

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

1.1 Product identifier

Trade name/designation: Alumasc Bitumen Primer.

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

Relevant identified uses: 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

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]:

H226 - Flammable Liquid Category 3, H336 - Specific target organ toxicity - single exposure Category 3 (narcotic effects), H411 - Chronic Aquatic Hazard Category 2, H372 - Specific target organ toxicity - repeated exposure Category 1, H304 - Aspiration Hazard Category 1.

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:
H226: Flammable liquid and vapour.
H336: May cause drowsiness or dizziness.
H411: Toxic to aquatic life with long lasting effects.
H372: Causes damage to organs through prolonged or repeated exposure. (Not specified).
H304: May be fatal if swallowed and enters airways.

Supplementary statements: 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.
P260: Do not breathe the mist/vapours/spray.
P271: Use in a well-ventilated area.

Precautionary statements - response:	P301+P310: IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician/ first aider. P331: Do NOT induce vomiting. P370+P378: In case of fire: Use alcohol resistant foam or fine spray/water fog to extinguish.
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

REACH - Art.57-59: The mixture does not contain Substances of Very High Concern (SVHC) at the SDS print date.

3. COMPOSITION AND INFORMATION ABOUT THE COMPONENTS

3.1 Substances

A solvent based bituminous paint.

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]
1.64742-82-1 2.265-185-4 232-489-3 3.649-330-00-2 649-345-00-4 4.01-2119458049-33-XXXX 01-2119490979-12-XXXX 01-2120261965-45-XXXX	50-60	Naphtha Petroleum, Heavy, Hydrodesulfurised	Specific Target Organ Toxicity - Single Exposure Category 3 (Narcotic Effects), Aspiration Hazard Category 1, Flammable Liquid Category 3, Chronic Aquatic Hazard Category 2; H336, H304, H226, H411, EUH066 ^[1]
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 this product comes in contact with the eyes: <ul style="list-style-type: none"> - 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 contact occurs: <ul style="list-style-type: none"> - Immediately remove all contaminated clothing, including footwear. - Flush skin and hair with running water (and soap if available). - Seek medical attention in event of irritation.
Inhalation:	If fumes, aerosols or combustion products are inhaled remove from contaminated area. Other measures are usually unnecessary.
Ingestion:	If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus. If swallowed do NOT induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. Observe the patient carefully.

Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.
Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.
Seek medical advice.
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.

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 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.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Water spray or fog.
Foam.
Dry chemical powder.

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.
May be violently or explosively reactive.
Wear full body protective clothing with breathing apparatus.

Fire/explosion hazard:

Liquid and vapour are flammable.
Moderate fire hazard when exposed to heat or flame.
Vapour forms an explosive mixture with air.
Combustion products include:
- Carbon Monoxide (CO)
- Carbon Dioxide (CO₂)
- Other pyrolysis products typical of burning organic material.

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:

The conductivity of this material may make it a static accumulator., A liquid is typically considered nonconductive if its conductivity is below 100 pS/m and is considered semi-conductive if its conductivity is below 10 000 pS/m., Whether a liquid is nonconductive or semi-conductive, the precautions are the same., A number of factors, for example liquid temperature, presence of contaminants, and anti-static additives can greatly influence the conductivity of a liquid.
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.
Avoid all personal contact, including inhalation.
Wear protective clothing when risk of overexposure occurs.
Use in a well-ventilated area.
DO NOT allow clothing wet with material to stay in contact with skin.

Fire & explosion protection:

See Section 5.

Other information:

Store in original containers in approved flammable liquid storage area.
Store away from incompatible materials in a cool, dry, well-ventilated area.
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:

Xylenes:

- May ignite or explode in contact with strong oxidisers, 1,3-dichloro-5,5-dimethylhydantoin, uranium fluoride.
- Attack some plastics, rubber and coatings.
- May generate electrostatic charges on flow or agitation due to low conductivity.
- Vigorous reactions, sometimes amounting to explosions, can result from the contact between aromatic rings and strong oxidising agents.
- Aromatics can react exothermically with bases and with diazo compounds.

