



## Ardex WPM 247

Ardex (Ardex NZ)

Chemwatch: 81-2272  
Version No: 2.1.1.1  
Safety Data Sheet according to HSNO Regulations

Chemwatch Hazard Alert Code: 2

Issue Date: 30/05/2017  
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S.GHS.NZL.EN

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

#### Product Identifier

Product name	Ardex WPM 247
Synonyms	anionic bitumen emulsion
Other means of identification	Not Available

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

Relevant identified uses	Water based bitumen polymer.
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#### Details of the supplier of the safety data sheet

Registered company name	Ardex (Ardex NZ)	Ardex (Ardex Australia)
Address	32 Lane Street Woolston Christchurch New Zealand	20 Powers Road Seven Hills NSW 2147 Australia
Telephone	+64 3373 6928	1800 224 070
Fax	+64 3384 9779	1300 780 102
Website	Not Available	Not Available
Email	Not Available	Not Available

#### Emergency telephone number

Association / Organisation	Not Available	Not Available
Emergency telephone numbers	+64 3373 6900	1800 224 070 (Mon-Fri, 9am-5pm)
Other emergency telephone numbers	Not Available	Not Available

### SECTION 2 HAZARDS IDENTIFICATION

#### Classification of the substance or mixture

Classification <sup>[1]</sup>	Acute Toxicity (Oral) Category 5, Acute Toxicity (Inhalation) Category 5, Skin Corrosion/Irritation Category 3, Eye Irritation Category 2B, Skin Sensitizer Category 1, Carcinogenicity Category 2, Specific target organ toxicity - single exposure Category 3 (respiratory tract irritation), Specific target organ toxicity - single exposure Category 3 (narcotic effects)
Legend:	1. Classified by Chemwatch; 2. Classification drawn from CCID EPA NZ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI
Determined by Chemwatch using GHS/HSNO criteria	6.1E (inhalation), 6.1E (oral), 6.3B, 6.4A (mild), 6.5B (contact), 6.7B, 6.9 (narcotic), 6.9 (respiratory)

#### Label elements

Hazard pictogram(s)	
SIGNAL WORD	<b>WARNING</b>

#### Hazard statement(s)

H303	May be harmful if swallowed.
H333	May be harmful if inhaled
H316	Causes mild skin irritation
H320	Causes eye irritation.

Continued...

H317	May cause an allergic skin reaction.
H351	Suspected of causing cancer.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.

**Precautionary statement(s) Prevention**

P201	Obtain special instructions before use.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P281	Use personal protective equipment as required.

**Precautionary statement(s) Response**

P308+P313	IF exposed or concerned: Get medical advice/attention.
P363	Wash contaminated clothing before reuse.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P304+P312	IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell.

**Precautionary statement(s) Storage**

P405	Store locked up.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.

**Precautionary statement(s) Disposal**

P501	Dispose of contents/container in accordance with local regulations.
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**SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS****Substances**

See section below for composition of Mixtures

**Mixtures**

CAS No	%[weight]	Name
8052-42-4	50-60	<u>bitumen (petroleum)</u>
Not Available	0-5	polymer
Not Available	<3	anionic emulsifier
Not Available	<2	viscosity modifier
1310-73-2	<0.1	<u>sodium hydroxide</u>
2634-33-5	<0.1	<u>1,2-benzisothiazoline-3-one</u>
7732-18-5	30-60	<u>water</u>

