

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

### 1.1 Product identifier

Trade name/designation: Eurorooft SA Primer – Roller applied.

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

Relevant identified uses: Adhesives, sealants.

### 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](mailto:technical@alumascroofing.com)

### 1.4 Emergency telephone numbers

Association / Organisation: National Poisons Information Service  
Emergency telephone numbers: 0344 892 0111 (Healthcare professionals only)

Other emergency telephone numbers: Alumasc Building Products: +44 17 4464 8400 (Mon-Thurs 8.30-17.00, 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 Liquids Category 3, H336 - Specific Target Organ Toxicity - Single Exposure (Narcotic Effects) Category 3, H411 - Hazardous to the Aquatic Environment Long-Term 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 GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567.

### 2.2 Label elements

Hazard pictures:



Signal word:

Danger.

Hazard statements:

H336 May cause drowsiness or dizziness.  
H225 Highly flammable liquid and vapour.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H410 Very toxic to aquatic life with long lasting effects.

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.  
P271 Use only outdoors or in a well-ventilated area.  
P240 Ground and bond container and receiving equipment.  
P241 Use explosion-proof electrical/ventilating/lighting/intrinsically safe equipment.  
P242 Use non-sparking tools.  
P243 Take action to prevent static discharges.  
P261 Avoid breathing mist/vapours/spray.  
P273 Avoid release to the environment.  
P280 Wear protective gloves, protective clothing, eye protection and face protection.  
P264 Wash all exposed external body areas thoroughly after handling.

Precautionary statements response: P370+P378 In case of fire: Use alcohol resistant foam or normal protein foam to extinguish.  
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.  
P337+P313 If eye irritation persists: Get medical advice/attention.  
P391 Collect spillage.  
P302+P352 IF ON SKIN: Wash with plenty of water.  
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].  
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P332+P313 If skin irritation occurs: Get medical advice/attention.  
P362+P364 Take off contaminated clothing and wash it before reuse.

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 an authorised hazardous or special waste collection point in accordance with any local regulation.

### 2.3 Other hazards

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

## 3. COMPOSITION AND INFORMATION ABOUT THE COMPONENTS

### 3.1 Substances

See 'Composition on ingredients' in Section 3.2.

### 3.2 Mixtures

1. CAS No 2. EC No 3. Index No 4. REACH No	% [weight]	Name	Classified according to GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567	Nanoform Particle Characteristics
1. 142-82-5 2. 205-563-8 3. 601-008-00-2 4. Not available	20-40	Heptane *	Flammable Liquid Category 2, Skin Corrosion/Irritation Category 2, Specific target organ toxicity - single exposure Category 3 (narcotic effects), Aspiration Hazard Category 1, Acute Aquatic Hazard Category 1, Chronic Aquatic Hazard Category 1; H225, H315, H336, H304, H400, H410 [2]	Not available
1. 78-93-3 2. 201-159-0 3. 606-002-00-3 4. Not available	10-30	Methyl Ethyl Ketone *	Flammable Liquid Category 2, Eye Irritation Category 2, Specific target organ toxicity - single exposure Category 3 (narcotic effects); H225, H319, H336, EUH066 [2]	Not available
1. 67-64-1 2. 200-662-2 3. 606-001-00-8 4. Not available	10-30	Acetone *	Flammable Liquid Category 2, Eye Irritation Category 2, Specific target organ toxicity - single exposure Category 3 (narcotic effects); H225, H319, H336, EUH066 [2]	Not available
<b>Legend:</b>	1. Classified by Chemwatch; 2. Classification drawn from GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567; 3. Classification drawn from C&L; * EU IOELVs available; [e] Substance identified as having endocrine disrupting properties.			

## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

- Eye contact:** If this product comes in contact with the 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 contact occurs:  
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 the 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 the left side (head-down position, if possible) to maintain an 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 simple ketones:

#### Basic treatment:

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

#### Advanced treatment:

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

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

#### Emergency department:

- Laboratory analysis of complete blood count, serum electrolytes, BUN, creatinine, glucose, urinalysis, baseline for serum aminotransferases (ALT and AST), calcium, phosphorus and magnesium, may assist in establishing a treatment regime. Other useful analyses include anion and osmolar gaps, arterial blood gases (ABGs), chest radiographs and electrocardiograph.
- Positive end-expiratory pressure (PEEP)-assisted ventilation may be required for acute parenchymal injury or adult respiratory distress syndrome.
- Consult a toxicologist as necessary.