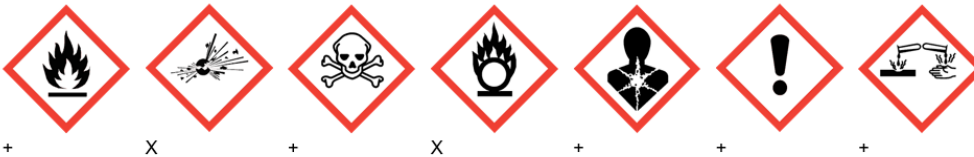
For alkyl aromatics:

The alkyl side chain of aromatic rings can undergo oxidation by several mechanisms. The most common and dominant one is the attack by oxidation at benzylic carbon as the intermediate formed is stabilised by resonance structure of the ring.

- Following reaction with oxygen and under the influence of sunlight, a hydroperoxide at the alpha-position to the aromatic ring, is the primary oxidation product formed (provided a hydrogen atom is initially available at this position) - this product is often short-lived but may be stable dependent on the nature of the aromatic substitution; a secondary C-H bond is more easily attacked than a primary C-H bond whilst a tertiary C-H bond is even more susceptible to attack by oxygen.
- Monoalkylbenzenes may subsequently form monocarboxylic acids; alkyl naphthalenes mainly produce the corresponding naphthalene carboxylic acids.

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.



X - Must not be stored together.

0 - 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
Naphtha Petroleum, Heavy, Hydrodesulfurised	Dermal 80 mg/kg bw/day (Systemic, Chronic) Inhalation 44 mg/m³ (Systemic, Chronic) Dermal 7.56 mg/cm² (Local, Chronic) Inhalation 44 mg/m³ (Local, Chronic) Dermal 30 mg/kg bw/day (Systemic, Acute) Inhalation 1 300 mg/m³ (Systemic, Acute) Inhalation 1 100 mg/m³ (Local, Acute) Dermal 40 mg/kg bw/day (Systemic, Chronic) * Inhalation 22 mg/m³ (Systemic, Chronic) * Oral 10.56 mg/kg bw/day (Systemic, Chronic) * Dermal 3.78 mg/cm² (Local, Chronic) * Inhalation 22 mg/m³ (Local, Chronic) * Dermal 60 mg/kg bw/day (Systemic, Acute) * Inhalation 1 200 mg/m³ (Systemic, Acute) * Oral 50 mg/kg bw/day (Systemic, Acute) * Inhalation 55 mg/m³ (Local, Acute) *	Not available

* Values for general population.

Occupational Exposure Limits (OEL):

Ingredient data:

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Not available	Not available	Not available	Not available	Not available	Not available	Not Available

Emergency limits:

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
Naphtha Petroleum, Heavy, Hydrodesulfurised	Stoddard solvent; (Mineral spirits, 85% Nonane and 15% Trimethyl Benzene)	300 mg/m ³	1,800 mg/m ³	29500 mg/m ³

Ingredient	Original IDLH	Revised IDLH
Naphtha Petroleum, Heavy, Hydrodesulfurised	20,000 mg/m ³	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 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: 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.

Respiratory protection:

Type A 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.

Environmental exposure controls:

See Section 12.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Important health, safety and environmental information

