalation(Rat) LC50; 658 mg/14h<sup>[2]</sup>  
 ailable

**IRRITATION**

Not Available

**propane**
**TOXICITY**

 Inhalation(Rat) LC50; >13023 ppm4h<sup>[1]</sup>
**IRRITATION**

Not Available

**iso-butane**
**TOXICITY**

 Inhalation(Rat) LC50; >13023 ppm4h<sup>[1]</sup>
**IRRITATION**

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

**TIMBOND SPRAY  
 ADHESIVE CANISTER**

Laboratory (in vitro) and animal studies show, exposure to the material may result in a possible risk of irreversible effects, with the possibility of producing mutation.

**METHYLENE CHLORIDE**

Inhalation (human) TCLo: 500 ppm/ 1 y - I Eye(rabbit): 10 mg - mild  
 The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.  
 The material may cause severe 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. Repeated exposures may produce severe ulceration.

**WARNING:** This substance has been classified by the IARC as Group 2A: Probably Carcinogenic to Humans.

**TIMBOND SPRAY  
 ADHESIVE CANISTER &  
 METHYLENE CHLORIDE**

<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>	×
<b>Legend</b>	× Data either not available or does not fill the criteria for classification ✓ Data available to make classification		

**11.2 Information on other hazards**
**11.2.1. Endocrine Disruption Properties**

Not available



## SECTION 12: Ecological information

### 12.1. Toxicity

TIMBOND SPRAY ADHESIVE CANISTER	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available
methylene chloride	Endpoint	Test Duration (hr)	Species	Value	Source
	BCF	1008h	Fish	2-5.4	7
	EC50(ECx)	96h	Algae or other aquatic plants	0.98mg/l	4
	EC50	72h	Algae or other aquatic plants	202-286mg/l	4
	EC50	48h	Crustacea	150-218mg/l	4
	LC50	96h	Fish	2-3.3mg/l	4
	EC50	96h	Algae or other aquatic plants	0.98mg/l	4
butane	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50(ECx)	96h	Algae or other aquatic plants	7.71mg/l	2
	LC50	96h	Fish	24.11mg/l	2
	EC50	96h	Algae or other aquatic plants	7.71mg/l	2
propane	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50(ECx)	96h	Algae or other aquatic plants	7.71mg/l	2
	LC50	96h	Fish	24.11mg/l	2
	EC50	96h	Algae or other aquatic plants	7.71mg/l	2
iso-butane	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50(ECx)	96h	Algae or other aquatic plants	7.71mg/l	2
	LC50	96h	Fish	24.11mg/l	2
	EC50	96h	Algae or other aquatic plants	7.71mg/l	2

#### 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

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.

Wastes resulting from use of the product must be disposed of on site or at approved waste sites.

For Methylene Chloride: Log Kow: 1.25; Log Koc: 1.68; Log Kom: 1.44; Henry's atm m<sup>3</sup>/mol: 2.68E-03; Henry's Law Constant: 0.002 atm/m<sup>3</sup>/mol; BCF: 5.

Atmospheric Fate: Methylene chloride is a volatile liquid that tends to evaporate to the atmosphere from water and soil. The main degradation pathway for methylene chloride in air is via reactions with hydroxyl radicals the average atmospheric lifetime is estimated to be 130 days. Because this degradation pathway is relatively slow, methylene chloride may become widely dispersed but, is not likely to accumulate in the atmosphere. The small amount of methylene chloride which reaches the stratosphere, (about 1%), may undergo direct breakdown by sunlight; however, this is not expected to occur in the troposphere.

For Butane (Synonym: n-Butane): Log Kow: 2.89; Koc: 450-900; Henry's Law Constant: 0.95 atm-cu m/mole, Vapor Pressure: 1820 mm Hg; BCF: 1.9.

Atmospheric Fate: Butane is expected to exist only as a gas in the ambient atmosphere. Gas-phase n-butane is degraded in the atmosphere by reaction with hydroxyl radicals; the half-life for this reaction in air is estimated to be 6.3 days, (@ 25 C). Butane is not expected to absorb UV light and probably will probably not be broken down directly by sunlight in the atmosphere. Nighttime reactions with radical species and nitrogen oxides may contribute to the atmospheric transformation of butane.

