

## Waterproofing Technologies Pty Ltd

Version No:1.1 Safety Data Sheet according to WHS and ADG requirements Issue Date: **12/12/2019** Print Date: **12/12/2019** S.GHS.AUS.EN

## SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

#### **Product Identifier**

Product name	ENVIRO PRIME PW PART B
Synonyms	Not Available
Proper shipping name	ISOPHORONEDIAMINE
Other means of identification	Not Available

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

Relevant identified uses Potable water primer

#### Details of the supplier of the safety data sheet

Registered company name	Waterproofing Technologies Pty Ltd
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Telephone	+61 (0)2 8595 8699
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Website	www.envirosystems.com.au
Email	sales@envirosystems.com.au

#### Emergency telephone number

Association / Organisation	Waterproofing Technologies Pty Ltd
Emergency telephone numbers	+61 (0)2 8595 8699
Other emergency telephone numbers	Not Available

# **SECTION 2 HAZARDS IDENTIFICATION**

## Classification of the substance or mixture

HAZARDOUS CHEMICAL. DANGEROUS GOODS. According to the WHS Regulations and the ADG Code.

Poisons Schedule	S5	
Classification <sup>[1]</sup>	Acute Toxicity (Oral) Category 4, Acute Toxicity (Dermal) Category 4, Acute Toxicity (Inhalation) Category 4, Skin Corrosion/Irritation Category 1B, Skin Sensitizer Category 1, Serious Eye Damage Category 1, Acute Aquatic Hazard Category 3, Chronic Aquatic Hazard Category 3	
Legend:	1. Classification drawn from HSIS ; 2. Classification drawn from EC Directive 1272/2008 - Annex VI	

#### Label elements

GHS label elements	
SIGNAL WORD	DANGER

#### Hazard statement(s)

H302	Harmful if swallowed.
H312	Harmful in contact with skin.

H332	Harmful if inhaled.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H412	Harmful to aquatic life with long lasting effects.

#### Precautionary statement(s) Prevention

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read label before use.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P271	Use only outdoors or in a well-ventilated area.

#### Precautionary statement(s) Response

P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.	
P303+P361+P353	P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.	
P305+P351+P338	+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.	
P310	P310 Immediately call a POISON CENTER or doctor/physician.	
P363	Wash contaminated clothing before reuse.	

## Precautionary statement(s) Storage

P405

P501

Store locked up.

#### Precautionary statement(s) Disposal

Dispose of contents/container in accordance with local regulations.

#### SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

#### Substances

See section below for composition of Mixtures

#### Mixtures

CAS No	%[weight]	Name
69-72-7	7-10	salicylic acid
100-51-6	20-25	benzyl alcohol
2855-13-2	50-75	isophorone diamine

# SECTION 4 FIRST AID MEASURES

Description of first aid measures

Eye Contact	If this product comes in contact with the eyes: <ul> <li>Immediately hold eyelids apart and flush the eye continuously with running water.</li> <li>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.</li> <li>Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.</li> <li>Transport to hospital or doctor without delay.</li> <li>Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>
Skin Contact	<ul> <li>If skin or hair contact occurs:</li> <li>Immediately flush body and clothes with large amounts of water, using safety shower if available.</li> <li>Quickly remove all contaminated clothing, including footwear.</li> <li>Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre.</li> <li>Transport to hospital, or doctor.</li> </ul>
Inhalation	<ul> <li>If furnes or combustion products are inhaled remove from contaminated area.</li> <li>Lay patient down. Keep warm and rested.</li> <li>Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li> <li>Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.</li> <li>Transport to hospital, or doctor, without delay.</li> <li>Inhalation of vapours or aerosols (mists, furnes) may cause lung oedema.</li> <li>Corrosive substances may cause lung damage (e.g. lung oedema, fluid in the lungs).</li> <li>As this reaction may be delayed up to 24 hours after exposure, affected individuals need complete rest (preferably in semi-recumbent posture) and must be kept under medical observation even if no symptoms are (yet) manifested.</li> <li>Before any such manifestation, the administration of a spray containing a dexamethasone derivative or beclomethasone derivative may be considered.</li> <li>This must definitely be left to a doctor or person authorised by him/her.</li> <li>(ICSC13719)</li> </ul>
Ingestion	<ul> <li>For advice, contact a Poisons Information Centre or a doctor at once.</li> <li>Urgent hospital treatment is likely to be needed.</li> <li>If swallowed do NOT induce vomiting.</li> <li>If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.</li> </ul>

- 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.
- Transport to hospital or doctor without delay.

#### Indication of any immediate medical attention and special treatment needed

- For acute or short-term repeated exposures to highly alkaline materials:
- Respiratory stress is uncommon but present occasionally because of soft tissue edema.
- Unless endotracheal intubation can be accomplished under direct vision, cricothyroidotomy or tracheotomy may be necessary.
- Oxygen is given as indicated.
- The presence of shock suggests perforation and mandates an intravenous line and fluid administration.
- Damage due to alkaline corrosives occurs by liquefaction necrosis whereby the saponification of fats and solubilisation of proteins allow deep penetration into the tissue.
- Alkalis continue to cause damage after exposure.