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

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

#### For acute or short term repeated exposures to petroleum distillates or related hydrocarbons:

- Primary threat to life, from pure petroleum distillate ingestion and/or inhalation, is respiratory failure.
- Patients should be quickly evaluated for signs of respiratory distress (e.g. cyanosis, tachypnoea, intercostal retraction, obtundation) and given oxygen. Patients with inadequate tidal volumes or poor arterial blood gases (pO<sub>2</sub> 50 mm Hg) should be intubated.
- Arrhythmias complicate some hydrocarbon ingestion and/or inhalation and electrocardiographic evidence of myocardial injury has been reported; intravenous lines and cardiac monitors should be established in obviously symptomatic patients. The lungs excrete inhaled solvents, so that hyperventilation improves clearance.
- A chest x-ray should be taken immediately after stabilisation of breathing and circulation to document aspiration and detect the presence of pneumothorax.
- Epinephrine (adrenalin) is not recommended for treatment of bronchospasm because of potential myocardial sensitisation to catecholamines. Inhaled cardioselective bronchodilators (e.g. Alupent, Salbutamol) are the preferred agents, with aminophylline a second choice.
- Lavage is indicated in patients who require decontamination; ensure use of cuffed endotracheal tube in adult patients. [Ellenhorn and Barceloux: Medical Toxicology].

## 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

#### Fire-fighting:

- 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 (CO<sub>2</sub>)
- other pyrolysis products typical of burning organic material.

May emit clouds of acrid smoke.

## 6. ACCIDENTAL RELEASE MEASURES

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

See Section 8.

### 6.2 Environmental precautions

See Section 12.

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### 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 of the SDS.

## 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.
- Electrostatic discharge may be generated during pumping - this may result in fire.
- Ensure electrical continuity by bonding and grounding (earthing) all equipment.
- Restrict line velocity during pumping in order to avoid generation of electrostatic discharge ( $\leq 1$  m/sec until fill pipe submerged to twice its diameter, then  $\leq 7$  m/sec).
- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.

#### Fire & explosion protection:

See Section 5.

#### Other information:

- 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:

##### 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

**Ketones in this group:**

- are reactive with many acids and bases liberating heat and flammable gases (e.g., H<sub>2</sub>).
- react with reducing agents such as hydrides, alkali metals, and nitrides to produce flammable gas (H<sub>2</sub>) and heat.
- are incompatible with isocyanates, aldehydes, cyanides, peroxides, and anhydrides.
- Avoid reaction with oxidising agents

						
+	X	+	X	+	+	+

**X** - Must not be stored together.

**O** - May be stored together with specific preventions.

**+** - May be stored together.

**Note:** Depending on other risk factors, compatibility assessment based on the table above may not be relevant to storage situations, particularly where large volumes of dangerous goods are stored and handled. Reference should be made to the Safety Data Sheets for each substance or article and risks assessed accordingly.

**7.3 Specific end uses(s)**

See Section 1.2.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1 Control parameters**

Ingredient	DNELs Exposure Pattern Worker	PNECs Compartment
Heptane:	Dermal 300 mg/kg bw/day (Systemic, Chronic) Inhalation 2 085 mg/m <sup>3</sup> (Systemic, Chronic) Dermal 149 mg/kg bw/day (Systemic, Chronic) * Inhalation 447 mg/m <sup>3</sup> (Systemic, Chronic) * Oral 149 mg/kg bw/day (Systemic, Chronic) *	Not available
Methyl Ethyl Ketone:	Dermal 1 161 mg/kg bw/day (Systemic, Chronic) Inhalation 600 mg/m <sup>3</sup> (Systemic, Chronic) Dermal 412 mg/kg bw/day (Systemic, Chronic) * Inhalation 106 mg/m <sup>3</sup> (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)
Acetone:	Dermal 186 mg/kg bw/day (Systemic, Chronic) Inhalation 1 210 mg/m <sup>3</sup> (Systemic, Chronic) Inhalation 2 420 mg/m <sup>3</sup> (Local, Acute) Dermal 62 mg/kg bw/day (Systemic, Chronic) * Inhalation 200 mg/m <sup>3</sup> (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)

\* Values for general population.