**SECTION 4 FIRST AID MEASURES**

NZ Poisons Centre 0800 POISON (0800 764 766) | NZ Emergency Services: 111

**Description of first aid measures**

<b>Eye Contact</b>	<p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> <li>▶ Wash out immediately with fresh 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>▶ Seek medical attention without delay; if pain persists or recurs seek medical attention.</li> <li>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>
<b>Skin Contact</b>	<p>If skin contact occurs:</p> <ul style="list-style-type: none"> <li>▶ Immediately remove all contaminated clothing, including footwear.</li> <li>▶ Flush skin and hair with running water (and soap if available).</li> <li>▶ Seek medical attention in event of irritation.</li> <li>▶ Immediately drench burn area in cold running water.</li> <li>▶ If hot bitumen adheres to the skin, <b>DO NOT attempt to remove it (it acts as a sterile dressing)</b>.</li> <li>▶ For burns to the head and neck and trunk, apply cold wet towels to the burn area, and change frequently to maintain cooling.</li> <li>▶ Cooling should be maintained for no longer than thirty minutes.</li> <li>▶ When hot bitumen completely encircles a limb, it may have a tourniquet effect and should be split as it cools.</li> <li>▶ Transport to hospital or doctor.</li> </ul> <p>In case of burns:</p> <ul style="list-style-type: none"> <li>▶ Immediately apply cold water to burn either by immersion or wrapping with saturated clean cloth.</li> <li>▶ <b>DO NOT remove or cut away clothing over burnt areas. DO NOT pull away clothing which has adhered to the skin as this can cause further injury.</b></li> <li>▶ <b>DO NOT break blister or remove solidified material.</b></li> <li>▶ Quickly cover wound with dressing or clean cloth to help prevent infection and to ease pain.</li> <li>▶ For large burns, sheets, towels or pillow slips are ideal; leave holes for eyes, nose and mouth.</li> <li>▶ <b>DO NOT apply ointments, oils, butter, etc. to a burn under any circumstances.</b></li> <li>▶ Water may be given in small quantities if the person is conscious.</li> <li>▶ Alcohol is not to be given under any circumstances.</li> <li>▶ Reassure.</li> <li>▶ Treat for shock by keeping the person warm and in a lying position.</li> </ul>

	<ul style="list-style-type: none"> <li>▶ Seek medical aid and advise medical personnel in advance of the cause and extent of the injury and the estimated time of arrival of the patient.</li> </ul>
<b>Inhalation</b>	<ul style="list-style-type: none"> <li>▶ If fumes 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> </ul>
<b>Ingestion</b>	<ul style="list-style-type: none"> <li>▶ <b>If swallowed do NOT induce vomiting.</b></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> <li>▶ Observe the patient carefully.</li> <li>▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.</li> <li>▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.</li> <li>▶ Seek medical advice.</li> </ul>

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

Treat symptomatically.

Burns : No attempt should be made to remove the bitumen (it acts as a sterile dressing). Cover the bitumen with tulle gras and leave for two days when any detached bitumen can be removed. Re-dress and leave for a further week. If necessary refer to a burns unit. [Manufacturer]

## SECTION 5 FIREFIGHTING MEASURES

### Extinguishing media

- ▶ **Do NOT direct a solid stream of water or foam into burning molten material; this may cause spattering and spread the fire.**

The product contains a substantial proportion of water, therefore there are no restrictions on the type of extinguishing media which may be used. Choice of extinguishing media should take into account surrounding areas.

Though the material is non-combustible, evaporation of water from the mixture, caused by the heat of nearby fire, may produce floating layers of combustible substances.

In such an event consider:

- ▶ foam.

### Special hazards arising from the substrate or mixture

<b>Fire Incompatibility</b>	None known.
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### Advice for firefighters

<b>Fire Fighting</b>	<ul style="list-style-type: none"> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ Wear breathing apparatus plus protective gloves in the event of a fire.</li> <li>▶ Prevent, by any means available, spillage from entering drains or water courses.</li> <li>▶ Use fire fighting procedures suitable for surrounding area.</li> </ul>
<b>Fire/Explosion Hazard</b>	<p>carbon dioxide (CO<sub>2</sub>) , nitrogen oxides (NO<sub>x</sub>) , sulfur oxides (SO<sub>x</sub>) , sulfur dioxide (SO<sub>2</sub>) , other pyrolysis products typical of burning organic material. May emit clouds of acrid smoke</p> <p><b>NOTE:</b> Burns with intense heat. Produces melting, flowing, burning liquid and dense acrid black smoke. May emit poisonous fumes. May emit corrosive fumes.</p> <ul style="list-style-type: none"> <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> </ul> <p>Combustion products include:</p>