INGESTION:

Milk and water are the preferred diluents

No more than 2 glasses of water should be given to an adult.

- ▶ Neutralising agents should never be given since exothermic heat reaction may compound injury.
- \* Catharsis and emesis are absolutely contra-indicated.
- \* Activated charcoal does not absorb alkali.
- \* Gastric lavage should not be used.

Supportive care involves the following

- Withhold oral feedings initially.
- ▶ If endoscopy confirms transmucosal injury start steroids only within the first 48 hours.
- · Carefully evaluate the amount of tissue necrosis before assessing the need for surgical intervention
- Patients should be instructed to seek medical attention whenever they develop difficulty in swallowing (dysphagia).
- SKIN AND EYE:

Injury should be irrigated for 20-30 minutes.

Eye injuries require saline. [Ellenhorn & Barceloux: Medical Toxicology]

Clinical experience of benzyl alcohol poisoning is generally confined to premature neonates in receipt of preserved intravenous salines.

- Metabolic acidosis, bradycardia, skin breakdown, hypotonia, hepatorenal failure, hypotension and cardiovascular collapse are characteristic.
- High urine benzoate and hippuric acid as well as elevated serum benzoic acid levels are found.
- The so-called 'gasping syndrome describes the progressive neurological deterioration of poisoned neonates.
- Management is essentially supportive.

for salicylate intoxication:

Pending gastric lavage, use emetics such as syrup of Ipecac or delay gastric emptying and absorption by swallowing a slurry of activated charcoal. Do not give ipecac after charcoal.

Gastric lavage with water or perhaps sodium bicarbonate solution (3%-5%). Mild alkali delays salicylate absorption from the stomach and perhaps slightly from the duodenum.

- Saline catharsis with sodium or magnesium sulfate (15-30 gm in water).
- Take an immediate blood sample for an appraisal of the patient's acid-base status. A pH determination on an anaerobic sample of arterial blood is best. An analysis of the plasma salicylate concentration should be made at the same time. Laboratory controls are almost essential for the proper management of severe salicylism.
- In the presence of an established acidosis, alkali therapy is essential, but at least in an adult, alkali should be withheld until its need is demonstrated by chemical analysis. The intensity of treatment depends on the intensity of acidosis. In the presence of vomiting, intravenous sodium bicarbonate is the most satisfactory of all alkali therapy.
- Correct dehydration and hypoglycaemia (if present) by the intravenous administration of glucose in water or in isotonic saline. The administration of glucose may also serve to remedy ketosis which is often seen in poisoned children.
- Even in patients without hypoglycaemia, infusions of glucose adequate to produce distinct hyperglycaemia are recommended to prevent glucose depletion in the brain. This recommendation is based on impressive experimental data in animals.
- Renal function should be supported by correcting dehydration and incipient shock. Overhydration is not justified. An alkaline urine should be maintained by the administration of alkali if necessary with care to prevent a severe systemic alkalosis. As long as urine remains alkaline (pH above 7.5), administration of an osmotic diuretic such as mannitol or perhaps THAM is useful, but one must be careful to avoid hypokalaemia. Supplements of potassium chloride should be included in parenteral fluids.
- + Small doses of barbiturates, diazepam, paraldehyde, or perhaps other sedatives (but probably not morphine) may be required to suppress extreme restlessness and convulsions.
- For hyperpyrexia, use sponge baths.

The presence of petechiae or other signs of haemorrhagic tendency calls for a large Vitamin K dose and perhaps ascorbic acid. Minor transfusions may be necessary since bleeding in salicylism is not always due to a prothrombin effect.

Haemodialysis and haemoperfusion have proved useful in salicylate poisoning, as have peritoneal dialysis and exchange transfusions, but alkaline diuretic therapy is probably sufficient except in fulminating cases.

#### [GOSSELIN, et.al.: Clinical Toxicology of Commercial Products]

The mechanism of the toxic effect involves metabolic acidosis, respiratory alkalosis, hypoglycaemia, and potassium depletion. Salicylate poisoning is characterised by extreme acid-base disturbances, electrolyte disturbances and decreased levels of consciousness. There are differences between acute and chronic toxicity and a varying clinical picture which is dependent on the age of the patient and their kidney function. The major feature of poisoning is metabolic acidosis due to 'uncoupling of oxidative phosphorylation' which produces an increased metabolic rate, increased oxygen consumption, increased formation of carbon dioxide, increased heat production and increased utilisation of glucose. Direct stimulation of the respiratory centre leads to hyperventilation and respiratory alkalosis. This leads to compensatory increased renal excretion of bicarbonate which contributes to the metabolic acidosis which may occur as a result of increased glucose demand, increased rates of tissue glycolysis, and impaired rate of glucose synthesis. **NOTE:** Tissue glucose levels may be lower than plasma levels. Hyperglycaemia may occur due to increased glycogenolysis. Potassium depletion occurs as a result of increased renal excretion as well as intracellular movement of potassium.