Appearance:	Black	Relative density (Water = 1):	0.85-0.9
Physical state:	Liquid	Partition coefficient n-octanol/water:	Not available
Odour:	Not available	Auto-ignition temperature (°C):	>200
Odour threshold:	Not available	Decomposition temperature:	Not available
pH (as supplied):	Not available	Viscosity (cSt):	>100
Melting point/freezing point (°C):	Not available	Molecular weight (g/mol):	Not available
Initial boiling point and boiling range (°C):	>150	Taste:	Not available
Flash point (°C):	>39	Explosive properties:	Not available
Evaporation rate:	Not available	Oxidising properties:	Not available
Flammability:	Flammable	Surface Tension (dyn/cm or mN/m):	Not available
Upper Explosive Limit (%):	Not available	Volatile Component (%vol):	Not available
Lower Explosive Limit (%):	Not available	Gas group:	Not available
Vapour pressure (kPa):	Not available	pH as a solution (1%):	Not available
Solubility in water:	Immiscible	VOC g/L:	<540
Vapour density (Air = 1):	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>The material is not thought to produce either adverse health effects or irritation of the respiratory tract following inhalation (as classified by EC Directives using animal models). Nevertheless, adverse systemic effects have been produced following exposure of animals by at least one other route and good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.</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>Inhaling high concentrations of mixed hydrocarbons can cause narcosis, with nausea, vomiting and light-headedness. Low molecular weight (C2-C12) hydrocarbons can irritate mucous membranes and cause incoordination, giddiness, nausea, vertigo, confusion, headache, appetite loss, drowsiness, tremors and stupor.</p> <p>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.</p> <p>On exposure to mixed trimethylbenzenes, some people may become nervous, tensed, anxious and have difficult breathing. There may be a reduction red blood cells and bleeding abnormalities. There may also be drowsiness.</p> <p>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.</p> <p>Exposure to white spirit may cause nausea and vertigo.</p> <p>The acute toxicity of inhaled alkylbenzene is best described by central nervous system depression. These compounds may also act as general anaesthetics. Whole body symptoms of poisoning include light-headedness, nervousness, apprehension, a feeling of well-being, confusion, dizziness, drowsiness, ringing in the ears, blurred or double vision, vomiting and sensations of heat, cold or numbness, twitching, tremors, convulsions, unconsciousness, depression of breathing, and arrest.</p> <p>Headache, fatigue, tiredness, irritability and digestive disturbances (nausea, loss of appetite and bloating) are the most common symptoms of xylene overexposure. Injury to the heart, liver, kidneys and nervous system has also been noted amongst workers.</p>
Ingestion:	<p>Swallowing of the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis; serious consequences may result. (ICSC13733)</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>Ingestion of petroleum hydrocarbons can irritate the pharynx, oesophagus, stomach and small intestine, and cause swellings and ulcers of the mucous. Symptoms include a burning mouth and throat; larger amounts can cause nausea and vomiting, narcosis, weakness, dizziness, slow and shallow breathing, abdominal swelling, unconsciousness and convulsions.</p> <p>Accidental ingestion of the material may be seriously damaging to the health of the individual; animal experiments indicate that ingestion of less than 40 gram may be fatal.</p>
Skin contact:	<p>Repeated exposure may cause skin cracking, flaking or drying following normal handling and use. Open cuts, abraded or irritated skin should not be exposed to this material.</p> <p>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.</p> <p>Skin contact with the material may be harmful; systemic effects may result following absorption.</p> <p>The material may cause moderate inflammation of the skin either following direct contact or after a delay of some time. Repeated exposure can cause contact dermatitis which is characterised by redness, swelling and blistering.</p> <p>Aromatic hydrocarbons may produce sensitivity and redness of the skin. They are not likely to be absorbed into the body through the skin but branched species are more likely to.</p>

Eye: Direct eye contact with petroleum hydrocarbons can be painful, and the corneal epithelium may be temporarily damaged. Aromatic species can cause irritation and excessive tear secretion.
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 produces a high level of eye discomfort and is capable of causing pain and severe conjunctivitis. Corneal injury may develop, with possible permanent impairment of vision, if not promptly and adequately treated.

