1. IDENTIFICATION OF THE SUBSTRATE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Trade name/designation: Euroroof Spray Cleaning Solvent.

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

Relevant identified uses: Solvent.

1.3 Supplier details

Alumasc Building Products Ltd
White House Works, Bold Road, Sutton, St Helens, Merseyside, United Kingdom, WA9 4JG
Tel: +44 (0)1744 648400
e-mail: technical@alumascroofing.com

1.4 Emergency telephone number

Association / Organisation:National Poisons Information Service
Emergency telephone numbers:0344 892 0111 (Healthcare professionals only)
Other emergency telephone numbers Alumasc Building Products: +44 17 4464 8400
(Mon-Thurs – 08.30-17.00 Fri – 08.30-16.00)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Considered a hazardous mixture according to Reg. (EC) No 1272/2008 and their amendments. Classified as Dangerous Goods for transport purposes.

Classification according to Regulation (EC) No. 1272/2008 [CLP][1]:
H336 - Specific Target Organ Toxicity - Single Exposure (Narcotic Effects) Category 3, H302 - Acute Toxicity (Oral) Category 4, H315 - Skin Corrosion/Irritation Category 2, H319 - Serious Eye Damage/Eye Irritation Category 2, H351 - Carcinogenicity Category 2, H222+H229 - Aerosols Category 1.
Legend:
1. Classified by Chemwatch; 2. Classification drawn from GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567.

2.2 Label elements

Hazard pictures:

Signal word: Danger.

Hazard statements:
H336 May cause drowsiness or dizziness.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H351 Suspected of causing cancer.
H222+H229 Extremely flammable aerosol. Pressurized container: may burst if heated.

Supplementary statements: EUH044 Risk of explosion if heated under confinement.

Precautionary statements prevention:
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
P261 Avoid breathing vapour/ spray
P264 Wash contaminated skin thoroughly after handling
P271 Use only outdoors or in a well-ventilated area
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection

Precautionary statements response: P308+P313 IF exposed or concerned: Get medical advice/ attention.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P302+P352 IF ON SKIN: Wash with plenty of water and soap.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing
P362+P364 Take off contaminated clothing and wash it before reuse
P337+P313 If eye irritation persists: Get medical advice/attention.
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor/physician/first aider if you feel unwell.
P330 Rinse mouth.
P332+P313 If skin irritation occurs: Get medical advice/attention.

Precautionary statements storage: 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.

Precautionary statements disposal: P501: Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

2.3 Other hazards

Methylene Chloride: Listed in the Europe Regulation (EC) No 1907/2006 - Annex XVII (restrictions may apply).

3. COMPOSITION AND INFORMATION ABOUT THE COMPONENTS

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 3. 602-004-00-3 4. Not available	60-100	Methylene Chloride *	Carcinogenicity Category 2, Acute Toxicity (Oral) Category 4, Skin Corrosion/Irritation Category 2; H351, H302, H315 [2]	Not available	Not available
1. 68476-85-7 2. 270-704-2 3. 649-202-00-6 4. Not available	30-60	LPG (Liquefied Petroleum Gas)	Flammable Gases Category 1A, Gases Under Pressure (Liquefied Gas); H220, H280 [1]	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.				

4. FIRST AID MEASURES

4.1 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 skin contact occurs:	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:	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 petroleum distillates:
- In case of ingestion, gastric lavage with activated charcoal can be used promptly to prevent absorption - decontamination (induced emesis or lavage) is controversial and should be considered on the merits of each individual case; of course the usual precautions of an endotracheal tube should be considered prior to lavage, to prevent aspiration.
- Individuals intoxicated by petroleum distillates should be hospitalized immediately, with acute and continuing attention to neurologic and cardiopulmonary function.
- Positive pressure ventilation may be necessary.
- Acute central nervous system signs and symptoms may result from large ingestions of aspiration-induced hypoxia.
- After the initial episode, individuals should be followed for changes in blood variables and the delayed appearance of pulmonary oedema and chemical pneumonitis. Such patients should be followed for several days or weeks for delayed effects, including bone marrow toxicity, hepatic and renal impairment Individuals with chronic pulmonary disease will be more seriously impaired, and recovery from inhalation exposure may be complicated.
- Gastrointestinal symptoms are usually minor and pathological changes of the liver and kidneys are reported to be uncommon in acute intoxications.