## Occupational Exposure Limits (OEL):

### Ingredient data:


Source	Ingredient	Material name	TWA	STEL	Peak	Notes
EU Consolidated List of Indicative Occupational Exposure Limit Values (IOELVs)	Heptane	n-Heptane	500 ppm / 2085 mg/m <sup>3</sup>	Not available	Not available	Not available
UK Workplace Exposure Limits (WELs)	Heptane	n-Heptane	500 ppm / 2085 mg/m <sup>3</sup>	Not available	Not available	Not available
EU Consolidated List of Indicative Occupational Exposure Limit Values (IOELVs)	Methyl Ethyl Ketone	Butanone	200 ppm / 600 mg/m <sup>3</sup>	900 mg/m <sup>3</sup> / 300 ppm	Not available	Not available
UK Workplace Exposure Limits (WELs)	Methyl Ethyl Ketone	Butan-2-one (methyl ethyl ketone)	200 ppm / 600 mg/m <sup>3</sup>	899 mg/m <sup>3</sup> / 300 ppm	Not available	Sk, BMGV
EU Consolidated List of Indicative Occupational Exposure Limit Values (IOELVs)	Acetone	Acetone	500 ppm / 1210 mg/m <sup>3</sup>	Not available	Not available	Not available
UK Workplace Exposure Limits (WELs)	Acetone	Acetone	500 ppm / 1210 mg/m <sup>3</sup>	3620 mg/m <sup>3</sup> / 1500 ppm	Not available	Not available

### Emergency limits:

Ingredient	TEEL-1	TEEL-2	TEEL-3
Heptane	500 ppm	830 ppm	5000* ppm
Methyl Ethyl Ketone	Not available	Not available	Not available
Acetone	Not available	Not available	Not available

Ingredient	Original IDLH	Revised IDLH
Heptane	750 ppm	Not available
Methyl Ethyl Ketone	3,000 ppm	Not available
Acetone	2,500 ppm	Not available

## 8.2 Exposure controls

8.2.1 Appropriate engineering Controls:	<p>CARE: Use of a quantity of this material in confined space or poorly ventilated area, where rapid build-up of concentrated atmosphere may occur, could require increased ventilation and/or protective gear 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.</p> <p>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.</p>
8.2.2 Personal protection:	
Eye and face protection:	<p>Safety glasses with side shields. Chemical goggles. Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants.</p>
Skin protection:	See Hand Protection below.
Hands/feet protection:	<p>Wear chemical protective gloves, e.g. PVC. Wear safety footwear or safety gumboots, e.g. Rubber Neoprene rubber gloves</p>
Body protection:	See Other Protection below.

Other protection:	<p>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.</p>
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### Recommended material(s)

#### GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:

"Forsberg Clothing Performance Index".

The effect(s) of the following substance(s) are taken into account in the computer generated selection:

Euroroof SB Bitumen Primer

Materia	CPI	Materia	CPI
PE/EVAL/PE	A	HYPALON	C
PVA	A	NAT+NEOPR+NITRILE	C
TEFLON	A	NATURAL+NEOPRENE	C
VITON	A	NEOPRENE	C
BUTYL	C	NEOPRENE/NATURAL	C
BUTYL/NEOPRENE	C	NITRILE	C
PVC	C	NITRILE+PVC	C
PVDC/PE/PVDC	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 A Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

### 8.2.3. Environmental exposure controls

See Section 12.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Important health, safety and environmental information

<b>Appearance:</b>	Black	<b>Relative density (Water = 1):</b>	0.8-0.9
<b>Physical state:</b>	Liquid	<b>Partition coefficient n-octanol/water:</b>	Not available
<b>Odour:</b>	Not available	<b>Auto-ignition temperature (°C):</b>	Not available
<b>Odour threshold:</b>	Not available	<b>Decomposition temperature:</b>	Not available
<b>pH (as supplied):</b>	Not available	<b>Viscosity (cSt):</b>	1111.111-14444.444
<b>Melting point/freezing point (°C):</b>	Not available	<b>Molecular weight (g/mol):</b>	Not available
<b>Initial boiling point and boiling range (°C):</b>	79	<b>Taste:</b>	Not available
<b>Flash point (°C):</b>	-9	<b>Explosive properties:</b>	Not available
<b>Evaporation rate:</b>	Not available	<b>Oxidising properties:</b>	Not available
<b>Flammability:</b>	Flammable	<b>Surface Tension (dyn/cm or mN/m):</b>	Not available
<b>Upper Explosive Limit (%):</b>	Not available	<b>Volatile Component (%vol):</b>	Not available
<b>Lower Explosive Limit (%):</b>	Not available	<b>Gas group:</b>	Not available
<b>Vapour pressure (kPa):</b>	Not available	<b>pH as a solution (1%):</b>	Not available
<b>Solubility in water:</b>	Immiscible		