For Isobutene (Refrigerant Gas): Koc: 35, (estimated); Henry's Law Constant: 4.08 atm-cu m/mole; Vapor Pressure: 2611 mm Hg @ 25 deg C; BCF: 74, (estimated).

Atmospheric Fate: Isobutane is a gas at ordinary temperatures. The substance is highly flammable and explosive. It is degraded in the atmosphere by reactions with hydroxyl radicals;

the half-life for this reaction in air is 6.9 days. The loss of these substances via wet/dry deposition is thought to be of minor importance.

For Propane: Koc 460. log

Kow 2.36.

Henry's Law constant of 7.07x10<sup>-1</sup> atm-cu m/mole, derived from its vapour pressure, 7150 mm Hg, and water solubility, 62.4 mg/L. Estimated BCF: 13.1.

Terrestrial Fate: Propane is expected to have moderate mobility in soil.

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

### 12.2. Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
methylene chloride	LOW (Half-life = 56 days)	HIGH (Half-life = 191 days)
butane	LOW	LOW
propane	LOW	LOW
iso-butane	HIGH	HIGH

### 12.3. Bioaccumulative potential

Ingredient	Bioaccumulation
methylene chloride	LOW (BCF = 40)
butane	LOW (LogKOW = 2.89)
propane	LOW (LogKOW = 2.36)
iso-butane	LOW (BCF = 1.97)

### 12.4. Mobility in soil

Ingredient	Bioaccumulation
methylene chloride	LOW (KOC = 23.74)
butane	LOW (KOC = 43.79)
propane	LOW (KOC = 23.74)
iso-butane	LOW (KOC = 35.04)

### 12.5. Results of PBT and vPvB assessment

	P	B	T
Relevant available data	Not Available	Not Available	Not Available
PBT	x	x	x
vPvB	x	x	x
PBT Criteria fulfilled?	No		
vPvB	No		

### 12.6. Other adverse effects

Not Available

### 12.7. Other adverse effects

Not Available

**SECTION 13: Disposal considerations****13.1. Waste treatment methods**

<b>Product / Packaging disposal</b>	<ul style="list-style-type: none"><li>• DO NOT allow wash water from cleaning or process equipment to enter drains.</li><li>• It may be necessary to collect all wash water for treatment before disposal.</li><li>• In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.</li><li>• Where in doubt contact the responsible authority.</li><li>• Evaporate residue at an approved site.</li><li>• Return empty containers to supplier. If containers are marked non-returnable establish means of disposal with manufacturer prior to purchase.</li><li>• Ensure damaged or non-returnable cylinders are gas-free before disposal.</li></ul>
<b>Waste treatment options</b>	Not Available
<b>Sewage disposal options</b>	Not Available

**SECTION 14: Transport information****Labels Required**

<b>Marine Pollutant</b>	NO
<b>HAZCHEM</b>	2YE

**Land transport (ADR-RID)****14.1. UN number**

3501

**14.2. UN proper shipping name**

CHEMICAL UNDER PRESSURE, FLAMMABLE, N.O.S. (contains propane)

**14.3. Transport hazard class(es)**

<b>Class</b>	2.1
<b>Subrisk</b>	Not Applicable

**14.4. Packing group**

Not applicable.

**14.5. Environmental hazards**

Not Applicable

**14.6. Special precautions for user**

<b>Hazard identification (Kemler)</b>	23
<b>Classification code</b>	8F
<b>Hazard Label</b>	2.1
<b>Special provisions</b>	274 659
<b>Tunnel Restriction Code</b>	2 (B/D)

**Air transport (ICAO-IATA /DGR)****14.1. UN number**

3501

**14.2. UN proper shipping name**

Chemical under pressure, flammable, n.o.s. \* (contains propane)

**14.3. Transport hazard class(es)**

<b>ICAO/IATA Class</b>	2.1
<b>ICAO / IATA Subrisk</b>	Not Applicable
<b>ERG Code</b>	10L

**14.4. Packing group**

Not applicable.