Salicylates competitively inhibit vitamin K dependent synthesis of factors II, VII, IX, X and in addition, may produce a mild dose dependent hepatitis. Salicylates are bound to albumin. The extent of protein binding is concentration dependent (and falls with higher blood levels). This, and the effects of acidosis, decreasing ionisation, means that the volume of distribution increases markedly in overdose as does CNS penetration. The extent of protein binding (50-80%) and the rate of metabolism are concentration dependent. Hepatic clearance has zero order kinetics and thus the therapeutic half-life of 2-4.5 hours but the half-life in overdose is 18-36 hours. Renal excretion is the most important route in overdose. Thus when the salicylate concentrations are in the toxic range there is increased tissue distribution and impaired clearance of the drug.

HyperTox 3.0 https://www.ozemail.com.au/-ouad/SALI0001.HTA

for non-steroidal anti-inflammatories (NSAIDs)

- Symptoms following acute NSAIDs overdoses are usually limited to lethargy, drowsiness, nausea, vomiting, and epigastric pain, which are generally reversible with supportive care. Gastrointestinal bleeding can occur. Hypertension, acute renal failure, respiratory depression, and coma may occur, but are rare. Anaphylactoid reactions have been reported with therapeutic ingestion of NSAIDs, and may occur following an overdose.
- Patients should be managed by symptomatic and supportive care following a NSAIDs overdose.
- There are no specific antidotes.
- Emesis and/or activated charcoal (60 to 100 grams in adults, 1 to 2 g/kg in children), and/or osmotic cathartic may be indicated in patients seen within 4 hours of ingestion with symptoms or following a large overdose (5 to 10 times the usual dose).
- + Forced diuresis, alkalinisation of urine, hemodialysis, or haemoperfusion may not be useful due to high protein binding.

#### **SECTION 5 FIREFIGHTING MEASURES**

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Continued...

- Extinguishing media
  - Foam.
  - Dry chemical powder. BCF (where regulations permit).
  - Carbon dioxide.
  - Water spray or fog Large fires only.

#### Special hazards arising from the substrate or mixture

Eiro	Incompatibility
гпе	Incompanyinty

+ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

#### Advice for firefighters

Fire Fighting	<ul> <li>Alert Fire Brigade and tell them location and nature of hazard.</li> <li>Wear full body protective clothing with breathing apparatus.</li> <li>Prevent, by any means available, spillage from entering drains or water course.</li> <li>Use fire fighting procedures suitable for surrounding area.</li> <li>Do not approach containers suspected to be hot.</li> </ul>
Fire/Explosion Hazard	<ul> <li>Combustible.</li> <li>Slight fire hazard when exposed to heat or flame.</li> <li>Heating may cause expansion or decomposition leading to violent rupture of containers.</li> <li>On combustion, may emit toxic fumes of carbon monoxide (CO).</li> <li>May emit acrid smoke.</li> <li>Combustion products include:</li> <li>carbon dioxide (CO2)</li> <li>aldehydes</li> <li>nitrogen oxides (NOx)</li> <li>other pyrolysis products typical of burning organic material.</li> <li>Contains low boiling substance: Closed containers may rupture due to pressure buildup under fire conditions.</li> <li>May emit corrosive fumes.</li> <li>WARNING: Long standing in contact with air and light may result in the formation of potentially explosive peroxides.</li> </ul>
HAZCHEM	2X

# SECTION 6 ACCIDENTAL RELEASE MEASURES

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

See section 8

# **Environmental precautions**

See section 12

## Methods and material for containment and cleaning up

Minor Spills	<ul> <li>Drains for storage or use areas should have retention basins for pH adjustments and dilution of spills before discharge or disposal of material.</li> <li>Check regularly for spills and leaks.</li> <li>Clean up all spills immediately.</li> <li>Avoid breathing vapours and contact with skin and eyes.</li> <li>Control personal contact with the substance, by using protective equipment.</li> <li>Contain and absorb spill with sand, earth, inert material or vermiculite.</li> <li>Wipe up.</li> </ul>
Major Spills	<ul> <li>Clear area of personnel and move upwind.</li> <li>Alert Fire Brigade and tell them location and nature of hazard.</li> <li>Wear full body protective clothing with breathing apparatus.</li> <li>Prevent, by any means available, spillage from entering drains or water course.</li> <li>Consider evacuation (or protect in place).</li> </ul>