- Chlorinated and non-chlorinated hydrocarbons may sensitize the heart to epinephrine and other circulating catecholamines so that arrhythmias may occur. Careful consideration of this potential adverse effect should precede administration of epinephrine or other cardiac stimulants and the selection of bronchodilators.

BP America Product Safety & Toxicology Department
Treat symptomatically.
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.
- 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

5. FIRE-FIGHTING MEASSURES

5.1 Extinguishing media

For small fire:
Water spray, dry chemical or CO2

Large fire:
Water spray or fog.

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 fire-fighters

Fire-fighting:

- 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.

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.

Decomposition may produce toxic fumes of:
carbon monoxide (CO)
carbon dioxide (CO2)
hydrogen chloride
phosgene

Other pyrolysis products typical of burning organic material.
Contains low boiling substance: Closed containers may rupture due to pressure buildup under fire conditions.
- Non flammable liquid.
- However vapour will burn when in contact with high temperature flame.
- Ignition ceases on removal of flame.

WARNING: Aerosol containers may present pressure related hazards.

6. ACCIDENTIAL 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:
- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Wear protective clothing, impervious gloves and safety glasses.

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.
- 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.
- 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. Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- May be violently or explosively reactive.

6.4 Reference to other sections

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

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Safe handling:
Radon and its radioactive decay products are hazardous if inhaled or ingested
- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.

Fire & 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.

7.2 Conditions for safe storage, including any incompatibilities

Suitable container:
- **DO NOT** use aluminium or galvanised containers.
- Aerosol dispenser.
- Check that containers are clearly labelled.

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.
- Its 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.

Low molecular weight alkanes:

- May react violently with strong oxidisers, chlorine, chlorine dioxide, dioxygenyl tetrafluoroborate.
- May react with oxidising materials, nickel carbonyl in the presence of oxygen, heat.
- Are incompatible with nitronium tetrafluoroborate(1-), halogens and interhalogens
- may generate electrostatic charges, due to low conductivity, on flow or agitation.

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

						
+	X	+	X	+	+	+

X - Must not be stored together.
O - May be stored together with specific preventions.
+ - 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.

7.3 Specific end uses(s)

See Section 1.2.

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/m³ (Systemic, Chronic) *Dermal 5.82 mg/kg bw/day (Systemic, Chronic) ** *Inhalation 44 mg/m³ (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)

LPG (Liquefied Petroleum Gas):	Dermal 23.4 mg/kg bw/day (Systemic, Chronic)	Not available

* 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/m3	706 mg/m3 / 200 ppm	Not available	skin
UK Workplace Exposure Limits (WELs):	Methylene Chloride	Dichloromethane	100 ppm / 353 mg/m3	706 mg/m3 / 200 ppm	Not available	BMGV, Sk
UK Workplace Exposure Limits (WELs):	LPG (Liquefied Petroleum Gas)	Liquefied Petroleum Gas	1000 ppm / 1750 mg/m3	2180 mg/m3 / 1250 ppm	Not available	Carc (only applies if LPG contains more than 0.1% of buta-1,3-diene)

Emergency limits:

Ingredient	TEEL-1	TEEL-2	TEEL-3
Methylene Chloride	Not available	Not available	Not available
LPG (Liquefied Petroleum Gas)	65,000 ppm	2.30E+05 ppm	4.00E+05 ppm

Ingredient	Original IDLH	Revised IDLH
Methylene Chloride	2,300 ppm	Not available
LPG (Liquefied Petroleum Gas)	2,000 ppm	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.
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.
Skin protection:	See Hand Protection below.
Hands/feet protection:	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.
Body protection:	See Other Protection below.

Other protection:	No special equipment needed when handling small quantities. **OTHERWISE:** Overalls. Skin cleansing cream.

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:
Euroroof Spray Cleaning Solvent.

