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

1.1 Product identifier

Trade name/designation: Alumasc Fleece Backed Spray Adhesive.

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

Relevant identified uses: Adhesive.

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 numbersAlumasc 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]:

Flammable gases, Category 1A:	H220: Extremely flammable gas.
Gases under pressure, Liquefied gas:	H280: Contains gas under pressure; may explode if heated.
Skin irritation, Category 2:	H315: Causes skin irritation.
Eye irritation, Category 2:	H319: Causes serious eye irritation.
Respiratory sensitisation, Category 1:	H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin sensitisation, Category 1:	H317: May cause an allergic skin reaction.
Carcinogenicity, Category 2:	H351: Suspected of causing cancer.
Reproductive toxicity, Category 1B:	H360FD: May damage fertility. May damage the unborn child.
Specific target organ toxicity - single exposure, Category 3, Central nervous system:	H336: May cause drowsiness or dizziness.
Long-term (chronic) aquatic hazard, Category 3:	H412: Harmful to aquatic life with long lasting effects.

2.2 Label elements

Hazard pictures:

Signal word: Danger.

Hazard statements:
H220: Extremely flammable gas.
H280: Contains gas under pressure; may explode if heated.
H315: Causes skin irritation.
H317: May cause an allergic skin reaction.

H319: Causes serious eye irritation.
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H336: May cause drowsiness or dizziness.
H351: Suspected of causing cancer.
H360FD: May damage fertility. May damage the unborn child.
H412: Harmful to aquatic life with long lasting effects.

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.
P261: Avoid breathing mist.
P280: Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

Precautionary statements response: P304 + P340 + P312: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P308 + P313: IF exposed or concerned: Get medical advice/ attention.
P342 + P311: If experiencing respiratory symptoms: Call a POISON CENTER/ doctor.
P377: Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P381: In case of leakage, eliminate all ignition sources.

Storage: P403 + P233: Store in a well-ventilated place. Keep container tightly closed.
P410 + P403: Protect from sunlight. Store in a well-ventilated place.

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

Hazardous components which must be listed on the label:
dichloromethane
methylenediphenyl diisocyanate
dibutyltin dilaurate

Additional Labelling:
EUH204: Contains isocyanates. May produce an allergic reaction.
"As from 24 August 2023 adequate training is required before industrial or professional use."

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumula-tive and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
Dichloromethane can cause narcosis. Never use dichloromethane in poorly ventilated areas as it can produce large amounts of vapour (even at room temperature) that can cause serious and immediate health effects including loss of consciousness and death.
Dichloromethane vapours are heavier than air and may collect in containers or low-lying areas.
Dichloromethane emits toxic and corrosive fumes of phosgene, carbon monoxide and hydrogen chloride when heated to decomposition or involved in combustion.
Due to the risk of explosion do not weld, cut or burn drums or other vessels which contain or have contained DCM'.

3. COMPOSITION AND INFORMATION ABOUT THE COMPONENTS

3.2 Mixtures

CAS No EC No Index No REACH No	Concentration (% w/w)	Name	Classified according to GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567
75-09-2 200-838-9 602-004-00-3 01-2119480404-41-0000	>= 20 - < 30%	dichloromethane	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Carc. 2; H351 STOT SE 3; H336 (Central nervous system)

CAS No EC No Index No REACH No	Concentration (% w/w)	Name	Classified according to GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567
26447-40-5 247-714-0 615-005-00-9 01-2120770510-62-0000	>= 1 - < 5%	methylenediphenyl diisocyanate	Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Resp. Sens. 1; H334 Skin Sens. 1; H317 Carc. 2; H351 STOT SE 3; H335 (Respiratory system) STOT RE 2; H373
77-58-7 201-039-8 050-030-00-3 01-2119496068-27-0000	>= 0,3 - < 1	dibutyltin dilaurate	Muta. 2; H341 STOT SE 1; H370 Aquatic Acute 1; H400 Skin Sens. 1; H317 Skin Corr. 1C; H314 Repr. 1B; H360FD STOT RE 1; H372 (Immune system) Aquatic Chronic 1; H410 Eye Dam. 1; H318
Substances with a workplace exposure limit:			
115-10-6 204-065-8 603-019-00-8 01-2119472128-37-0000	>= 20 - < 30	dimethyl ether	Flam. Gas 1; H220 Press. Gas Compr. Gas; H280

For explanation of abbreviations see section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice: If on clothes, remove clothes.
Show this safety data sheet to the doctor in attendance.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Eye contact: Flush eyes with water at least 15 minutes.
Get medical attention if eye irritation develops or persists.