## 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

<b>Minor Spills</b>	<ul style="list-style-type: none"> <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> </ul>
<b>Major Spills</b>	<ul style="list-style-type: none"> <li>▶ Absorb or contain isothiazolinone liquid spills with sand, earth, inert material or vermiculite.</li> <li>▶ The absorbent (and surface soil to a depth sufficient to remove all of the biocide) should be shovelled into a drum and treated with an 11% solution of sodium metabisulfite (Na<sub>2</sub>S<sub>2</sub>O<sub>5</sub>) or sodium bisulfite (NaHSO<sub>3</sub>), or 12% sodium sulfite (Na<sub>2</sub>SO<sub>3</sub>) and 8% hydrochloric acid (HCl).</li> <li>▶ Glutathione has also been used to inactivate the isothiazolinones.</li> <li>▶ Use 20 volumes of decontaminating solution for each volume of biocide, and let containers stand for at least 30 minutes to deactivate microbicide before disposal.</li> </ul>

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

## SECTION 7 HANDLING AND STORAGE

### Precautions for safe handling

<b>Safe handling</b>	<ul style="list-style-type: none"> <li>▶ <b>DO NOT</b> allow clothing wet with material to stay in contact with skin</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>▶ Prevent concentration in hollows and sumps.</li> </ul>
<b>Other information</b>	<ul style="list-style-type: none"> <li>▶ Store in original containers.</li> <li>▶ Keep containers securely sealed.</li> <li>▶ No smoking, naked lights or ignition sources.</li> <li>▶ Store in a cool, dry, well-ventilated area.</li> </ul>

### Conditions for safe storage, including any incompatibilities

<b>Suitable container</b>	<ul style="list-style-type: none"> <li>▶ Polyethylene or polypropylene container.</li> <li>▶ Packing as recommended by manufacturer.</li> <li>▶ Check all containers are clearly labelled and free from leaks.</li> </ul>
<b>Storage incompatibility</b>	<ul style="list-style-type: none"> <li>▶ Avoid reaction with oxidising agents</li> <li>▶ Avoid strong acids, bases.</li> </ul>

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

### Control parameters

#### OCCUPATIONAL EXPOSURE LIMITS (OEL)

#### INGREDIENT DATA


Source	Ingredient	Material name	TWA	STEL	Peak	Notes
New Zealand Workplace Exposure Standards (WES)	bitumen (petroleum)	Asphalt (petroleum) fumes	5 ppm	Not Available	Not Available	Not Available
New Zealand Workplace Exposure Standards (WES)	sodium hydroxide	Sodium hydroxide	Not Available	Not Available	2 mg/m3	Not Available

#### EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
bitumen (petroleum)	Petroleum asphalt; (Bitumen)	30 mg/m3	330 mg/m3	2,000 mg/m3
sodium hydroxide	Sodium hydroxide	Not Available	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
bitumen (petroleum)	Not Available	Not Available
polymer	Not Available	Not Available
anionic emulsifier	Not Available	Not Available
viscosity modifier	Not Available	Not Available
sodium hydroxide	250 mg/m3	10 mg/m3
1,2-benzisothiazoline-3-one	Not Available	Not Available
water	Not Available	Not Available

### Exposure controls

<b>Appropriate engineering controls</b>	<p>For molten materials: Provide mechanical ventilation; in general such ventilation should be provided at compounding/ converting areas and at fabricating/ filling work stations where the material is heated. Local exhaust ventilation should be used over and in the vicinity of machinery involved in handling the molten material. Keep dry!! Processing temperatures may be well above boiling point of water, so wet or damp material may cause a serious steam explosion if used in unvented equipment. 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.</p>
<b>Personal protection</b>	
<b>Eye and face protection</b>	<ul style="list-style-type: none"> <li>▶ Safety glasses with side shields.</li> <li>▶ Chemical goggles.</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.</li> </ul>
<b>Skin protection</b>	See Hand protection below