Material	CPI	Material	CPI
PE/EVAL/PE	A	NATURAL RUBBER	C
PVA	A	NEOPRENE	C
TEFLON	B	VITON	C
BUTYL	C	VITON/BUTYL	C
CPE	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)
- 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+		-	Airline**

** - Continuous-flow or positive pressure demand.
A(All classes) = Organic vapours, B AUS or B1 = Acid gases, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Important health, safety and environmental information

Appearance:	Clear. Aerosol		
Physical state:	Aerosol	**Relative density (Water = 1):**	1.2-1.4
Odour:	Not available	**Partition coefficient n-octanol/water:**	1.25
Odour threshold:	Not available	**Auto-ignition temperature (°C):**	Not available
pH (as supplied):	Not available	**Decomposition temperature:**	Not available
Melting point/freezing point (°C):	Not available	**Viscosity (cSt):**	392.857-535.714
Initial boiling point and boiling range (°C):	40	**Molecular weight (g/mol):**	Not available
Flash point (°C):	Not available	**Taste:**	Not available
Evaporation rate:	27.5 BuAC = 1	**Explosive properties:**	In use may form flammable/ explosive vapour-air mixture
Flammability:	Not available	**Oxidising properties:**	Does not meet the criteria for classification as oxidising
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 (1%):**	Not available
Vapour density (Air = 1):	Not available	**VOC g/L:**	Not available
Nanoform Solubility:	Not available	**Nanoform Particle Characteristics:**	Not available
Particle Size:	Not available		

9.2 Other information

Not available.

10. STABILITY AND REACTIVITY

10.1 Reactivity

See Section 7.2.

10.2 Chemical stability

Elevated temperatures.
Presence of open flame.
Product is considered stable.
Presence of heat source
Presence of an ignition source

10.3 Possibility of hazardous reactions

See Section 7.2.

10.4 Conditions to avoid

See Section 7.2.

10.5 Incompatible materials

See Section 7.2.

10.6 Hazardous decomposition products

See Section 5.3

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Inhaled:	Inhalation of aerosols (mists, fumes), generated by the material during the course of normal handling, may be harmful. 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. 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. **WARNING:** Intentional misuse by concentrating/inhaling contents may be lethal. Inhalation exposure may cause susceptible individuals to show change in heart beat rhythm i.e. cardiac arrhythmia. Exposures must be terminated. Acute intoxication by halogenated aliphatic hydrocarbons appears to take place over two stages. Signs of a reversible narcosis are evident in the first stage and in the second stage signs of injury to organs may become evident, a single organ alone is (almost) never involved. Exposure to hydrocarbons may result in irregularity of heart beat. Symptoms of moderate poisoning may include dizziness, headache, nausea.
Ingestion:	Not normally a hazard due to physical form of product. Considered an unlikely route of entry in commercial/industrial environments 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. 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:	The material may accentuate any pre-existing dermatitis condition Skin contact with the material may damage the health of the individual; systemic effects may result following absorption. Spray mist may produce discomfort. 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. 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.
Eye:	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.

Chronic:	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. Constant or exposure over long periods to mixed hydrocarbons may produce stupor with dizziness, weakness and visual disturbance, weight loss and anaemia, and reduced liver and kidney function. Skin exposure may result in drying and cracking and redness of the skin. Main route of exposure to the gas in the workplace is by inhalation.

Euroroof Spray Cleaning Solvent:

Toxicity	Irritation
Not available	Not available

Methylene Chloride:

Toxicity	Irritation
dermal (rat) LD50: >2000 mg/kg[2]	Eye(rabbit): 162 mg - moderate
Inhalation(Rat) LC50; 76 mg/L4h[2]	Eye(rabbit): 500 mg/24hr - mild
Oral(Rat) LD50; >1600 mg/kg[2]	Skin (rabbit): 100mg/24hr-moderate
	Skin (rabbit): 810 mg/24hr-SEVERE

LPG (Liquefied Petroleum Gas):

Toxicity	Irritation
Inhalation(Rat) LC50; 658 mg/l4h[2]	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.

Euroroof Spray Cleaning Solvent:	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.
Lpg (Liquefied Petroleum Gas):	No significant acute toxicological data identified in literature search. inhalation of the gas.
Euroroof Spray Cleaning Solvent & Methylene Chloride:	

Acute Toxicity	✔	**Carcinogenicity**	✔
Skin Irritation/Corrosion	✔	**Reproductivity**	✘
Serious Eye Damage/Irritation	✔	**STOT - Single Exposure**	✔
Respiratory or Skin Sensitisation	✘	**STOT - Repeated Exposure**	✘
Mutagenicity	✘	**Aspiration Hazard**	✘

Legend:
✘ - Data either not available or does not fill the criteria for classification.
✔ - Data available to make classification.

