

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

1.1 Product identifier

Trade name/designation: Alumasc PVC Contact Adhesive.

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

Main use category: Adhesive.

1.3 Manufacturer/Supplier

Supplier:
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 Manufacturer/Supplier

Emergency telephone: 01744 648 400 - (Mon-Thurs – 08.30-17.00 Fri – 08.30-16.00)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EU) No. 1272/2008 [CPL] and amendments⁽¹⁾:

H336 - Specific target organ toxicity - single exposure Category 3 (narcotic effects), H225 - Flammable Liquid Category 2, H319 - Eye Irritation Category 2.

Legend:

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

2.2 Labelling according to Regulation (EU) 1272/2008

Hazard pictures:



Signal word: Danger.

Hazard statements:
H336: May cause drowsiness or dizziness.
H225: Highly flammable liquid and vapour.
H319: Causes serious eye irritation.

Supplementary statement(s): EUH066: Repeated exposure may cause skin dryness or cracking.

Precautionary statements prevention:
P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P241: Use explosion-proof equipment.
P243: Take action to prevent static discharges.
P271: Use only outdoors or in a well-ventilated area.
P240: Ground and bond container and receiving equipment.
P280: Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statements response:
P370+P378: In case of fire: Use alcohol resistant foam or normal protein foam to extinguish.
P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312: Call a POISON CENTER/doctor/physician/first aider/if you feel unwell.

Precautionary statements storage: P403+P235: Store in a well-ventilated place. Keep cool.
P405: Store locked up.

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

Acetone: Listed in the Europe Regulation (EC) No 1907/2006 - Annex XVII (Restrictions may apply).
Methyl Ethyl Ketone: Listed in the Europe Regulation (EC) No 1907/2006 - Annex XVII (Restrictions may apply).

3. COMPOSITION AND INFORMATION ABOUT THE COMPONENTS

3.1 Substances

Roller applied nitrile contact adhesive.

3.2 Mixtures

1.CAS No 2.EC No 3.Index No 4.REACH No	%[weight]	Name	Classification according to regulation (EC) No 1272/2008 [CLP] and amendments
1.67-64-1 2.200-662-2 3.606-001-00-8 4.01-2119471330-49-XXXX	50-65	Acetone *	Flammable Liquid Category 2, Specific Target Organ Toxicity - Single Exposure Category 3 (Narcotic Effects), Eye Irritation Category 2; H225, H336, H319, EUH066 [2]
1.78-93-3 2.201-159-0 3.606-002-00-3 4.01-2119457290-43-XXXX 01-2119943742-35-XXXX	10-20	Methyl Ethyl Ketone *	Flammable Liquid Category 2, Specific Target Organ Toxicity - Single Exposure Category 3 (Narcotic Effects), Eye Irritation Category 2; H225, H336, H319, EUH066 [2]

Legend:

1. Classified by Chemwatch; 2. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 3. Classification drawn from C&L; * EU IOELVs available

4. FIRST AID MEASURES

4.1 Description of first aid measures

Eye contact: If product comes in contact with eyes:
 - Wash out immediately 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.
 - Seek medical attention without delay; if pain persists or recurs seek medical attention.
 - Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

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: If fumes or combustion products are inhaled remove from contaminated area. Lay patient down. Keep warm and rested. Prosthesis such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. Transport to hospital, or doctor, without delay.

Ingestion: Immediately give a glass of water.
First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.
If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus.

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

Any material aspirated during vomiting may produce lung injury. Therefore, emesis should not be induced mechanically or pharmacologically. Mechanical means should be used if it is considered necessary to evacuate the stomach contents; these include gastric lavage after endotracheal intubation. If spontaneous vomiting has occurred after ingestion, the patient should be monitored for difficult breathing, as adverse effects of aspiration into the lungs may be delayed up to 48 hours.

For acute or short term repeated exposures to acetone:

- Symptoms of acetone exposure approximate ethanol intoxication.
- About 20% is expired by the lungs and the rest is metabolised. Alveolar air half-life is about 4 hours following two hour inhalation at levels near the Exposure Standard; in overdose, saturable metabolism and limited clearance, prolong the elimination half-life to 25-30 hours.
- There are no known antidotes and treatment should involve the usual methods of decontamination followed by supportive care.

Ellenhorn and Barceloux: Medical Toxicology]

Management:

Measurement of serum and urine acetone concentrations may be useful to monitor the severity of ingestion or inhalation.