Chronic: Long-term exposure to the product is not thought to produce chronic effects adverse to the health (as classified by EC Directives using animal models); nevertheless exposure by all routes should be minimised as a matter of course.
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.
Prolonged or repeated skin contact may cause drying with cracking, irritation and possible dermatitis following.
Long term exposure to coal tar dusts may produce chronic bronchitis or lung cancer. Dust or fume contact with skin may result in photosensitisation of skin areas and sunburn on frequent exposure to sunlight or ultraviolet radiation.
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.
Immersion of the hands and forearms in white spirits may quickly result in inflammation of the skin and follicles. Workers exposed to white spirit have reported nausea and vomiting and one worker has been reported to develop aplastic anaemia, bone marrow depression and this person later died from septicemia.
There has been concern that this material can cause cancer or mutations, but there is not enough data to make an assessment.

Alumasc Bitumen Primer:

Toxicity	Irritation
Not available	Not available

Naphtha Petroleum, Heavy, Hydrodesulfurised:

Toxicity	Irritation
Dermal (rabbit) LD50: >1900 mg/kg ^[1]	Eye: no adverse effect observed (not irritating) ^[1]
Oral (rat) LD50: >4500 mg/kg ^[1]	Skin: adverse effect observed (irritating) ^[1]
	Skin: no adverse effect observed (not irritating) ^[1]

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.

Alumasc Bitumen Primer: The production of creosotes and coal tars stems from the incomplete combustion of carbon-containing materials. Physically, they are usually viscous liquids or semisolids that are black or dark brown with a naphthalene-like odour. They have an oily liquid consistency and range in colour from yellowish-dark green to brown and largely contain a mixture of polycyclic aromatic hydrocarbons (PAHs) including phenol. For "distillates of coal tar" or 'creosotes. Critical Health Effects
The critical health effects for risk characterisation are systemic long-term effects including carcinogenicity, mutagenicity, reproductive toxicity and developmental toxicity. The chemicals are also considered to be phototoxic and have the potential to cause skin irritation and sensitisation and mild respiratory irritation.

Naphtha Petroleum,
Heavy, Hydrodesulfurised:

No significant acute toxicological data identified in literature search. For C9 aromatics (typically trimethylbenzenes – TMBs)

Acute toxicity: Animal testing shows that semi-lethal concentrations and doses vary amongst this group. The semilethal concentrations for inhalation range from 6000 to 10000 mg/cubic metre for C9 aromatic naphtha and 18000-24000 mg/cubic metre for 1,2,4- and 1,3,5-TMB, respectively.

Irritation and sensitization: Results from animal testing indicate that C9 aromatic hydrocarbon solvents are mildly to moderately irritating to the skin, minimally irritating to the eye, and have the potential to irritate the airway and cause depression of breathing rate.

For petroleum: This product contains benzene, which can cause acute myeloid leukaemia, and n-hexane, which can be metabolized to compounds which are toxic to the nervous system. This product contains toluene, and animal studies suggest high concentrations of toluene lead

to hearing loss. This product contains ethyl benzene and naphthalene, from which animal testing shows evidence of tumour formation.

Alumasc Bitumen Primer &
Naphtha Petroleum,
Heavy, Hydrodesulfurised:

Animal studies indicate that normal, branched and cyclic paraffins are absorbed from the gastrointestinal tract and that the absorption of

n-paraffins is inversely proportional to the carbon chain length, with little absorption above C30. With respect to the carbon chain lengths likely to be present in mineral oil, n-paraffins may be absorbed to a greater extent than iso- or cyclo-paraffins.

The major classes of hydrocarbons are well absorbed into the gastrointestinal tract in various species. For trimethylbenzenes:

Absorption of 1,2,4-trimethylbenzene occurs after exposure by swallowing, inhalation, or skin contact. In the workplace, inhalation and skin contact are the most important routes of absorption; whole-body toxic effects from skin absorption are unlikely to occur as the skin irritation

caused by the chemical generally leads to quick removal. The substance is fat-soluble and may accumulate in fatty tissues.