11.2.1 Endocrine Disruption Properties

Not available.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Euroroof Spray Cleaning Solvent:

End point	Test duration (Hr)	Species	Value	Source
Not available	Not available	Not available	Not available	Not available

Methylene Chloride:

End point	Test duration (Hr)	Species	Value	Source
NOEC(ECx)	96h	Algae or other aquatic plants	0.98mg/l	4
BCF	1008h	Fish	2-5.4	7
EC50	96h	Fish	2-3.3mg/l	4
LC50	72h	Algae or other aquatic plants	202-286mg/l	4
EC50	48h	Crustacea	150-218mg/l	4
EC50	96h	Algae or other aquatic plants	0.98mg/l	4

LPG (Liquefied Petroleum Gas):

End point	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 petroleum distillates:

Environmental fate:
When petroleum substances are released into the environment, four major fate processes will take place: dissolution in water, volatilization, biodegradation and adsorption. These processes will cause changes in the composition of these UVCB substances. In the case of spills on land or water surfaces, photodegradation-another fate process-can also be significant.

For Methylene Chloride:
Log Kow: 1.25; Log Koc: 1.68; Log Kom: 1.44; Henry's atm m3 /mol: 2.68E-03; Henry s Law Constant: 0.002 atm/m3/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.
The UK Department of Environment have established that methylene chloride is not a greenhouse gas and the Organisation for Economic Cooperation and Development (OECD) in a Monograph have affirmed that there was no single international view that risk reduction measures are required for the solvent. The Monograph suggests that alternatives may pose a greater risk to the environment.
In the atmosphere methylene chloride degrades by reaction with photochemically produced hydroxy radicals (half-life 6 months).

For Propane:
Koc 460. Log
Kow 2.36.
Henry's Law constant of 7.07x10-1 atm-cu m/mole, derived from its vapour pressure, 7150 mm Hg, and water solubility, 62.4 mg/L.
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)

12.3 Bioaccumulation potential

Ingredient	Bioaccumulation
Methylene Chloride	LOW (BCF = 40)

12.4 Mobility in soil

Ingredient	Mobility
Methylene Chloride	LOW (KOC = 23.74)

12.5 Results of PBT and vPvB assessment

	P	B	T
Relevant available data	Not available	Not available	Not available
PBT	✗	✗	✗
vPvB	✗	✗	✗

PBT Criteria fulfilled?	No
vPvB	No

12.6 Endocrine Disruption Properties

Not available.

12.7. Other adverse effects

Not available.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product / packaging disposal:	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. Consult State Land Waste Management Authority for disposal. Discharge contents of damaged aerosol cans at an approved site. Allow small quantities to evaporate.
Waste treatment options:	Not available.
Sewage disposal options:	Not available.

14. TRANSPORT INFORMATION

Labels required:

Marine Pollutant: No.

Hazchem: Not applicable.

Land transport (ADR):

14.1 UN number	1950	
14.2 UN proper shipping name	AEROSOLS	
14.3 Transport hazard class(es)	Class: Subrisk:	2.1 N/A
14.4 Packing group	Not applicable	
14.5 Environmental hazard	Not applicable	

14.6 Special precautions for user	Hazard identification (Kemler): Classification code: Hazard label: Special provisions: Limited quantity: Tunnel restriction code:	Not applicable 58 2.1 190 327 344 625 1 L 2 (D)

Air transport (ICAO-IATA/DGR):

14.1 UN number	1950	
14.2 UN proper shipping name	Aerosols, flammable	
14.3 Transport hazard class(es)	ICAO/IATA class: ICAO/IATA subrisk: ERG code:	2.1 N/A 10L
14.4 Packing group	Not applicable	
14.5 Environmental hazard	Not applicable	
14.6 Special precautions for user	Special provisions: Cargo only packing instruction: Cargo only maximum qty/pack: Passenger and cargo packing instruction: Passenger and cargo maximum qty/pack: Passenger and cargo limited qty packing instructions: Passenger and cargo limited maximum qty/pack:	A145 A167 A802 203 150 kg 203 75 kg Y203 30 kg G