**14.5. Environmental hazards**

Not Applicable

**14.6. Special precautions for user**

<b>Special provisions</b>	A1 A187
<b>Cargo Only Packing Instructions</b>	218
<b>Cargo Only Maximum Qty / Pack</b>	75 kg
<b>Passenger and Cargo Packing Instructions</b>	Forbidden
<b>Passenger and Cargo Maximum Qty / Pack</b>	Forbidden
<b>Passenger and Cargo Limited Quantity Packing Instructions</b>	Forbidden
<b>Passenger and Cargo Limited Maximum Qty / Pack</b>	Forbidden

**Sea transport (IMDG-Code / GGVSee)****14.1. UN number**

3501

**14.2. UN proper shipping name**

CHEMICAL UNDER PRESSURE, FLAMMABLE, N.O.S. (contains propane)

**14.3. Transport hazard class(es)****IMDG Class** 2.1**IMDG Subrisk** Not Applicable**14.4. Packing group**

Not applicable.

**14.5. Environmental hazards**

Not Applicable

**14.6. Special precautions for user****Special provisions** A1 A187**EMS Number** F-D, S-U**Special provisions** 274 362**Limited Quantities** 0**Inland waterways transport (ADN)****14.1. UN number**

3501

**14.2. UN proper shipping name**

CHEMICAL UNDER PRESSURE, FLAMMABLE, N.O.S. (contains propane)

**14.3. Transport hazard class(es)**

2.1 Not Applicable

**14.4. Packing group**

Not applicable.

**14.5. Environmental hazards**

Not Applicable

**14.6. Special precautions for user****Classification code** 8F**Special provisions** 274; 659**Equipment required** PP, EX, A**Fire cones number** 1

**14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code**

Not applicable.

**14.8. Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code**

Product name	Group
methylene chloride	Not Available
butane	Not Available
propane	Not Available
iso-butane	Not Available

**14.9. Transport in bulk in accordance with the ICG Code**

Product name	Ship Type
methylene chloride	Not Available
butane	Not Available
propane	Not Available
iso-butane	Not Available

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations / legislation specific for the substance or mixture****methylene chloride is found on the following regulatory lists**

Chemical Footprint Project - Chemicals of High Concern List  
EU Consolidated List of Indicative Occupational Exposure Limit Values (IOELVs)  
EU European Chemicals Agency (ECHA) Community Rolling Action Plan (CoRAP) List of Substances  
EU REACH Regulation (EC) No 1907/2006 - Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles  
Europe EC Inventory  
European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)  
European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI  
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs  
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 2A: Probably carcinogenic to humans

**butane is found on the following regulatory lists**

Chemical Footprint Project - Chemicals of High Concern List  
EU REACH Regulation (EC) No 1907/2006 - Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles  
EU REACH Regulation (EC) No 1907/2006 - Annex XVII (Appendix 1) Carcinogens: Category 1 A  
EU REACH Regulation (EC) No 1907/2006 - Annex XVII (Appendix 4) Germ cell mutagens: Category 1 B  
Europe EC Inventory  
European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)  
European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI

**propane is found on the following regulatory lists**

EU REACH Regulation (EC) No 1907/2006 - Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Europe EC Inventory

European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)

European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI

**iso-butane is found on the following regulatory lists**

Chemical Footprint Project - Chemicals of High Concern List

EU REACH Regulation (EC) No 1907/2006 - Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

EU REACH Regulation (EC) No 1907/2006 - Annex XVII (Appendix 1) Carcinogens:

Category 1 A

EU REACH Regulation (EC) No 1907/2006 - Annex XVII (Appendix 4) Germ cell mutagens: Category 1 B

Europe EC Inventory

European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)