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

# SECTION 7 HANDLING AND STORAGE

# Precautions for safe handling

Safe handling	Contains low boiling substance:         Storage in sealed containers may result in pressure buildup causing violent rupture of containers not rated appropriately. <ul> <li>Check for bulging containers.</li> <li>Vent periodically</li> <li>Always release caps or seals slowly to ensure slow dissipation of vapours</li> <li>Avoid all personal contact, including inhalation.</li> <li>Wear protective clothing when risk of exposure occurs.</li> <li>Use in a well-ventilated area.</li> <li>Avoid contact with moisture.</li> <li>Avoid contact with incompatible materials.</li> <li>DO NOT allow clothing wet with material to stay in contact with skin</li> </ul>
Other information	<ul> <li>Store in original containers.</li> <li>Keep containers securely sealed.</li> <li>Store in a cool, dry, well-ventilated area.</li> <li>Store away from incompatible materials and foodstuff containers.</li> <li>Protect containers against physical damage and check regularly for leaks.</li> <li>DO NOT store near acids, or oxidising agents</li> </ul>

## **ENVIRO PRIME PW PART B**

	► No smoking, naked lights, heat or ignition sources.			
Conditions for safe storage, including any incompatibilities				
Suitable container	<ul> <li>Glass container is suitable for laboratory quantities</li> <li>DO NOT use aluminium or galvanised containers</li> <li>Lined metal can, lined metal pail/ can.</li> <li>Plastic pail.</li> <li>Polyliner drum.</li> <li>Packing as recommended by manufacturer.</li> <li>Check all containers are clearly labelled and free from leaks.</li> <li>For low viscosity materials</li> <li>Drums and jerricans must be of the non-removable head type.</li> <li>Where a can is to be used as an inner package, the can must have a screwed enclosure.</li> <li>For materials with a viscosity of at least 2680 cSt. (23 deg. C) and solids (between 15 C deg. and 40 deg C.):</li> <li>Removable head packaging;</li> <li>Cans with friction closures and</li> <li>low pressure tubes and cartridges</li> <li>may be used.</li> <li>Where combination packages are used, and the inner packages are of glass, porcelain or stoneware, there must be sufficient inert cushioning material in contact with inner and outer packages unless the outer packaging is a close fitting moulded plastic box and the substances are not incompatible with the plastic.</li> </ul>			
Storage incompatibility	Benzyl alcohol:         • may froth in contact with water         • slowly oxidises in air, oxygen forming benzaldehyde         • is incompatible with mineral acids, caustics, aliphatic amines, isocyanates         • reacts violently with strong oxidisers, and explosively with sulfuric acid at elevated temperatures         • corrodes aluminium at high temperatures         • is incompatible with aluminum, iron, steel         • attacks some nonfluorinated plastics; may attack, extract and dissolve polypropylene         Benzyl alcohol contaminated with 1.4% hydrogen bromide and 1.2% of dissolved iron(II) polymerises exothermically above 100 deg. C.         Salicylic acid         • reacts with strong oxidisers, organic nitrites (such as ethyl nitrite), iodine, iron salts, lead diacetate         • is incompatible with mild steel, galvanised steel / zinc producing hydrogen gas which may form an explosive mixture with air.         • Avoid strong acids, acid chlorides, acid anhydrides and chloroformates.         • Avoid contact with copper, aluminium and their alloys.         • Avoid reaction with oxidising agents			

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

# **Control parameters**

## OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

Not Available

## EMERGENCY LIMITS

Ingredient	Material name	TEEL-1		TEEL-2	TEEL-3
benzyl alcohol	Benzyl alcohol	30 ppm		52 ppm	740 ppm
Ingredient	Original IDLH		Revised IDLH		
salicylic acid	Not Available		Not Available		
benzyl alcohol	Not Available		Not Available		
isophorone diamine	Not Available		Not Available		

#### 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. Enclosure and/or isolation of emission source which keeps a selected hazard 'physically' away from the worker and ventilation that strategically 'adds' and 'removes' air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. <b>For potent pharmacological agents:</b> <b>Powders</b> To prevent contamination and overexposure, no open handling of powder should be allowed. • Powder handling operations are to be done in a powders weighing hood, a glove box, or other equivalent ventilated containment system. • In situations where these ventilated containment hoods have not been installed, a non-ventilated enclosed containment hood should be used. • Pending changes resulting from additional air monitoring data, up to 300 mg can be handled outside of an enclosure provided that no grinding, crushing or other dust-generating process occurs. • An air-purfying respirator should be worn by all personnel in the immediate area in cases where non-ventilated containment is used, where significant amounts of material (e.g., more than 2 grams) are used, or where the material may become airborne (as through grinding, etc.). <b>CARE:</b> 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