<b>Vapour density (Air = 1):</b>	Not available	<b>VOC g/L:</b>	<540
<b>Nanoform Solubility</b>	Not available	<b>Nanoform Particle Characteristics</b>	Not available
<b>Particle Size</b>	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>Inhalation hazard is increased at higher temperatures.</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 incoordination.</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. Inhalation, by humans, of 1000 parts per million (0.1%) heptanes for 6 minutes was associated with slight dizziness; inhalation of higher concentrations for shorter periods, resulted in vertigo and incoordination, and hilarity. Central nervous system involvement occurs very early, even before mucous membrane irritation. Animal testing showed exposure to 1.5-2% for 30 minutes may be fatal.</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>Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may be damaging to the health of the individual.</p>
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Ingestion:	The material has <b>NOT</b> 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. Swallowing of the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis; serious consequences may result. (ICSC13733) Accidental ingestion of the material may be damaging to the health of the individual. Considered an unlikely route of entry in commercial/industrial environments. The liquid may produce gastrointestinal discomfort and may be harmful if swallowed.
Skin contact:	This material can cause inflammation of the skin on contact in some persons. The material may accentuate any pre-existing dermatitis condition. Skin contact with the material may damage the health of the individual; systemic effects may result following absorption. 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. Open cuts, abraded or irritated skin should not be exposed to this material. Entry into the bloodstream, 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.
Eye:	This material can cause eye irritation and damage in some persons.
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. 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.

**Euroroof SA Primer:**

Toxicity	Irritation
Not available	Not available

**Heptane:**

Toxicity	Irritation
Dermal (rabbit) LD50: >2000 mg/kg <sup>[1]</sup>	Eye: no adverse effect observed (not irritating) <sup>[1]</sup>
Inhalation(Rat) LC50; >29.29 mg/L4h <sup>[1]</sup>	Skin: no adverse effect observed (not irritating) <sup>[1]</sup>
Oral(Rat) LD50; >5000 mg/kg <sup>[1]</sup>	

**Methyl Ethyl Ketone:**

Toxicity	Irritation
Dermal (rabbit) LD50: ~6400-8000 mg/kg <sup>[2]</sup>	Eye (human): 350 ppm -irritant
Inhalation(Mouse) LC50; 32 mg/L4h <sup>[2]</sup>	Eye (rabbit): 80 mg - irritant
Oral(Rat) LD50; 2054 mg/kg <sup>[1]</sup>	Skin (rabbit): 402 mg/24 hr - mild
	Skin (rabbit):13.78mg/24 hr open

**Acetone:**

Toxicity	Irritation
Dermal (rabbit) LD50: 20 mg/kg <sup>[2]</sup>	Eye (human): 500 ppm - irritant
Inhalation(Mouse) LC50; 44 mg/L4h <sup>[2]</sup>	Eye (rabbit): 20mg/24hr -moderate
Oral(Rat) LD50; 1738 mg/kg <sup>[1]</sup>	Eye (rabbit): 3.95 mg - SEVERE
	Eye: adverse effect observed (irritating) <sup>[1]</sup>
	Skin (rabbit): 500 mg/24hr - mild
	Skin (rabbit):395mg (open) - mild
	Skin: no adverse effect observed (not irritating) <sup>[1]</sup>

**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.

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.
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.
Eurorooft Sa Primer & Methyl Ethyl Ketone:	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.
Methyl Ethyl Ketone & Acetone:	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.

<b>Acute Toxicity</b>	✗	<b>Carcinogenicity</b>	✗
<b>Skin Irritation/Corrosion</b>	✓	<b>Reproductivity</b>	✗
<b>Serious Eye Damage/Irritation</b>	✓	<b>STOT - Single Exposure</b>	✓
<b>Respiratory or Skin Sensitisation</b>	✗	<b>STOT - Repeated Exposure</b>	✗
<b>Mutagenicity</b>	✗	<b>Aspiration Hazard</b>	✗

**Legend:**

✗ - Data either not available or does not fill the criteria for classification.  
✓ - Data available to make classification.