Skin contact: Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Call a physician if irritation develops or persists.

Inhalation: Remove person to fresh air. If signs/symptoms continue, get medical attention.
If breathing has stopped, apply artificial respiration.
In case of unconsciousness bring patient into stable side position for transport.

Ingestion: Do NOT induce vomiting.
If accidentally swallowed obtain immediate medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Risk: High concentrations of dichloromethane cause anaesthetic effects, central nervous system depression, intoxication, un-consciousness and death.

Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause drowsiness or dizziness.
Suspected of causing cancer.
May damage fertility. May damage the unborn child.

4.3 Indication of any immediate medical attention and special treatment needed

Notes for the doctor:
Treatment: No further relevant information available.

5. FIRE-FIGHTING MEASSURES

5.1 Extinguishing media

Suitable extinguishing media:
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Water mist
Dry powder
Carbon dioxide (CO2)
Alcohol-resistant foam

Unsuitable extinguishing media:
Do NOT use water jet.

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting:
May release toxic, irritating and/or corrosive gases.
In case of fire, the following substance(s) may occur:
Carbon monoxide.
Hydrogen chloride (HCl)
Phosgene

5.3 Advice for fire-fighters

Special protective equipment for firefighters:
In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.

Further information:
In the event of fire, wear self-contained breathing apparatus.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

6. ACCIDENTIAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions: Remove all sources of ignition.
Use personal protective equipment.
Use breathing protection against the effects of fumes/dust/aerosol.
Evacuate personnel to safe areas.
Ensure adequate ventilation.

6.2 Environmental precautions

Environmental precautions: If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Non-sparking tools should be used.
Ensure adequate ventilation.
Send for recovery or disposal in suitable containers.

6.4 Reference to other sections

Refer to protective measures listed in sections 7 and 8., For disposal considerations see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Local/total ventilation:
Use only with adequate ventilation.

Advice on safe handling:
Avoid formation of dust and aerosols.
Take note of emission threshold.
Use solvent-proof equipment.
Ensure that suitable extractors are available on processing machines.
Handle with care.
Keep eye wash bottle available on working place.
Avoid release to the environment.
Keep out of reach of children.
Pressurized container: protect from sunlight and do not ex-pose to temperatures exceeding 50 °C. Do not pierce or burn, even after use.
Do not spray on an open flame or other ignition source.
Do not spray on a naked flame or any incandescent material.
Keep away from sources of ignition - No smoking. Keep away from children.
Use only with adequate ventilation.

Advice on protection against fire and explosion:
Keep product and empty container away from heat and sources of ignition.
Do not smoke.
Take measures to prevent the build up of electrostatic charge.
May form explosive mixtures in air.
Highly volatile, flammable constituents are re-leased during processing.
In the event of fire and/or explosion do not breathe fumes.
Keep breathing equipment ready.
Have fire extinguishing equipment ready in case of nearby fire.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers:
Pressurized container: protect from sunlight and do not ex-pose to temperatures exceeding 50 °C.
Do not pierce or burn, even after use.
Keep tightly closed in a dry, cool and well-ventilated place.
Protect against light.
Solvent vapours are heavier than air and may spread along floors.

Further information on storage conditions:
Keep containers tightly closed in a dry, cool and well-ventilated place.
Store in a cool place.
Heat will increase pressure and may lead to the container exploding.

Advice on common storage:
Do not store together with oxidizing and self-igniting products

7.3 Specific end uses(s)

No further relevant information available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational exposure limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
dimethyl ether	115-10-6	TWA	400 ppm 766 mg/m3	GB EH40
		STEL	500 ppm 958 mg/m3	GB EH40

		TWA	1.000 ppm 1.920 mg/m3	2000/39/EC
	Further information: Indicative			
dichloromethane	75-09-2	TWA	100 ppm 353 mg/m3	GB EH40
	Further information: Can be absorbed through the skin. The assigned sub- stances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
		STEL	200 ppm 706 mg/m3	GB EH40
	Further information: Can be absorbed through the skin. The assigned sub- stances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
		TWA	100 ppm 353 mg/m3	2017/164/EU
	Further information: Identifies the possibility of significant uptake through the skin, Indicative			
		STEL	200 ppm 706 mg/m3	2017/164/EU
	Further information: Identifies the possibility of significant uptake through the skin, Indicative			
methylenediphenyl diisocyanate	26447-40-5	TWA	0,02 mg/m3 (NCO)	GB EH40
	Further information: Capable of causing occupational asthma.			
		STEL	0,07 mg/m3 (NCO)	GB EH40
	Further information: Capable of causing occupational asthma.			