Inhalation management:

- Maintain a clear airway, give humidified oxygen and ventilate if necessary.
- If respiratory irritation occurs, assess respiratory function and, if necessary, perform chest X-rays to check for chemical pneumonitis.
- Consider the use of steroids to reduce the inflammatory response.
- Treat pulmonary oedema with PEEP or CPAP ventilation.

Dermal management:

- Remove any remaining contaminated clothing, place in double sealed, clear bags, label and store in secure area away from patients and staff.
- Irrigate with copious amounts of water.
- An emollient may be required.

Eye management:

- Irrigate thoroughly with running water or saline for 15 minutes.
- Stain with fluorescein and refer to an ophthalmologist if there is any uptake of the stain.

Oral management:

- No **GASTRIC LAVAGE OR EMETIC**.
- Encourage oral fluids.

Systemic management:

- Monitor blood glucose and arterial pH.
- Ventilator if respiratory depression occurs.
- If patient unconscious, monitor renal function.
- Symptomatic and supportive care.

The Chemical Incident Management Handbook:

Guy's and St. Thomas' Hospital Trust, 2000 BIOLOGICAL EXPOSURE INDEX

These represent the determinants observed in specimens collected from a healthy worker exposed at the Exposure Standard (ES or TLV):

Determinant	Sampling Time	Index	Comments
Acetone in urine	End of shift	50 mg/L	NS

NS: Non-specific determinant; also observed after exposure to other material.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Alcohol stable foam.
Dry chemical powder.
BCF (where regulations permit).

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

General:

Alert Fire Brigade and tell them location and nature of hazard.

May be violently or explosively reactive.

Wear breathing apparatus plus protective gloves in the event of a fire.

Fire/explosion hazard:

Liquid and vapour are highly flammable.

Severe fire hazard when exposed to heat, flame and/or oxidisers. Vapour may travel a considerable distance to source of ignition.

Combustion products include:

Carbon dioxide (CO₂).

Other Pyrolysis products typical of burning organic material.

Contains low boiling substance:

Closed containers may rupture due to pressure build up under fire conditions.

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:

Remove all ignition sources.

Clean up all spills immediately.

Avoid breathing vapours and contact with skin and eyes.

Major spills:

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.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Safe handling:

Containers, even those that have been emptied, may contain explosive vapours. Do NOT cut, drill, grind, weld or perform similar operations on or near containers.

Contains low boiling substance:

Storage in sealed containers may result in pressure buildup causing violent rupture of containers not rated appropriately.

- Check for bulging containers.
- Vent periodically.
- Always release caps or seals slowly to ensure slow dissipation of vapours.
- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- DO NOT allow clothing wet with material to stay in contact with skin.

Fire and explosion protection:

See Section 5.

Other information:

Store in original containers in approved flame-proof area.

No smoking, naked lights, heat or ignition sources.

DO NOT store in pits, depressions, basements or areas where vapours may be trapped.

7.2 Conditions for safe storage, including any incompatibilities

Suitable container:

Packing as supplied by manufacturer.

Plastic containers may only be used if approved for flammable liquid.

Check that containers are clearly labelled and free from leaks.

For low viscosity materials (i): Drums and jerry cans must be of the non-removable head type. (ii): Where a can is to be used as an inner package, the can must have a screwed enclosure.

For materials with a viscosity of at least 2680 cSt.

Storage incompatibility:

Methyl Ethyl Ketone:

- reacts violently with strong oxidisers, aldehydes, nitric acid, perchloric acid, potassium tert-butoxide, oleum.
- is incompatible with inorganic acids, aliphatic amines, ammonia, caustics, isocyanates, pyridines, chlorosulfonic acid.
- forms unstable peroxides in storage, or on contact with propanol or hydrogen peroxide.
- attacks some plastics.
- may generate electrostatic charges, due to low conductivity, on flow or agitation

Acetone:

- may react violently with chloroform, activated charcoal, aliphatic amines, bromine, bromine trifluoride, chlorotriazine, chromic(IV) acid, chromic(VI) acid, chromium trioxide, chromyl chloride, hexachloromelamine, iodine heptafluoride, iodoform, liquid oxygen, nitrosyl chloride, nitrosyl perchlorate, nitryl perchlorate, perchloromelamine, peroxomonosulfuric acid, platinum, potassium tert-butoxide, strong acids, sulfur dichloride, trichloromelamine, xenon tetrafluoride.
- reacts violently with bromoform and chloroform in the presence of alkalies or in contact with alkaline surfaces.
- may form unstable and explosive peroxides in contact with strong oxidisers, fluorine, hydrogen peroxide (90%), sodium perchlorate, 2-methyl-1,3-butadiene.
- can increase the explosive sensitivity of nitromethane on contact flow or agitation may generate electrostatic charges due to low conductivity.
- dissolves or attacks most rubber, resins, and plastics (polyethylenes, polyester, vinyl ester, PVC, Neoprene, Viton).