Sea transport (IMDG-Code/GGVSee):

14.1 UN number	1950	
14.2 UN proper shipping name	AEROSOLS	
14.3 Transport hazard class(es)	IMDG class: IMDG subrisk:	2.1 Not applicable
14.4 Packing group	Not applicable	
14.5 Environmental hazard	Not applicable	
14.6 Special precautions for user	EMS number: Special provisions: Limited quantities:	F-D , S-U 63 190 277 327 344 381 959 1000 ml

Inland waterways transport (ADN):

14.1 UN number	1950	
14.2 UN proper shipping name	AEROSOLS	
14.3 Transport hazard class(es)	Class: Subrisk:	2.1 N/A
14.4 Packing group	Not applicable	
14.5 Environmental hazard	Not applicable	
14.6 Special precautions for user	Classification code: Special provisions: Limited quantity: Equipment required: Fire cones numbers:	5F 190; 327; 344; 625 1 L PP, EX, A 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
LPG (Liquefied Petroleum Gas)	Not available

14.9. Transport in bulk in accordance with the ICG Code

Product Name	Ship Type
Methylene Chloride	Not available
LPG (Liquefied Petroleum Gas)	Not available

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

LPG (Liquefied Petroleum Gas) 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

This safety data sheet is in compliance with the following EU legislation and its adaptations - as far as applicable - : Directives 98/24/EC, - 92/85/EEC, - 94/33/EC, - 2008/98/EC, - 2010/75/EU; Commission Regulation (EU) 2020/878; Regulation (EC) No 1272/2008 as updated through ATPs.

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; STOT SE 3; STOT SE 3; STOT SE 3; Carc. 2; STOT SE 3; STOT SE 3; STOT SE 3; STOT SE 3; STOT SE 3; STOT SE 3; STOT SE 1; STOT SE 3; STOT SE 3; Expl. 1.1; Flam. Gas 1; Flam. Liq. 1; Org. Perox. A; Pyr. Liq. 1; Pyr. Sol. 1; Self-heat. 1; Water-react. 1; Ox. Gas 1; Ox. Sol. 1; Ox. Liq. 1; Comp.; Met. Corr. 1; Asp. Tox. 1; Eye Dam. 1; Lact.; STOT SE 1; STOT RE 1; STOT SE 3; STOT SE 1; STOT RE 1; Aquatic Acute 2; Aquatic Chronic 2; STOT SE 3	GHS08; Dgr; GHS01; GHS09	H351; H319; H336; H302; H341; H335; H314; H370; H202; H372; H401; H411; H361; H360
Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.			

Ingredient	CAS number	Index No	ECHA Dossier
LPG (liquefied petroleum gas)	68476-85-7.	649-202-00-6	Not available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
2	Flam. Gas 1; Liq.; Acute Tox. 4; STOT RE 2; Comp.; Flam. Liq. 1; STOT SE 1; STOT SE 1	GHS02; GHS08; GHS04; Dgr	H220; H340; H350; H280; H360; H332; H373; H224; H370
1	Flam. Gas 1; Muta. 1B; Carc. 1B	GHS02; GHS08; GHS04; Dgr	H220; H340; H350
Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.			

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	Yes
Canada - DSL	Yes
Canada - NDSL	No (methylene chloride; LPG (liquefied petroleum gas))
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
Legend:	Yes = All CAS declared ingredients are on the inventory. No = One or more of the CAS listed ingredients are not on the inventory and are not exempt from listing (see specific ingredients in brackets).

16. OTHER INFORMATION

Full text risk and hazard codes:
H202 Explosive, severe projection hazard.
H220 Extremely flammable gas.
H224 Extremely flammable liquid and vapour.
H280 Contains gas under pressure; may explode if heated.
H314 Causes severe skin burns and eye damage.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
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.
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.

SDS version summary:

Version	Date of Update	Section Updated
2.0	24/03/2023	Template Change

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.

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
AIIC: 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

The contents and format of this SDS are in accordance with EEC Commission Directive 1999/45/EC, 67/548/EC, 1272/2008/EC and EEC Commission Regulation 1907/2006/EC (REACH) Annex II.

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