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 Bitumen Primer:

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

Naphtha Petroleum, Heavy, Hydrodesulfurised:

End point	Test duration (Hr)	Species	Value	Source
LC50	96	Fish	4.1mg/L	2
EC50	48	Crustacea	4.5mg/L	2
EC50	72	Algae or other aquatic plants	>1-mg/L	2
LC50	96	Fish	0.14mg/L	2
EC50	96	Algae or other aquatic plants	0.277mg/L	2
NOEC	720	Crusacea	0.024mg/L	2

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.

Toxic 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.

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

Oils of any kind can cause:

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

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

For 1,2,4 - Trimethylbenzene:

Half-life (hr) air: 0.48-16;

Half-life (hr) H₂O surface water: 0.24 -672;

Half-life (hr) H₂O ground: 336-1344;

Half-life (hr) soil: 168-672;

Henry's Pa m³ /mol: 385 -627;

Bioaccumulation: not significant. 1,2,4-Trimethylbenzene is a volatile organic compound (VOC) substance.

Atmospheric fate: 1,2,4-trimethylbenzene can contribute to the formation of photochemical smog in the presence of other VOCs. For Aromatic Substances Series:

Environmental Fate: Large, molecularly complex polycyclic aromatic hydrocarbons, or PAHs, are persistent in the environment longer than smaller PAHs.

Atmospheric Fate: PAHs are 'semi-volatile substances' which can move between the atmosphere and the Earth's surface in repeated, temperature-driven cycles of deposition and volatilization. Terrestrial Fate: BTEX compounds have the potential to move through soil and contaminate ground water, and their vapors are highly flammable and explosive.

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 C₉ aromatics (typically trimethylbenzene - TMBs)

Chemicals in this category possess properties indicating a hazard for the environment (acute toxicity for fish, invertebrates, and algae from 1 to 10 mg/L). Category members are readily biodegradable, except 1,3,5-trimethylbenzene (CAS RN 108-67-8). Category members are not expected to be bioaccumulative.

For Xylenes:

log K_{oc} : 2.05-3.08; K_{oc} : 25.4-204; Half-life (hr) air : 0.24-42; Half-life (hr) H₂O surface water : 24-672; Half-life (hr) H₂O ground :

336-8640; Half-life (hr) soil : 52-672; Henry's Pa m³ /mol : 637-879; Henry's atm m³ /mol - 7.68E-03; BOD 5 if unstated - 1.4,1%; COD - 2.56,13% ThOD - 3.125 : BCF : 23; log BCF : 1.17-2.41.

Environmental Fate:

Most xylenes released to the environment will occur in the atmosphere and volatilisation is the dominant environmental fate process. Soil - Xylenes are expected to have moderate mobility in soil evaporating rapidly from soil surfaces.

DO NOT discharge into sewer or waterways.

12.2 Persistence and degradability

No data available for all ingredients.

12.3 Bioaccumulation potential

No data available for all ingredients.

12.4 Mobility in soil

No data available for all ingredients.

12.5 Results of PBT and vPvB assessment

Not applicable.

12.6 Other adverse effects

Not data available.

Our company policy is one of continuous research and development; we therefore reserve the right to amend content herein without prior notice.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

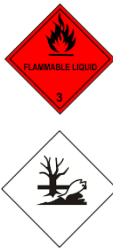
Product / packaging disposal: Legislation addressing waste disposal requirements may differ by country, state and/or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.
DO NOT allow wash water from cleaning or process equipment to enter drains. 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:

Hazchem: 2W

Land transport (ADR):

14.1 UN number	1999
14.2 UN proper shipping name	TARS, LIQUIDS, including road oils and cutback bitumens
14.3 Transport hazard class(es)	Class: 3 Subrisk: N/A
14.4 Packing group	III
14.5 Environmental hazard	Environmentally hazardous
14.6 Special precautions for user	Hazard identification (Kemler): 30 Classification code: F1 Hazard label: 3 Special provisions: N/A Limited quantity: 5L Tunnel restriction code: 3 (D/E)