Ketones in this group:

- are reactive with many acids and bases liberating heat and flammable gases (e.g., H₂).
- react with reducing agents such as hydrides, alkali metals, and nitrides to produce flammable gas (H₂) and heat.
- are incompatible with isocyanates, aldehydes, cyanides, peroxides, and anhydrides.
- Avoid strong bases.
- Avoid reaction with oxidising agents



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

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
Acetone	Dermal 186 mg/kg bw/day (Systemic, Chronic) Inhalation 1 210 mg/m ³ (Systemic, Chronic) Inhalation 2 420 mg/m ³ (Local, Acute) Dermal 62 mg/kg bw/day (Systemic, Chronic) * Inhalation 200 mg/m ³ (Systemic, Chronic) * Oral 62 mg/kg bw/day (Systemic, Chronic) *	10.6 mg/L (Water (Fresh)) 1.06 mg/L (Water - Intermittent release) 21 mg/L (Water (Marine)) 30.4 mg/kg sediment dw (Sediment (Fresh Water)) 3.04 mg/kg sediment dw (Sediment (Marine)) 29.5 mg/kg soil dw (Soil) 100 mg/L (STP)
Methyl Ethyl Ketone	Dermal 1 161 mg/kg bw/day (Systemic, Chronic) Inhalation 600 mg/m ³ (Systemic, Chronic) Dermal 412 mg/kg bw/day (Systemic, Chronic) * Inhalation 106 mg/m ³ (Systemic, Chronic) * Oral 31 mg/kg bw/day (Systemic, Chronic) *	55.8 mg/L (Water (Fresh)) 55.8 mg/L (Water - Intermittent release) 55.8 mg/L (Water (Marine)) 284.74 mg/kg sediment dw (Sediment (Fresh Water)) 284.7 mg/kg sediment dw (Sediment (Marine)) 22.5 mg/kg soil dw (Soil) 709 mg/L (STP) 1000 mg/kg food (Oral)

* Values for general population.

Occupational exposure limits (OEL):

Ingredient data:

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
UK Workplace Exposure Limits (WELs)	Acetone	Acetone	500 ppm / 1210 mg/m ³	3620 mg/m ³ / 1500 ppm	Not available	Not available
EU Consolidated List of Indicative Occupational Exposure Limit Values (IOELVs)	Acetone	Acetone	500 ppm / 1210 mg/m ³	Not available	Not available	Not available
UK Workplace Exposure Limits (WELs)	Methyl Ethyl Ketone	Butan-2-One (Methyl Ethyl Ketone)	200 ppm / 600 mg/m ³	899 mg/m ³ / 300 ppm	Not available	Sk, BMGV
EU Consolidated List of Indicative Occupational Exposure Limit Values (IOELVs)	Methyl Ethyl Ketone	Butanone	200 ppm / 600 mg/m ³	900 mg/m ³ / 300 ppm	Not available	Not available

Emergency limits:

Ingredient	TEEL-1	TEEL-2	TEEL-3
Acetone	Not available	Not available	Not available
Methyl Ethyl Ketone	Not available	Not available	Not available

Ingredient	Original IDLH	Revised IDLH
Acetone	2,500 ppm	Not available
Methyl Ethyl Ketone	3,000 ppm	Not available

8.2 Exposure controls

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.



Personal protective:

ALUMASC PVC CONTACT ADHESIVE
SAFETY DATA SHEET

Reference No: SDS-SP004
Date of issue: 01/07/2021



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: Wear chemical protective gloves, e.g. PVC.
Wear safety footwear or safety gumboots, e.g. Rubber.
The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.
The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.

Body protection: See other protection below.

Other protection: Overalls.
PVC Apron.
PVC protective suit may be required if exposure severe.
Some plastic personal protective equipment (PPE) (e.g. gloves, aprons, overshoes) are not recommended as they may produce static electricity.
For large scale or continuous use wear tight-weave non-static clothing (no metallic fasteners, cuffs or pockets).
Non sparking safety or conductive footwear should be considered.