Derived no effect level (DNEL):

Substance name	End Use	Exposure routes	Potential health effects	Value
dimethyl ether	Workers	Inhalation	Systemic, long-term	1894 mg/m3
	Workers	Eye contact	Local effects	
dichloromethane	Workers	Eye contact	Local effects	
	Workers	Dermal	Systemic, long-term	12 mg/kg
	Workers	Inhalation	Systemic, long-term	176 mg/m3
	Workers	Inhalation	Systemic, short-term	132,14 mg/m3
methylenediphenyl diisocyanate	Workers	Dermal	Acute systemic effects	50 mg/kg
	Workers	Inhalation	Acute systemic effects	0,1 mg/m3
	Workers	Dermal	Local effects	28,7 mg/cm2
	Workers	Inhalation	Local effects	0,1 mg/m3
	Workers	Inhalation	Long-term systemic effects	0,05 mg/m3
	Workers	Inhalation	Local effects	0,05 mg/m3
dibutyltin dilaurate	Workers	Dermal	Systemic, short-term	2,08 mg/kg
	Workers	Inhalation	Systemic, short-term	0,059 mg/m3
	Workers	Dermal	Systemic, long-term	0,43 mg/kg
	Workers	Inhalation	Systemic, long-term	0,02 mg/m3
	Workers	Eye contact	Local effects	

Predicted no effect concentration (PNEC):

Substance name	Environmental Compartment	Value
dimethyl ether	Soil	0,045 mg/kg
	Marine sediment	0,069 mg/kg
	Marine water	0,016 mg/l
	Sewage treatment plant	160 mg/l
	Fresh water	0,155 mg/l
	Fresh water sediment	0,681 mg/kg
dichloromethane	Marine water	0,031 mg/l
	Sewage treatment plant	26 mg/l
	Fresh water sediment	0,163 mg/kg
	Marine sediment	0,163 mg/kg
	Fresh water	130 µg/l
	Soil	0,173 mg/kg
methylenediphenyl diisocyanate	Fresh water	> 1 mg/l
	Marine water	> 0,1 mg/l
	Soil	> 1 mg/kg
	Sewage treatment plant	> 1 mg/l
dibutyltin dilaurate	Predator	0,2 mg/kg
	Fresh water	0 mg/l
	Marine water	0 mg/l
	Sewage treatment plant	100 mg/l
	Marine sediment	0,005 mg/kg
	Soil	0,041 mg/kg
	Fresh water sediment	0,05 mg/kg

8.2 Exposure controls

8.2.1. Appropriate engineering controls:	Provide adequate ventilation. Avoid inhalation of vapours. Observe any occupational exposure limits for the product or ingredients. As this product contains ingredients with exposure limits, process enclosures, local exhaust ventilation or other engineering controls should be used to keep worker exposure below any statutory or recommended limits, if use generates dust, fumes, gas, vapour or mist.
8.2.2. Personal protection:	
Eye and face protection:	The following protection should be worn: Tightly fitting Chemical safety goggles or face shield / equipment with better protection.
Skin protection:	Protective clothing