**11.2.1. Endocrine Disruption Properties**

Not available.

**12. ECOLOGICAL INFORMATION**

**12.1 Toxicity**

**Eurorooft SA Primer:**

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

**Heptane:**

End point	Test duration (Hr)	Species	Value	Source
LC50	96h	Fish	3446.8mg/L	4
EC50	48h	Crustacea	0.64mg/l	2
NOEC(ECx)	504h	Crustacea	0.17mg/l	2

**Methyl Ethyl Ketone:**

End point	Test duration (Hr)	Species	Value	Source
NOEC(ECx)	48h	Crustacea	68mg/l	2
EC50	72h	Algae or other aquatic plants	1972mg/l	2
LC50	96h	Fish	>324mg/L	4
EC50	48h	Crustacea	308mg/l	2
EC50	96h	Algae or other aquatic plants	>500mg/l	4

**Acetone:**

End point	Test duration (Hr)	Species	Value	Source
NOEC(ECx)	48h	Fish	0.001mg/L	4
LC50	96h	Fish	>100mg/l	4
EC50	48h	Crustacea	6098.4mg/L	5
EC50	96h	Algae or other aquatic plants	9.873-27.684mg/l	4

**Naphtha Petroleum, Heavy, Hydrodesulfurised:**

End point	Test duration (Hr)	Species	Value	Source
EC50(ECx)	72h	Algae or other aquatic plants	391mg/l	2
EC50	72h	Algae or other aquatic plants	391mg/l	2
NOEC(ECx)	504h	Crustacea	0.097mg/l	2
EC50	72h	Algae or other aquatic plants	0.53mg/l	2
EC50	96h	Algae or other aquatic plants	0.58mg/l	2
NOEC(ECx)	720h	Crustacea	0.024mg/l	2
LC50	96h	Fish	0.14mg/l	2
EC50	96h	Algae or other aquatic plants	0.277mg/L	2

**Legend:**

Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data.

May cause long-term adverse effects in the aquatic environment.

Do NOT allow the 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 the use of the product must be disposed of on site or at approved waste sites.

**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 n-Heptane: Log Kow: 4.66; Koc: 2400-8100; Half-life (hr) Air: 52.8; Half-life (hr) Surface Water: 2.9-312; Henry's atm m3 /mol: 2.06; BOD 5 (if unstated): 1.92; COD: 0.06; BCF: 340-2000; Log BCF: 2.53-3.31.

Atmospheric Fate: Breakdown of n-heptane by sunlight is not expected to be an important fate process. If released to the atmosphere, n-heptane is expected to exist entirely in the vapour phase, in ambient air.

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
Heptane	LOW	LOW
Methyl Ethyl Ketone	LOW (Half-life = 14 days)	LOW (Half-life = 26.75 days)
Acetone	LOW (Half-life = 14 days)	MEDIUM (Half-life = 116.25 days)

## 12.3 Bioaccumulation potential

Ingredient	Bioaccumulation
Heptane	HIGH (LogKOW = 4.66)
Methyl Ethyl Ketone	LOW (LogKOW = 0.29)
Acetone	LOW (BCF = 0.69)

## 12.4 Mobility in soil

Ingredient	Mobility
Heptane	LOW (KOC = 274.7)
Methyl Ethyl Ketone	MEDIUM (KOC = 3.827)
Acetone	HIGH (KOC = 1.981)

## 12.5 Results of PBT and vPvB assessment

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

PBT Criteria fulfilled?	No
vPvB	No

## 12.6 Endocrine Disruption Properties

Not available.

## 12.7. Other adverse effects

Not available.

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

Product / packaging disposal:	<p>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.</p> <p>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.</p> <p>In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.</p> <p>Recycle wherever possible.</p> <p>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.</p> <p>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).</p>
Waste treatment options:	Not available.
Sewage disposal options:	Not available.

## 14. TRANSPORT INFORMATION

### Labels required:



Marine Pollutant:

Hazchem: 3YE.