European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI

**15.2. Chemical safety assessment**

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

**ECHA SUMMARY**

Ingredient	CAS number	Index No	ECHA Dossier
methylene chloride	75-09-2	602-004-00-3	Not Available
Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Carc. 2	GHS08; Wng	H351
2	STOT SE 3; STOT SE 3; Carc. 2; STOT SE 1; Expl. 1.1; Flam. Gas 1; Aerosol 1; Flam. Liq. 1; Flam. Sol. 1; Org. Perox. A; Pyr. Liq. 1; Self-heat. 1; Water-react. 1; Ox. Gas 1; Ox. Liq. 1; Comp.; Met. Corr. 1; Acute Tox. 1; Asp. Tox. 1; Acute Tox. 1; Skin Corr. 1A; Skin Sens. 1; Eye Dam. 1; Acute Tox. 1; Resp. Sens. 1; Muta. 1A; Repr. 1A; Lact.; STOT RE 1; Aquatic Acute 2; Aquatic Chronic 2	GHS08; Dgr; GHS01; GHS09	H351; H319; H336; H302; H341; H335; H314; H370; H202; H372; H401; H411; H360

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Ingredient	CAS number	Index No	ECHA Dossier
butane	106-97-8.	601-004-00-0 601-004-01-8	Not Available
Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Flam. Gas 1	GHS02; GHS04; Dgr	H220
2	Flam. Gas 1; Liq.; Muta. 1B; Carc. 1A; STOT SE 3	GHS02; GHS04; Dgr; GHS08	H220; H280; H340; H350; H304; H315; H335; H336; H361; H373; H411; H223; H229; H371

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Ingredient	CAS number	Index No	ECHA Dossier
propane	74-98-6	601-003-00-5	Not Available
Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Flam. Gas 1	GHS02; GHS04; Dgr	H220
2	Flam. Gas 1; Liq.; Skin Irrit. 2; Eye Irrit. 2; Acute Tox. 4; STOT SE 3; Muta. 1B; Carc. 1A; Flam. Liq. 2; Asp. Tox. 1; STOT SE 3; Repr. 2; STOT RE 2; Aquatic Chronic 2	GHS02; GHS04; Dgr; GHS03; GHS08; GHS09	H220; H280; H223; H229; H315; H319; H332; H335; H340; H350; H225; H304; H336; H361; H373; H411

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Ingredient	CAS number	Index No	ECHA Dossier
iso-butane	75-28-5.	601-004-00-0 601-004-01-8	Not Available
Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Flam. Gas 1	GHS02; GHS04; Dgr	H220
2	Flam. Gas 1; Liq.; Muta. 1B; Carc. 1A; STOT SE 3; STOT SE 1	GHS04; Dgr; GHS08; GHS01	H220; H280; H340; H350; H336; H223; H229; H370

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.



**National Inventory Status**

<b>National Inventory</b>	<b>Status</b>
Australia - AIC / Australia Non-Industrial Use	Yes
Canada - DSL	Yes
Canada - NDSL	No (methylene chloride; butane; propane; iso-butane)
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	Yes
Vietnam - NCI	Yes
Russia - FBEPH	Yes

## Legewnd:

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****Issued by** Compliance**Revision date** 20/10/2022

**Hazard statements in full**

H202 Explosive, severe projection hazard.  
H220 Extremely flammable gas.  
H223 Flammable aerosol.  
H225 Highly flammable liquid and vapour.  
H229 Pressurised container: May burst if heated.  
H280 Contains gas under pressure; may explode if heated.  
H302 Harmful if swallowed.  
H304 May be fatal if swallowed and enters airways.  
H314 Causes severe skin burns and eye damage.  
H319 Causes serious eye irritation.  
H332 Harmful if inhaled.  
H335 May cause respiratory irritation.  
H336 May cause drowsiness or dizziness.  
H340 May cause genetic defects.  
H341 Suspected of causing genetic defects.  
H350 May cause cancer.  
H360 May damage fertility or the unborn child.  
H361 Suspected of damaging fertility or the unborn child.  
H370 Causes damage to organs.  
H371 May cause damage to organs.  
H372 Causes damage to organs through prolonged or repeated exposure.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H401 Toxic to aquatic life.  
H411 Toxic to aquatic life with long lasting effects.

**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.

For detailed advice on Personal Protective Equipment, refer to the following EU CEN Standards:

- EN 166 Personal eye-protection
- EN 340 Protective clothing
- EN 374 Protective gloves against chemicals and micro-organisms
- EN 13832 Footwear protecting against chemicals
- EN 133 Respiratory protective devices

**Definitions and abbreviations**

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

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.