Hands/feet protection:	Direct contact with the product must be avoided by organizational measures. The glove material has to be impermeable and resistant to the product/the substance/the preparation. The exact break through time can be obtained from the protective glove producer and this has to be observed. The gloves need to be disposed after the penetration time and replaced by new ones. Apply skin protectant before working with gloves to avoid skin swellings and use a skin cleansing and skincare product after the work. **For the permanent contact gloves made of the following materials are suitable:** If longer exposure to the chemical preparation is necessary, a sturdy over glove against mechanical strain is recommend-ed in combination with the Barrier 02-100 under glove from Ansell or other suppliers (penetration time: 480 min). **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:** Butyl rubber (minimum thickness: 0.7 mm; penetration time: 15 min) **As protection from splashes gloves made of the following materials are suitable:** Nitril (minimum thickness 0.12 mm), Disposable gloves with long cuffs After contact with the chemical preparation, take the disposable nitrile glove off immediately and put on a new disposable nitrile glove.
Other skin and body protection:	Wear suitable protective clothing as protection against splashing or contamination. Wear apron or protective clothing in case of contact.
Hygiene measures:	Instantly remove any soiled and impregnated garments. Wash hands before breaks and immediately after handling the product. Avoid contact with the eyes and skin. Store protective clothing separately.
Respiratory protection:	Use respiratory protection unless adequate risk management measures (exhaust/ ventilation) are provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. In case of brief exposure or low pollution (exceeding of TLV) use breathing filter apparatus. In case of intensive or longer exposure use breathing apparatus that is independent of circulating air. Ensure that suitable extractors are available on processing machines. **Filter type:** Self-contained breathing apparatus
Environmental exposure controls:	Keep container tightly sealed when not in use.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Important health, safety and environmental information

Appearance:	Compressed liquefied gas
Colour:	Red
Odour:	Characteristic
Odour Threshold:	Is not determined
pH:	Is not determined
Melting point/freezing point:	Is not determined
Flash point:	-41 °C
Evaporation rate:	Is not determined
Upper explosion limit / Upper flammability limit:	27 %(V)
Lower explosion limit / Lower flammability limit:	3 %(V)
Relative vapour density:	Is not determined
Density:	1,10 g/cm³ (20 °C)
Solubility(ies)	
Water solubility:	Not miscible or difficult to mix

Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	Is not determined
Decomposition temperature:	Not applicable
Explosive properties:	Product is not explosive. However, formation of explosive vapour/air mixtures is possible.

9.2 Other information

No data available.

10. STABILITY AND REACTIVITY

10.1 Reactivity

No further relevant information available.

10.2 Chemical stability

No decomposition if used according to the specifications.

10.3 Possibility of hazardous reactions

Hazardous reactions:	Develops readily flammable vapours/fumes. Hazardous decomposition products formed under fire conditions.

10.4 Conditions to avoid

Conditions to avoid:	Heat may lead to dangerous pressure build-up in sealed container.

10.5 Incompatible materials

Materials to avoid:	Reacts violently with metals such as aluminium powder, magnesium powder, strong bases (alkalis) and strong oxidants, causing a fire and explosion hazard. (Attacks some forms of plastic and rubber coatings.)

10.6 Hazardous decomposition products

Hydrogen chloride gas
Phosgene
Carbon monoxide

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity:
Based on available data, the classification criteria are not met.

Product:

Acute inhalation toxicity:	Acute toxicity estimate: > 20000 ppm Exposure time: 4 Hours Test atmosphere: gas Method: Calculation method

Components:
dichloromethane:

Acute oral toxicity:	LD50 Oral (Rat): > 2.000 mg/kg

methylenediphenyl diisocyanate:

Acute inhalation toxicity:	Acute toxicity estimate: 1,5 mg/l Test atmosphere: dust/mist Method: Calculation method

Skin corrosion/irritation:
Causes skin irritation.

Serious eye damage/eye irritation:
Causes serious eye irritation.

Respiratory or skin sensitisation:
Skin sensitisation:
May cause an allergic skin reaction.

Respiratory sensitisation:
May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Germ cell mutagenicity:
Based on available data, the classification criteria are not met.

Carcinogenicity:
Suspected of causing cancer.

Reproductive toxicity:
May damage fertility. May damage the unborn child.

STOT - single exposure:
May cause drowsiness or dizziness.

STOT - repeated exposure:
Based on available data, the classification criteria are not met.

Aspiration toxicity:
Based on available data, the classification criteria are not met.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Components:
dichloromethane:

Toxicity to fish:	LC50 (Pimephales promelas (fathead minnow)): 140,8 - 277,8 mg/l Exposure time: 96 Hours Test Type: flow-through test

12.2 Persistence and degradability

No data available

12.3 Bioaccumulation potential

Components:
dichloromethane:

Partition coefficient: n-octanol/water:	log Pow: 1,25

methylenediphenyl diisocyanate:

Partition coefficient: n-octanol/water:	log Pow: 4,5

dibutyltin dilaurate:

Partition coefficient: n-octanol/water:	log Pow: 3,12

dimethyl ether:

Partition coefficient: n-octanol/water:	log Pow: 0,10

12.4 Mobility in soil

Product:

Mobility:	Medium: Soil Remarks: Do not allow product to reach ground water, water bodies or sewage system.