### Land transport (ADR):

14.1 UN number	1993
14.2 UN proper shipping name	FLAMMABLE LIQUID, N.O.S.
14.3 Transport hazard class(es)	Class: 3 Subrisk: N/A
14.4 Packing group	II
14.5 Environmental hazard	Environmentally hazardous
14.6 Special precautions for user	Hazard identification (Kemler): 33 Classification code: F1 Hazard label: 3 Special provisions: 274 601 640C Limited quantity: 1L Tunnel restriction code: 2 (D/E)

### Air transport (ICAO-IATA/DGR):

14.1 UN number	1993
14.2 UN proper shipping name	Flammable liquid, n.o.s. *
14.3 Transport hazard class(es)	ICAO/IATA class: 3 ICAO/IATA subrisk: N/A ERG code: 3H
14.4 Packing group	II
14.5 Environmental hazard	Environmentally hazardous
14.6 Special precautions for user	Special provisions: A3 Cargo only packing instruction: 364 Cargo only maximum qty/pack: 60L Passenger and cargo packing instruction: 353 Passenger and cargo maximum qty/pack: 5L Passenger and cargo limited qty packing instructions: Y341 Passenger and cargo limited maximum qty/pack: 1L

### Sea transport (IMDG-Code/GGVSee):

14.1 UN number	1993
14.2 UN proper shipping name	FLAMMABLE LIQUID, N.O.S
14.3 Transport hazard class(es)	IMDG class: 3 IMDG subrisk: N/A
14.4 Packing group	II
14.5 Environmental hazard	Marine Pollutant
14.6 Special precautions for user	EMS number: F-E , S-E Special provisions: 274 Limited quantities: 1L

### Inland waterways transport (ADN):

14.1 UN number	1993
14.2 UN proper shipping name	FLAMMABLE LIQUID, N.O.S
14.3 Transport hazard class(es)	Class: 3 Subrisk: N/A
14.4 Packing group	II
14.5 Environmental hazard	Environmentally hazardous

14.6 Special precautions for user	Classification code: Special provisions: Limited quantity: Equipment required: Fire cones numbers:	F1 274; 601; 640C 1L PP, EX, A 1
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**14.7. Transport in bulk according to Annex II of MARPOL and the IBC code**

Not applicable.

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

Product Name	Group
Heptane	Not available
Methyl Ethyl Ketone	Not available
Acetone	Not available

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

Product Name	Ship Type
Heptane	Not available
Methyl Ethyl Ketone	Not available
Acetone	Not available

**15. REGULATORY INFORMATION**

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

**Heptane is found on the following regulatory lists:**

EU Consolidated List of Indicative Occupational Exposure Limit Values (IOELVs)	Europe EC Inventory
EU European Chemicals Agency (ECHA) Community Rolling Action Plan (CoRAP) List of Substances	European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)
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	European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI

**Methyl Ethyl Ketone is found on the following regulatory lists:**

EU Consolidated List of Indicative Occupational Exposure Limit Values (IOELVs)	Europe EC Inventory
EU European Chemicals Agency (ECHA) Community Rolling Action Plan (CoRAP) List of Substances	European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)
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	European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI

**Acetone is found on the following regulatory lists:**

EU Consolidated List of Indicative Occupational Exposure Limit Values (IOELVs)	European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)
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	European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI
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	

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

**15.2 Chemical Safety Assessment**

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

**ECHA summary:**

Ingredient	CAS number	Index No	ECHA Dossier
Heptane	142-82-5	601-008-00-2	01-2119457603-38-XXXX   01-2119457601-42-XXXX

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Flam. Liq. 2; Asp. Tox. 1; Skin Irrit. 2; Narc. STOT SE 3; Aquatic Acute 1; Aquatic Chronic 1	GHS02; GHS09; GHS08; GHS07; Dgr	H225; H304; H315; H336; H410
2	Flam. Liq. 2; Asp. Tox. 1; Narc. STOT SE 3; Aquatic Chronic 1; Aquatic Acute 1; STOT SE 3; Resp. STOT SE 3; Flam. Liq. 1; Acute Tox. 3; Acute Tox. 4; Skin Corr. 1B; Skin Sens. 1; Acute Tox. 2; Resp. Sens. 1; Muta. 1B; Carc. 1B; Repr. 1B; STOT RE 1; Eye Irrit. 2	GHS02; GHS09; GHS08; GHS07; Dgr; GHS05; GHS06; Wng	H225; H304; H336; H410; H400; H371; H301; H312; H314; H317; H330; H334; H340; H350; H360; H372; H319; H335
1	Flam. Liq. 2; Asp. Tox. 1; Skin Irrit. 2; Narc. STOT SE 3; Aquatic Acute 1; Aquatic Chronic 1	GHS02; GHS09; GHS08; GHS07; Dgr	H225; H304; H315; H336; H410
2	Flam. Liq. 2; Asp. Tox. 1; Skin Irrit. 2; Narc. STOT SE 3; Aquatic Chronic 1; Aquatic Acute 1; Resp. Sens. 1	GHS02; GHS09; GHS08; GHS07; Dgr	H225; H304; H315; H336; H410; H400; H334