Environmental exposure controls: See Section 12.

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:
Alumasc PVC Contact Adhesive

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

CPI - Chemwatch Performance Index:

A: Best selection.

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

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

NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation.

*Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

Respiratory protection:

Type AX Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent).

- 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Colourless		
Physical state	Liquid	Relative density (Water = 1)	0.8-0.9
Odour	Characteristic	Partition coefficient n-octanol / water	Not available
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)	1947.040-2206.646
Initial boiling point and boiling range (°C)	56	Molecular weight (g/mol)	Not available
Flash point (°C)	-18	Taste	Not available
Evaporation rate	Not available	Explosive properties	Explosive under influence of flame
Flammability	HIGHLY FLAMMABLE	Oxidising properties	Not available
Upper Explosive Limit (%)	13.0	Surface Tension (dyn/cm or mN/m)	Not available
Lower Explosive Limit (%)	2.6	Volatile Component (%vol)	Not available
Vapour pressure (kPa)	Not available	Gas group	Not available
Solubility in water	Partly miscible	pH as a solution (1%)	Not available
Vapour density (Air = 1)	Not available	VOC g/L	Not available

9.2 Other information

Not available.

10. STABILITY AND REACTIVITY

10.1 Reactivity

See Section 7.2.

10.2 Chemical stability

Unstable in the presence of incompatible materials.

Product is considered stable.

Hazardous polymerisation will not occur.

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:	<p>There is strong evidence to suggest that this material can cause, if inhaled once, very serious, irreversible damage of organs.</p> <p>The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.</p> <p>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.</p> <p>The material has NOT been classified by EC Directives or other classification systems as "harmful by inhalation". This is because of the lack of corroborating animal or human evidence.</p> <p>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.</p> <p>The use of a quantity of material in an unventilated or confined space may result in increased exposure and an irritating atmosphere developing.</p> <p>Before starting consider control of exposure by mechanical ventilation.</p> <p>Acute exposure of humans to high concentrations of methyl ethyl ketone produces irritation to the eyes, nose and throat. Acute exposure by inhalation also causes nervous system depression, headache, and nausea. High vapour levels are easily detected due to odour, however odour fatigue may occur, with loss of warning of exposure.</p> <p>Effects of exposure to acetone by inhalation include central nervous system depression, light-headedness, unintelligible speech, incoordination, stupor, low blood pressure, fast heart rate, metabolic acidosis, high blood sugar and ketosis. Rarely, there may be convulsions and death of kidney tubules.</p> <p>Ketone vapours irritate the nose, throat and mucous membrane. High concentrations depress the central nervous system, causing headache, vertigo, poor concentration, sleep and failure of the heart and breathing.</p>
Ingestion:	<p>There is strong evidence to suggest that this material can cause, if swallowed once, very serious, irreversible damage of organs.</p> <p>The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence.</p> <p>Swallowing of the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis; serious consequences may result. (ICSC13733)</p> <p>Accidental ingestion of the material may be damaging to the health of the individual.</p>
Skin contact:	<p>There is strong evidence to suggest that this material, on a single contact with skin, can cause very serious, irreversible damage of organs. The material may accentuate any pre-existing dermatitis condition.</p> <p>Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions.</p> <p>In humans exposed to methyl ethyl ketone, skin inflammation has been reported. Animal testing has shown methyl ethyl ketone to have high acute toxicity from skin exposure.</p>

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. There is some evidence to suggest that the material may cause mild but significant 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: There is evidence that material may produce eye irritation in some persons and produce eye damage 24 hours or more after instillation. Severe inflammation may be expected with pain. The liquid may produce eye discomfort and is capable of causing temporary impairment of vision and/or transient eye inflammation, ulceration.

Chronic: Long-term exposure to respiratory irritants may result in airways disease, involving difficulty breathing and related whole-body problems. Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. Animal testing shows that methyl ethyl ketone may have slight effects on the nervous system, liver, kidney and respiratory system; there may also be developmental effects and an increase in birth defects. However, there is limited information available on the long-term effects of methyl ethyl ketone in humans, and no information is available on whether it causes developmental or reproductive toxicity or cancer. It is generally considered to have low toxicity, but it is often used in combination with other solvents, and the toxic effects of the mixture may be greater than with either solvent alone. Prolonged or repeated skin contact may cause drying with cracking, irritation and possible dermatitis following. Workers exposed to acetone for long periods showed inflammation of the airways, stomach and small bowel, attacks of giddiness and loss of strength. Exposure to acetone may enhance the liver toxicity of chlorinated solvents.