12.5 Results of PBT and vPvB assessment

Product:
Assessment: This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6. Other adverse effects

Product:
Endocrine disrupting potential: This substance/mixture does not contain components considered to have endocrine disrupting properties for environment according to UK REACH Article 57(f) at levels of 0.1% or higher.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Disposal considerations:	Disposal of this product and its packaging must comply with all applicable environmental protection and waste disposal legislation, including any requirements set by local authorities. Any unwanted or non-recyclable material should be disposed of through a licensed waste disposal contractor. Transportation of such waste may be subject to ADR (International Carriage of Dangerous Goods by Road) regulations and must be managed in accordance with those requirements.
Waste code:	08 04 09* waste adhesives and sealants containing organic solvents or other hazardous substances.
Special precautions:	This material and its container must be disposed of in a safe way. Caution should be exercised when handling empty containers that have not been properly cleaned or rinsed, as they may retain hazardous residues. Spillage and wash water from cleaning tools must be prevented from entering soil, watercourses, drains, or sewer systems. Empty containers should be directed to authorised waste disposal or appropriate local recycling facilities.
Further information available via:	https://www.alumascroofing.com/downloads/disposal-guides/

14. TRANSPORT INFORMATION

Labels required:

14.1 UN number

ADN: UN 3501
ADR: UN 3501
RID: UN 3501
IMDG: UN 3501
IATA (Cargo): UN 3501
IATA (Passenger): UN 3501
Not permitted for transport

14.2 UN proper shipping name

AND:	CHEMICAL UNDER PRESSURE, FLAMMABLE, N.O.S.(DIMETHYL ETHER)
ADR:	CHEMICAL UNDER PRESSURE, FLAMMABLE, N.O.S.(DIMETHYL ETHER)
RID:	CHEMICAL UNDER PRESSURE, FLAMMABLE, N.O.S.(DIMETHYL ETHER)
IMDG:	CHEMICAL UNDER PRESSURE, FLAMMABLE, N.O.S.(DIMETHYL ETHER)
IATA (Cargo):	Chemical under pressure, flammable, n.o.s. (Dimethyl ether)
IATA (Passenger):	CHEMICAL UNDER PRESSURE, FLAMMABLE, TOXIC, N.O.S. Not permitted for transport

14.3 Transport hazard class(es)

AND:	2
ADR:	2
RID:	2
IMDG:	2.1
IATA (Cargo):	2.1
IATA (Passenger):	Not permitted for transport

14.4 Packing group

AND:

Packing group:	Not assigned by regulation
Classification code::	8F
Hazard identification number:	23
Labels:	2.1

ADR:

Packing group:	Not assigned by regulation
Classification code:	8F
Hazard identification number:	23
Labels:	2.1
Tunnel restriction code:	(B/D)

RID:

Packing group:	Not assigned by regulation
Classification code:	8F
Hazard identification number:	23
Labels:	2.1

IMDG:

Packing group:	Not assigned by regulation
Labels:	2.1
mS Code:	F-D, S-U

IATA (Cargo):

Packing instruction (cargo aircraft):	218
Packing group:	Not assigned by regulation
Labels:	Flammable Gas

IATA (Passenger):
Not permitted for transport.

14.5 Environmental hazards

AND:

Environmentally hazardous:	No

ADR:

Environmentally hazardous:	No

RID:

Environmentally hazardous:	No

IMDG:

Marine pollutant:	No

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

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

Not applicable for product as supplied.

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

Not applicable.

14.9. Transport in bulk in accordance with the ICG Code

Not applicable.