Personal protection	
Eye and face protection	<ul> <li>Chemical goggles.</li> <li>Full face shield may be required for supplementary but never for primary protection of eyes.</li> <li>Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience.</li> </ul>
Skin protection	See Hand protection below
Hands/feet protection	<ul> <li>Wear chemical protective gloves, e.g. PVC.</li> <li>Wear safety footwear or safety gumboots, e.g. Rubber</li> <li>When handling corrosive liquids, wear trousers or overalls outside of boots, to avoid spills entering boots.</li> <li><b>NOTE:</b> <ul> <li>The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.</li> <li>Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed.</li> </ul> </li> <li>The selection of suitable gloves does not only depend on thematerial, but also on further marks of quality which vary from manufacturer tomanufacturer. Where the chemical is a preparation of several substances, theresistance of the glove material can not be calculated in advance and hastherefore to be checked prior to the application.</li> <li>The exact break through time for substances has to be obtainedfrom the manufacturer of the protective gloves and has to be observed whenmaking a final choice.</li> <li>Personal hygiene is a key element of effective hand care. Glovesmust only be worn on clean hands.</li> </ul>
Body protection	See Other protection below
Other protection	<ul> <li>Overalls.</li> <li>PVC Apron.</li> <li>PVC protective suit may be required if exposure severe.</li> <li>Eyewash unit.</li> <li>Ensure there is ready access to a safety shower.</li> </ul>
Thermal hazards	Not Available

#### 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:

#### ENVIRO PRIME PW PART B

Material	CPI
BUTYL	A
VITON	Α

\* 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**

varies with Type of filter.

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

Where the concentration of gas/particulates in the breathing zone,approaches or exceeds the 'Exposure Standard' (or ES), respiratoryprotection is required. Degree of protection varies with both face-piece and Class offilter; the nature of protection

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	K-AUS P2	-	K-PAPR-AUS / Class 1 P2
up to 50 x ES	-	K-AUS / Class 1 P2	-
up to 100 x ES	-	K-2 P2	K-PAPR-2 P2 ^

#### ^ - Full-face

 $\begin{array}{l} \mathsf{A}(\mathsf{All classes}) = \mathsf{Organic vapours}, \mathsf{B} \ \mathsf{AUS or} \ \mathsf{B1} = \mathsf{Acid gasses}, \mathsf{B2} = \mathsf{Acid gas or hydrogen cyanide}(\mathsf{HCN}), \mathsf{B3} = \mathsf{Acid gas or hydrogen cyanide}(\mathsf{HCN}), \mathsf{E} = \mathsf{Sulfur dioxide}(\mathsf{SO2}), \mathsf{G} = \mathsf{Agricultural chemicals}, \mathsf{K} = \mathsf{Ammonia}(\mathsf{NH3}), \mathsf{Hg} = \mathsf{Mercury}, \mathsf{NO} = \mathsf{Oxides of nitrogen}, \mathsf{MB} = \mathsf{Methyl bromide}, \mathsf{AX} = \mathsf{Low boiling pointorganic compounds}(\mathsf{below} \ \mathsf{65 degC}) \end{array}$ 

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.

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# SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

#### Information on basic physical and chemical properties

Appearance	Yellow liquid		
Physical state	Liquid	Relative density (Water = 1)	0.98
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	11	Decomposition temperature	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available

Initial boiling point and boiling range (°C)	>200	Molecular weight (g/mol)	Not Available
Flash point (°C)	>150	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Applicable	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water (g/L)	Partly miscible	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available

# SECTION 10 STABILITY AND REACTIVITY

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Reactivity	See section 7
Chemical stability	<ul> <li>Unstable in the presence of incompatible materials.</li> <li>Product is considered stable.</li> <li>Hazardous polymerisation will not occur.</li> </ul>
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