Alumasc PVC Contact Adhesive:

Toxicity	Irritation
Not available	Not available

Acetone:

Toxicity	Irritation
Dermal (Rabbit) LD50: >11.899 mg/kg ^[1]	Eye (Human): 500 ppm - irritant
Inhalation (Mouse) LC50: 44 mg/L ^[2]	Eye (Rabbit): 20mg/24hr - moderate
Oral (Rat) LD50: 2.785 mg/kg ^[1]	Eye (Rabbit): 3.95 mg - SEVERE
	Eye: Adverse effect observed (irritating) ^[1]
	Skin (Rabbit): 500 mg/24hr - mild
	Skin (Rabbit):395mg (open) - mild
	Skin: No adverse effect observed (not irritating) ^[1]

Methyl Ethyl Ketone:

Toxicity	Irritation
Dermal (Rabbit) LD50: >12.346 mg/kg ^[1]	Eye (Human): 350 ppm - irritant
Inhalation (Mouse) LC50: 32 mg/L ^[2]	Eye (Rabbit): 80 mg - irritant
Oral (Rat) LD50: 2054 mg/kg ^[1]	Skin (Rabbit): 402 mg/24 hr - mild
	Skin (Rabbit):13.78mg/24 hr open

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 PVC Contact Adhesive & Methyl Ethyl Ketone:

Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant.

Methyl ethyl ketone is considered to have a low order of toxicity; however, methyl ethyl ketone is often used in combination with other solvents and the mixture may have greater toxicity than either solvent alone. Combinations of n-hexane with methyl ethyl ketone, and also methyl n-butyl ketone with methyl ethyl ketone may result in an increased in peripheral neuropathy, a progressive disorder of the nerves of the extremities.

Combinations with chloroform also show an increase in toxicity.

Euroroof PVC Contact Adhesive & Acetone:

For Acetone:

The acute toxicity of acetone is low. Acetone is not a skin irritant or sensitizer, but it removes fat from the skin, and it also irritates the eye. Animal testing shows acetone may cause macrocytic anaemia.

Acetone & Methyl Ethyl Ketone:

The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.

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.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Alumasc PVC Contact Adhesive:

End point	Test Duration (hr)	Species	Value	Source
Not available	Not available	Not available	Not available	Not available

Acetone:

End point	Test Duration (hr)	Species	Value	Source
LC50	96	Fish	13.303mg/L	4
NOEC (ECx)	12	Fish	0.001mg/L	4
EC50	48	Crustacea	6098.4mg/L	5
EC50	96	Algae or other aquatic plants	9.87327.684mg/l	4

Methyl Ethyl Ketone:

End point	Test Duration (hr)	Species	Value	Source
NOEC (ECx)	96	Fish	1.18mg/L	4
LC50	96	Fish	>1.18mg/L	4
EC50	48	Crustacea	308mg/l	2
EC50	72	Algae or other aquatic plants	1972mg/l	2
EC50	96	Algae or other aquatic plants	>500mg/l	4

Legend:

Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 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.

For Methyl Ethyl Ketone:

log Kow: 0.26-0.69;
log Koc: 0.69;
Koc: 34;
Half-life (hr) air: 2.3;
Half-life (hr) H2O surface water: 72-288; Henry's atm m3 /mol: 1.05E-05;
BOD 5: 1.5-2.24, 46%;
COD: 2.2-2.31, 100%;
ThOD: 2.44;
BCF: 1.

Environmental Fate: Terrestrial Fate - Measured Koc values of 29 and 34 were obtained for methyl ethyl ketone in silt loams. Methyl Ethyl Ketone is expected to have very high mobility in soil.

For Ketones:

Ketones, unless they are alpha, beta--unsaturated ketones, can be considered as narcosis or baseline toxicity compounds. Aquatic Fate: Hydrolysis of Ketones in water is thermodynamically favourable only for low molecular weight ketones. Reactions with water are reversible with no permanent change in the structure of the ketone substrate.

For Acetone:

log Kow : -0.24;
Half-life (hr) air : 312-1896;
Half-life (hr) H2O surface water: 20; Henry's atm m3 /mol : 3.67E-05 BOD 5: 0.31-1.76,46-55%
COD: 1.12-2.07
ThOD: 2.2BCF: 0.69.

Environmental Fate: The relatively long half-life allows acetone to be transported long distances from its emission source. Atmospheric Fate: Acetone preferentially locates in the air compartment when released to the environment.