15. REGULATORY INFORMATION

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

Relevant EU provisions transposed through retained EU law:

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	:	Conditions of restriction for the following entries should be considered: Number on list 74methylenediphenyl diisocyanate (Number on list 74) methylenediphenyl diisocyanate (Number on list 74)
REACH - Candidate List of Substances of Very High Concern for Authorisation (SVHC, Article 59)	:	Not applicable
Regulation (EU) No 2024/590 on substances that deplete the ozone layer	:	Compliant
Regulation (EU) 2019/1021 on persistent organic pollutants (recast)	:	Compliant
Council Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors	:	Neither banned nor restricted
Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment, Annex II	:	Compliant
Council Regulation (EC) No 273/2004 on drug precursors	:	Compliant
Regulation (EU) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals	:	Not applicable
Regulation (EU) 2019/1148 on the marketing and use of explosives precursors	:	Not applicable
UK REACH List of substances subject to authorisation (Annex XIV)	:	Compliant

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances:

P2a:	FLAMMABLE GASES
18:	Liquefied flammable gases (including LPG) and natural gas

Volatile organic compounds:	Directive 2010/75/EU of 24 November 2010 on industrial and livestock rearing emissions (integrated pollution prevention and control) Volatile organic compounds (VOC) content: 49,48 %

The components of this product are reported in the following inventories:
REACH: On the inventory, or in compliance with the inventory

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this mixture.

16. OTHER INFORMATION

Full text risk and hazard codes:

H220:	Extremely flammable gas
H280:	Contains gas under pressure; may explode if heated
H314:	Causes severe skin burns and eye damage
H315:	Causes skin irritation
H317:	May cause an allergic skin reaction
H318:	Causes serious eye damage
H319:	Causes serious eye irritation
H332:	Harmful if inhaled
H334:	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335:	May cause respiratory irritation
H336:	May cause drowsiness or dizziness
H341:	Suspected of causing genetic defects
H351:	Suspected of causing cancer
H360FD:	May damage fertility and may damage 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
H400:	Very toxic to aquatic life
H410:	Very toxic to aquatic life with long lasting effects

Full text of other abbreviations:

Acute Tox.:	Acute toxicity
Aquatic Acute:	Short-term (acute) aquatic hazard
Aquatic Chronic:	Long-term (chronic) aquatic hazard
Carc.:	Carcinogenicity
Eye Dam.:	Serious eye damage
Eye Irrit.:	Eye irritation
Flam. Gas:	Flammable gases
Muta.:	Germ cell mutagenicity
Press. Gas:	Gases under pressure
Repr.:	Reproductive toxicity
Resp. Sens.:	Respiratory sensitisation
Skin Corr.:	Skin corrosion
Skin Irrit.:	Skin irritation
Skin Sens.:	Skin sensitisation
STOT RE:	Specific target organ toxicity - repeated exposure
STOT SE:	Specific target organ toxicity - single exposure
2000/39/EC:	Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values
2017/164/EU:	Europe. Commission Directive 2017/164/EU establishing a fourth list of indicative occupational exposure limit values
GB EH40:	UK. EH40 WEL - Workplace Exposure Limits
2000/39/EC / TWA:	Limit Value - eight hours
2017/164/EU / STEL:	Short term exposure limit
2017/164/EU / TWA:	Limit Value - eight hours
GB EH40 / TWA:	Long-term exposure limit (8-hour TWA reference period)
GB EH40 / STEL:	Short-term exposure limit (15-minute reference period)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Test-ing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regula-tion (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergen-cy Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration as-sociated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good La-boratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships car-rying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - Interna-tional Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test popula-tion; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - Interna-tional Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Ef-fect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic sub-stance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quanti-tative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Re-striction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

SDS version summary:

Version	Date of Update	Section Updated
1.0	21/10/2025	Template change
2.0	08/12/2025	The following sections have been updated: - Section 1 - Section 2 - Section 5 - Section 4 - Section 8 - Section 9 - Section 10 - Section 11 - Section 14 - Section 15 - Section 16

Other information:
This safety datasheet only contains information relating to safety and does not replace any product information or product specification.

Classification of the mixture:		**Classification procedure:**
Flam. Gas 1A:	H220	Based on product data or assessment
Press. Gas Liquefied Gas:	H280	Based on product data or assessment
Skin Irrit. 2:	H315	Calculation method
Eye Irrit. 2:	H319	Calculation method
Resp. Sens. 1:	H334	Calculation method
Skin Sens. 1:	H317	Calculation method
Carc. 2:	H351	Calculation method
Repr. 1B:	H360FD	Calculation method
STOT SE 3:	H336	Calculation method
Aquatic Chronic 3:	H412	Calculation method

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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