Air transport (ICAO-IATA/DGR):

14.1 UN number	1999
14.2 UN proper shipping name	TARS, LIQUIDS, including road asphalt and oils, bitumens and cutbacks
14.3 Transport hazard class(es)	ICAO/IATA class: 3 ICAO/IATA subrisk: N/A ERG code: 3L
14.4 Packing group	III
14.5 Environmental hazard	Environmentally hazardous

14.6 Special precautions for user	Special provisions:	A3
	Cargo only packing instruction:	366
	Cargo only maximum qty/pack:	220L
	Passenger and cargo packing instruction:	355
	Passenger and cargo maximum qty/pack:	60L
	Passenger and cargo limited qty packing instructions:	Y344
	Passenger and cargo limited maximum qty/pack:	10L

Sea transport (IMDG-Code/GGVSee):

14.1 UN number	1999	
14.2 UN proper shipping name	TARS, LIQUIDS, including road oils and cutback bitumens	
14.3 Transport hazard class(es)	IMDG class:	3
	IMDG subrisk:	N/A
14.4 Packing group	III	
14.5 Environmental hazard	Marine pollutant	
14.6 Special precautions for user	EMS number:	F-E, S-E
	Special provisions:	955
	Limited quantities:	5L

Inland waterways transport (ADN):

14.1 UN number	1999	
14.2 UN proper shipping name	-	
14.3 Transport hazard class(es)	Class:	3
	Subrisk:	N/A
14.4 Packing group	III	
14.5 Environmental hazard	Environmentally hazardous	
14.6 Special precautions for user	Classification code:	F1
	Special provisions:	N/A
	Limited quantity:	5L
	Equipment required:	PP, EX, A
	Fire cones numbers:	0

15. REGULATORY INFORMATION

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

Naphtha Petroleum, Heavy, Hydrodesulfurised 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 2) Carcinogens: category 1B (Table 3.1)/category 2 (Table 3.2).
 EU REACH Regulation (EC) No 1907/2006 - Annex XVII (Appendix 4) Mutagens: category 1B (Table 3.1)/category 2 (Table 3.2).
 Europe ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
 Europe EC Inventory.
 Europe ECHA Registered Substances - Classification and Labelling - DSD-DPD.
 Europe European Agreement concerning the International Carriage of Dangerous Goods by Road.
 Europe European Customs Inventory of Chemical Substances.
 European Chemical Agency (ECHA) Classification & Labelling Inventory - Chemwatch Harmonised classification.
 European Union - European Inventory of Existing Commercial Chemical Substances (EINECS).
 European Union (EU) Annex I to Directive 67/548/EEC on Classification and Labelling of Dangerous Substances - updated by ATP: 31.
 European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI.
 European Union (EU) Transport of Dangerous Goods by Road - Dangerous Goods List.
 IMO IBC Code Chapter 17: Summary of minimum requirements.
 IMO MARPOL (Annex II) - List of Noxious Liquid Substances Carried in Bulk.
 IMO Provisional Categorization of Liquid Substances - List 2: Pollutant only mixtures containing at least 99% by weight of components already assessed by IMO.
 International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs.
 International Air Transport Association (IATA) Dangerous Goods Regulations.
 International FOSFA List of Banned Immediate Previous Cargoes.
 International Maritime Dangerous Goods Requirements (IMDG Code).
 Regulations concerning the International Carriage of Dangerous Goods by Rail – Table A: Dangerous Goods List - RID 2019 (English).
 United Nations Recommendations on the Transport of Dangerous Goods Model Regulations.

15.2 Chemical Safety Assessment

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

National Inventory	Status
Australia – AICS:	Yes
Canada – DSL:	Yes
Canada – NDSL:	No (Naphtha Petroleum, Heavy, Hydrodesulfurised)
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).

16. OTHER INFORMATION

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.
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:	Bio Concentration Factors.
BEI:	Biological Exposure Index.

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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