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

Ingredient	CAS number	Index No	ECHA Dossier
Methyl Ethyl Ketone	78-93-3	606-002-00-3	01-2119457290-43-XXXX   01-2119943742-35-XXXX

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Flam. Liq. 2; Eye Irrit. 2; Narc. STOT SE 3	GHS02; GHS07; Dgr	H225; H319; H336
2	Flam. Liq. 2; Eye Irrit. 2; Narc. STOT SE 3; Resp. STOT SE 3; STOT SE 3; Skin Irrit. 2; Eye Irrit. 2A	GHS02; GHS07; Dgr; Wng; GHS08; GHS01; None Specified	H225; H319; H336; H371; H335; H302; H312; H341; H361; H314

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

Ingredient	CAS number	Index No	ECHA Dossier
Acetone	67-64-1	606-001-00-8	01-2119471330-49-XXXX

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Flam. Liq. 2; Eye Irrit. 2; Narc. STOT SE 3; Skin Irrit. 2; Skin Sens. 1; Aquatic Chronic 2	GHS02; GHS07; Dgr; GHS09	H225; H319; H336; H315; H317; H411
2	Flam. Liq. 2; Eye Irrit. 2; Narc. STOT SE 3; Resp. STOT SE 3; STOT SE 3; Eye Irrit. 2A; Skin Irrit. 2; Skin Sens. 1; Aquatic Chronic 2	GHS02; GHS07; Dgr; GHS08; GHS01; Wng; GHS06; GHS09	H225; H319; H336; H371; H228; H315; H312; H335; H302; H332; H340; H317; H411

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



National Inventory	Status
Australia - AIIIC / Australia Non-Industrial Use	Yes
Canada - DSL	Yes
Canada - NDSL	No (Heptane; Methyl Ethyl Ketone; Acetone)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	Yes
Japan - ENCS	Yes
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	Yes
Taiwan - TCSI	Yes
Mexico - INSQ	Yes
Vietnam - NCI	Yes
Russia - FBEPH	Yes
Legend:	Yes = All CAS declared ingredients are on the inventory. No = One or more of the CAS listed ingredients are not on the inventory and are not exempt from listing (see specific ingredients in brackets).

## 16. OTHER INFORMATION

### Full text risk and hazard codes:

H228 Flammable solid.  
H301 Toxic if swallowed.  
H302 Harmful if swallowed.  
H304 May be fatal if swallowed and enters airways.  
H312 Harmful in contact with skin.  
H314 Causes severe skin burns and eye damage.  
H317 May cause an allergic skin reaction.  
H330 Fatal if inhaled.  
H332 Harmful if inhaled.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H335 May cause respiratory irritation.  
H340 May cause genetic defects.  
H341 Suspected of causing genetic defects.  
H350 May cause cancer.  
H360 May damage fertility or the unborn child.  
H361 Suspected of damaging fertility or the unborn child.  
H371 May cause damage to organs.  
H372 Causes damage to organs through prolonged or repeated exposure.  
H400 Very toxic to aquatic life.  
H411 Toxic to aquatic life with long lasting effects.

### SDS version summary:

Version	Date of Update	Section Updated
2.0	02/10/2023	Template Change

### Other information:

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references. The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. For detailed advice on Personal Protective Equipment, refer to the following EU CEN Standards:  
EN 166 Personal eye-protection  
EN 340 Protective clothing  
EN 374 Protective gloves against chemicals and micro-organisms  
EN 13832 Footwear protecting against chemicals  
EN 133 Respiratory protective devices

**Definitions and abbreviations:**

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

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

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