# SECTION 11 TOXICOLOGICAL INFORMATION

## Information on toxicological effects

Inhaled	Inhalation of aerosols (mists, fumes), generated by the material during the course of normal handling, may be harmful. The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. Inhalation of benzyl alcohol may affect breathing (causing depression and paralysis of breathing and lower blood pressure. The use of a quantity of material in an unventilated or confined space may result in increased exposure and an irritating atmosphere developing. Before starting consider control of exposure by mechanical ventilation.			
Ingestion	Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual. The material can produce chemical burns within the oral cavity and gastrointestinal tract following ingestion. High oral doses of salicylates, such as aspirin, may cause a mild burning pain in the throat and stomach, causing vomiting. This is followed (within hours) by deep, rapid breathing, tiredness, nausea and further vomiting, thirst and diarrhoea. Ingestion of large doses of benzyl alcohol may cause abdominal pain, nausea, vomiting, diarrhea. It may affect behavior/central nervous system and cause headache, somnolence, excitement, dizziness, ataxia, coma, convulsions, and other symptoms of central nervous system depression. Exposure to excessive amounts of benzyl alcohol has been associated with toxicity (hypotension, metabolic acidosis), particularly in neonates, and an increased incidence of kemicterus (a neurological condition that occurs in severe jaundice), particularly in small preterm infants. There have been rare reports of deaths, primarily in preterm infants, associated with exposure to excessive amount of benzyl alcohol from medications is usually considered negligible compared to that received in flush solutions containing benzyl alcohol.			
Skin Contact	Skin contact with the material may be harmful; systemic effects may result following absorption. The material can produce chemical burns following direct contact with the skin. Open cuts, abraded or irritated skin should not be exposed to this material Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.			
Eye	The material can produce chemical burns to the eye following direct contact. Vapours or mists may be extremely irritating. If applied to the eyes, this material causes severe eye damage.			
Chronic	Repeated or prolonged exposure to corrosives may result in the erosion of teeth, inflammatory and ulcerative changes in the mouth and necrosis (rarely) of the jaw. Bronchial irritation, with cough, and frequent attacks of bronchial pneumonia may ensue. Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems. Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population. Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. Chronic exposure to salicylates produce problems with metabolism, central nervous system disturbances, or kidney damage. Those with pre-existing damage to the eye, skin or kidney are especially at risk. Prolonged or repeated exposure to benzyl alcohol may cause allergic contact dermatitis. Prolonged or repeated ingestion may affect behavior/central nervous system with symptoms similar to acute ingestion. It may also affect the liver, kidneys, cardiovascular system, and metabolism (weight loss). Animal studies have shown this compound to cause lung, liver, kidney and CNS disorders. Studies in animals have shown evidence of teratogenicity in the chick embryo. There is limited evidence that, skin contact with this product is more likely to cause a sensitisation reaction in some persons compared to the general population.			
	ΤΟΧΙΟΙΤΥ	IRRITATION		
ENVIRO PRIME PW PART B	Not Available	Not Available		
salicylic acid	TOXICITY           dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup> Oral (rat) LD50: 200-2000 mg/kg <sup>[1]</sup>	IRRITATION         Eye (rabbit): 100 mg - SEVERE         Skin (rabbit): 500 mg/24h - mild		

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			
SALICYLIC ACID	For certain benzyl derivatives: The members of this group are rapidly absorbed through the gastrointestinal tract, metabolised primarily in the liver, and excreted primarily in the urine either unchanged or as conjugates of benzoic acid derivatives. At high dose levels, gut micro-organisms may act to produce minor amounts of breakdown products. However, no adverse effects have been reported even at repeated high doses. Similarly, no effects were observed on reproduction, foetal development and tumour potential. The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. Amember or analogue of a group of hydroxy and alkoxy-substituted benzylderivatives generally regarded as safe (GRAS) based in part on theirself-limiting properties as flavouring substances in food; their rapidabsorption. metabolic detoxification, and excretion in humans and otheranimals, their low level of flavour use, the wide margin of safety between theconservative estimates of intake and the no-observed-adverse effect levelsdetermined from chronic and subchronic studies and the lack of significantgenotoxic and mutagenic potential. This evidence of safety is supported by thefact that the intake of benzyl derivatives as natural components of traditionalfoods is greater than the inter the as intentionally added flavouring substances. Allmembers of this group are aromatic primary alcohols, aldehydes, carboxylicacids or their corresponding esters or acetals. The structural features commonto all members of the oroup is a primary oxycenated functional droup bondeddirectly to a benzene ring.			
BENZYL ALCOHOL	Unlike benzylic alcohols, the beta-hydroxyl group of the members of benzyl alkyl alcohols contributes to break down reactions but do not undergo phase II metabolic activation. Though structurally similar to cancer causing ethyl benzene, phenethyl alcohol is only of negligible concern due to limited similarity in their pattern of activity. For benzoates: Benzyl alcohol, benzoic acid and its sodium and potassium salt have a common metabolic and excretion pathway. All but benzyl alcohol are considered to be unharmful and of low acute toxicity. They may cause slight initation by oral, dermal or inhalation exposure except sodium benzoate which doesn't initate the skin. Studies showed increased mortality, reduced weight gain, liver and kidney effects at higher doses, also, lesions of the brains, thymus and skeletal muscles may occur with benzyl alcohol. However, they do not cause cancer, genetic or reproductive toxicity. Adverse reactions for tagrances in perfumes and in fragrancedcosmetic products include allergic contact dermatilis, initiant contactdermatilis, photosensitivity, immediate contact reactions (contact unicaria), and pigmented contact dermatilis. Airborne and connubial contact dermatilis accur. In toerace to perfumes, by inhalation, may occur if the perfumecontains a sensitising principal. Symptoms may vary from general ilness, coughing, phlegm, wheezing, chest-tightness, headache, exertional dyspnoea, acute respiratory tinces, haylever, and other respiratory toestruction. Fragrance allergens act as haptens, i.e. low molecular weightchemicals that are immunogenic only when attached to a carrier protein. However, not all sensitising fragrance chemicals are directly reactive guire provious activation. A prehapten is a chemical that iself is non- orlow-sensitising but that is transformed in to a hapten outis the raspiratory interactive guire as a shaptens, i.e. low molecular weightchemicals that are immunogenic only when attached to a carrier protein. However, not all sensitising fragrance chemicals are di			
ISOPHORONE DIAMINE	Isophorone diamine is a strong skin irritant, corrosive with repeated application. Frequent occupational exposure may lead to the development of allergic skin inflammation. There could be damage to the smell organ, throat and lungs following inhalational exposure. Reduced kidney weight can result. No effects on reproduction gene alteration and cancer formation have been observed. The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. The material may be observed to the eye, with group of the damage to the lung including reduced lung function.			
SALICYLIC ACID & ISOPHORONE DIAMINE	Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritation.			
SALICYLIC ACID & BENZYL ALCOHOL & ISOPHORONE DIAMINE	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.			
BENZYL ALCOHOL & ISOPHORONE DIAMINE	The following information refers to contact allergens as a group and may not be specific to this product. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are equally important.			
Acute Toxicity	✓	Carcinogenicity	$\otimes$	
Skin Irritation/Corrosion	*	Reproductivity	0	
Serious Eye Damage/Irritation	*	STOT - Single Exposure	0	
Respiratory or Skin sensitisation	✓	STOT - Repeated Exposure	$\otimes$	
Mutagenicity	0	Aspiration Hazard	0	