DO NOT discharge into sewer or waterways.

12.2 Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
Acetone	LOW (Half-life = 14 days)	MEDIUM (Half-life = 116.25 days)
Methyl Ethyl Ketone	LOW (Half-life = 14 days)	LOW (Half-life = 26.75 days)

12.3 Bio accumulative potential

Ingredient	Bioaccumulation
Acetone	LOW (BCF = 0.69)
Methyl Ethyl Ketone	LOW (LogKOW = 0.29)

12.4 Mobility in soil

Ingredient	Mobility
Acetone	HIGH (KOC = 1.981)
Methyl Ethyl Ketone	MEDIUM (KOC = 3.827)

12.5 Results of PBT and vPvB assessment

Not applicable.

12.6 Other adverse effects

No data available.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product / packaging disposal:

Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.

- 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. Recycle wherever possible.

- Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.
- Dispose of by burial in a land-fill specifically licensed to accept chemical and / or pharmaceutical wastes or Incineration in a licensed apparatus (after admixture with suitable combustible material).

Waste treatment options: Not available.

Sewage disposal options: Not available.

14. TRANSPORT INFORMATION

Labels required:



Marine pollutant: No.
Hazchem: 3YE.

Land transport (ADR-RID):

14.1 UN number 1133.
14.2 UN proper shipping name Adhesives containing flammable liquid.
14.3 Transport hazard class(es) Class: 3.
Subrisk: Not applicable.
14.4 Packing group II.
14.5 Environmental hazard Not applicable.

14.6 Special precautions for user

Hazard identification (Kemler)	33
Classification code	F1
Hazard label	3
Special provisions	640C; 640D
Limited quantity	5L
Tunnel restriction code	2 (D/E)

Air transport (ICAO-IATA / DGR):

14.1 UN number 1133.
14.2 UN proper shipping name Adhesives containing flammable liquid.
14.3 Transport hazard class(es) Class: 3.
Subrisk: Not applicable.
ERG code: 3L.
14.4 Packing group II.
14.5 Environmental hazard Not applicable.

14.6 Special precautions for user

Special provisions	A3
Cargo only packing instructions	364
Cargo only maximum qty / pack	60L
Passenger and cargo packing instructions	353
Passenger and cargo maximum qty / pack	5L
Passenger and cargo limited quantity packing instructions	Y341
Passenger and cargo limited maximum qty / pack	1L

Sea transport (IMDG-Code / GGVSee):

14.1 UN number	1133.
14.2 UN proper shipping name	Adhesives containing flammable liquid.
14.3 Transport hazard class(es)	Class: 3 Subrisk: Not applicable.
14.4 Packing group	II.
14.5 Environmental hazard	Not applicable.

14.6 Special precautions for user

EMS No.	F-E, S-D
Special provisions	N/A
Limited quantities	5L

Inland waterways transport (ADN):

14.1 UN number	1133.
14.2 UN proper shipping name	Adhesives containing flammable liquid.
14.3 Transport hazard class(es)	Class: 3. Subrisk: Not applicable.
14.4 Packing group	II.
14.5 Environmental hazard	Not applicable.

14.6 Special precautions for user

Classification code	F1
Special provisions	640C/640D
Limited quantity	5L
Equipment required	PP, EX, A
Fire cones number	1

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

Not applicable.

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

Not available.

14.9 Transport in bulk in accordance with the ICG Code

Not available.

15. REGULATORY INFORMATION

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

Acetone is found on the following regulatory list:

EU Consolidated List of Indicative Occupational Exposure Limit Values (IOELVs).
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.
UK Workplace Exposure Limits (WELs).

Methyl Ethyl Ketone is found on the following regulatory 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.
UK Workplace Exposure Limits (WELs).

15.2 Chemical Safety Assessment

No chemical safety assessment has been carried out.

16. OTHER INFORMATION

National Inventory	Status
Australia - AIIIC / Australia Non-Industrial Use	Yes
Canada - DSL	Yes
Canada - NDSL	No (Acetone; Methyl Ethyl Ketone)
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 - ARIPS	Yes

Legend:

Yes = All CAS declared ingredients are on the inventory.

No = One or more of the CAS listed ingredients are not on the inventory and are not exempt from listing (see specific ingredients in brackets).

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.
OSF:	Odour Safety Factor.
NOAE:	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.

ALUMASC PVC CONTACT ADHESIVE
SAFETY DATA SHEET

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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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