Legend:

Data available but does not till the criteria for classification
 Data required to make classification available

O – Data Not Available to make classification

#### **SECTION 12 ECOLOGICAL INFORMATION**

#### Toxicity

Ingredient	Endpoint	Test Duration (hr)	Species	Value	Source
salicylic acid	LC50	96	Fish	144.354mg/L	3
salicylic acid	EC50	48	Crustacea	870mg/L	4
salicylic acid	EC50	96	Algae or other aquatic plants	420.600mg/L	3
salicylic acid	BCF	96	Algae or other aquatic plants	<50mg/L	4
salicylic acid	EC03	168	Algae or other aquatic plants	=21mg/L	4
salicylic acid	NOEC	504	Crustacea	10mg/L	2
benzyl alcohol	LC50	96	Fish	10mg/L	4
benzyl alcohol	EC03	168	Algae or other aquatic plants	=16mg/L	4
isophorone diamine	LC50	96	Fish	54.352mg/L	3
isophorone diamine	EC50	48	Crustacea	17.4mg/L	4
isophorone diamine	EC50	96	Algae or other aquatic plants	7.221mg/L	3
isophorone diamine	EC10	72	Algae or other aquatic plants	=3.1mg/L	1
isophorone diamine	NOEC	72	Algae or other aquatic plants	=1.5mg/L	1
	Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 -				

Legend:

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

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Do NOT allow product to come incontact with surface waters or to intertidal areas below the mean high watermark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.

Wastes resulting from use of theproduct must be disposed of on site or at approved waste sites.

For salicylic acid:

log Kow : 0.35-2.26

BOD5: 0.95,41%

COD : 1.58,100%

ThOD : 1.623

BOD = 141%, 5 days

Environmental fate:

Due to the chemical structure of salicylic acid volatilisation and bioconcentration are not expected to be important environmental fate processes. Biodegradation is expected to be the dominant removal mechanism of salicylic acid from soil and water. It may also undergo photochemical degradation is sunlit environmental media

In air, it is expected to exist inboth the vapor and particulate phase. Vapor phase reaction with photochemicallyproduced hydroxyl radicals may be important (estimated half-life of 1.2 days). Removal by wet and dry deposition can also occur.

For isophorone diamine:

Persistence/Biodegradability: 42%(DOC, OECD 303A) \*8.0% (DOC, Die away test -9/69/EEC)\*

\* [Morton]

Environmental Fate:

Isophorone diamine has a meltingpoint of 10 C, it mixes with water and has a vapour pressure of 0.02 hPa at 20C. The measured log Kow is 0.99 (23 C). The pKa of approximately

10.4characterises the substance as a moderate base.

Models calculate the main targetcompartment for isophorone diamine to be water (99.8 %), followed by sedimentand soil (both 0.08 %). Isophorone diamine exhibits very low volatility fromsurface waters. The sorption potential to soil or sediment organic matter isexpected to be moderate.

Prevent, by any means available, spillage from entering drains or water courses.

For benzyl alcohol: log Kow :1.1Koc : <5henry's atm=" m3=" ol:=" 3.91e-07bod=" 5:=" 1.55-1.6,33-62%cod=" :=" 96%thod=" :=" 2.519bcf=" :=" >

Bioaccumulation: Not significant

Anaerobic Effects: Significantdegradation.

Effects on algae and plankton:Inhibits degradation of glucose

Degradation Biological:Significant processes

Abiotic: RxnOH\*,no photochem

Ecotoxicity: Fish LC50 (48 h):fathead minnow 770 mg/i; (72 h): 480 mg/l; (96 h) 460 mg/l. Fish LC50 (96 h)fathead minnow 10 ppm, bluegill sunfish 15 ppm; tidewater silverside fish 15ppm. Products of Biodegradation: Possibly hazardous short term degradationproducts are not likely. However, long term degradation products may arise, butthese are less toxic than the product itself. **DO NOT** discharge into sewer or waterways.

#### Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
salicylic acid	LOW	LOW
benzyl alcohol	LOW	LOW
isophorone diamine	HIGH	HIGH

#### **Bioaccumulative potential**

Ingredient	Bioaccumulation
salicylic acid	MEDIUM (BCF = 1000)
benzyl alcohol	LOW (LogKOW = 1.1)
isophorone diamine	LOW (BCF = 3.4)

#### Mobility in soil

salicylic acid	LOW (KOC = 23.96)
benzyl alcohol	LOW (KOC = 15.66)
isophorone diamine	LOW (KOC = 340.4)

## SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods	
Product / Packaging disposal	<ul> <li>Containers may still present a chemical hazard/ danger when empty.</li> <li>Return to supplier for reuse/ recycling if possible.</li> <li>Otherwise:</li> <li>If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.</li> <li>Where possible retain label warnings and SDS and observe all notices pertaining to the product.</li> <li>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.</li> <li>A Hierarchy of Controls seems to be common - the user should investigate:</li> <li>Reduction</li> <li>Recycling</li> <li>Disposal (if all else fails)</li> <li>This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means.</li> <li>D NOT allow wash watter from cleaning or process equipment to enter drains.</li> <li>It may be necessary to collect all wash water for treatment before disposal.</li> <li>It may be assible to sever may be subject to local laws and regulations and these should be considered first.</li> <li>Where in doubt contact the responsible authority.</li> <li>Recycle wherever possible.</li> <li>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.</li> <li>Treat and neutralises at an approved treatment plant.</li> <li>Treat and neutralises at an approved treatment plant.</li> <li>Treatment should involve: Neutralisation with suitable dilute acid followed by: burial in a land-fill specifically licenced to accept chemical and / or pharmaceutical wastes or Incineration in a licenced apparatus</li></ul>

## **SECTION 14 TRANSPORT INFORMATION**

# Labels Required



# Land transport (ADG)

UN number	2289
UN proper shipping name	ISOPHORONEDIAMINE
Transport hazard class(es)	Class8SubriskNot Applicable
Packing group	Ш
Environmental hazard	Not Applicable
Special precautions for user	Special provisionsNot ApplicableLimited quantity5 L

# Air transport (ICAO-IATA / DGR)

UN number	2289		
UN proper shipping name	Isophoronediamine		
Transport hazard class(es)	ICAO/IATA Class ICAO / IATA Subrisk ERG Code	8 Not Applicable 8L	
Packing group	Ш		
Environmental hazard	Not Applicable		

	Special provisions	A803
	Cargo Only Packing Instructions	856
	Cargo Only Maximum Qty / Pack	60 L
Special precautions for user	Passenger and Cargo Packing Instructions	852
	Passenger and Cargo Maximum Qty / Pack	5 L
	Passenger and Cargo Limited Quantity Packing Instructions	Y841
	Passenger and Cargo Limited Maximum Qty / Pack	1 L

## Sea transport (IMDG-Code / GGVSee)

UN number	2289		
UN proper shipping name	ISOPHORONEDIAMINE		
Transport hazard class(es)	IMDG Class8IMDG SubriskNot Applicable		
Packing group			
Environmental hazard	Not Applicable		
Special precautions for user	EMS NumberF-A, S-BSpecial provisionsNot ApplicableLimited Quantities5 L		

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

Not Applicable

## SECTION 15 REGULATORY INFORMATION

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

SALICYLIC ACID(69-72-7) IS FOUND ON THE FOLLOWING REGULATORY LISTS			
Australia Hazardous Substances	Information System - Consolidated Lists	Australia Inventory of Chemical Substances (AICS)	
BENZYL ALCOHOL(100-51-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS			
Australia Hazardous Substances Information System - Consolidated Lists		Australia Inventory of Chemical Substances (AICS)	
ISOPHORONE DIAMINE(2855-13-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS			
Australia Hazardous Substances Information System - Consolidated Lists		Australia Inventory of Chemical Substances (AICS)	
National Inventory	Status		
Australia - AICS	Y		
Canada - DSL	Υ		
China - IECSC	Y		
Europe - EINEC / ELINCS / NLP	Υ		
Japan - ENCS	Y		
Korea - KECI	Y		
New Zealand - NZIoC	Y		
Philippines - PICCS	Y		
USA - TSCA	Y		
Legend:	Y = All ingredients are on the inventory N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)		

# **SECTION 16 OTHER INFORMATION**

## Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources. 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. Scale of use, frequency of use and current or available engineering controls must be considered.

#### **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: BioConcentration Factors BEI: Biological Exposure Index