<b>Hands/feet protection</b>	<ul style="list-style-type: none"> <li>▶ Wear chemical protective gloves, e.g. PVC.</li> <li>▶ Wear safety footwear or safety gumboots, e.g. Rubber</li> </ul> <p><b>NOTE:</b></p> <ul style="list-style-type: none"> <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> <p>The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.</p> <p>The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.</p> <p>Personal hygiene is a key element of effective hand care.</p> <ul style="list-style-type: none"> <li>▶ Butyl rubber gloves</li> <li>▶ Nitrile rubber gloves</li> </ul>
<b>Body protection</b>	See Other protection below
<b>Other protection</b>	<ul style="list-style-type: none"> <li>▶ Overalls.</li> <li>▶ P.V.C. apron.</li> <li>▶ Barrier cream.</li> </ul>
<b>Thermal hazards</b>	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:

Ardex WPM 247

Material	CPI
BUTYL	C
NAT+NEOPR+NITRILE	C
NATURAL RUBBER	C
NATURAL+NEOPRENE	C
NEOPRENE	C
NEOPRENE/NATURAL	C
NITRILE	C
NITRILE+PVC	C
PE	C
PE/EVAL/PE	C
PVA	C
PVC	C
SARANEX-23	C
SARANEX-23 2-PLY	C
TEFLON	C
VITON	C
VITON/CHLOROBUTYL	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-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), respiratory protection is required.

Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

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

^ - Full-face

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO<sub>2</sub>), G = Agricultural chemicals, K = Ammonia(NH<sub>3</sub>), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

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.

For molten materials:

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Appearance</b>	Black liquid with slight bitumen odour; mixes with water.		
<b>Physical state</b>	Liquid	<b>Relative density (Water = 1)</b>	1.02
<b>Odour</b>	Not Available	<b>Partition coefficient n-octanol / water</b>	Not Available
<b>Odour threshold</b>	Not Available	<b>Auto-ignition temperature (°C)</b>	Not Available
<b>pH (as supplied)</b>	Not Available	<b>Decomposition temperature</b>	Not Available
<b>Melting point / freezing point (°C)</b>	Not Available	<b>Viscosity (cSt)</b>	Not Available

Initial boiling point and boiling range (°C)	>100	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	Not Available	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Available	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)	40
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water (g/L)	Miscible	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available

## SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	<ul style="list-style-type: none"> <li>▶ Unstable in the presence of incompatible materials.</li> <li>▶ Product is considered stable.</li> <li>▶ Hazardous polymerisation will not occur.</li> <li>▶ Extremely high temperatures.</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	<p>The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. 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>Hydrogen sulfide poisoning can cause increased secretion of saliva, nausea, vomiting, diarrhoea, giddiness, headache, vertigo, memory loss, palpitations, heartbeat irregularities, weakness, muscle cramps, confusion, sudden collapse, unconsciousness and death due to paralysis of breathing (at levels above 300 parts per million). The "rotten egg" odour is not a good indicator of exposure since odour fatigue occurs and odour is lost at over 200 ppm.</p> <p>Inhalation of high concentrations of gas/vapour causes lung irritation with coughing and nausea, central nervous depression with headache and dizziness, slowing of reflexes, fatigue and inco-ordination.</p> <p>Acute exposure to bitumen/asphalt vapours may cause coughing, chest tightness, muscle weakness, dizziness, tiredness, poor concentration, and even nausea and vomiting.</p> <p>Workers exposed to hot blown bitumens show bronchitis, inflammation of the nose, mouth, pharynx and larynx; symptoms include cough, phlegm, burning of the throat and chest, hoarseness, headache and nasal discharge.</p> <p>Concentrations of asphalt in the workplace ranges from virtually zero in areas of good mechanical ventilation to 40 mg/m<sup>3</sup> where there is very poor natural draft. Inhalation of aerosols (mists, fumes), generated by the material during the course of normal handling, may be damaging to the health of the individual.</p>
Ingestion	<p>Accidental ingestion of the material may be damaging to the health of the individual.</p> <p>Swallowing pieces of the bitumen may produce obstruction at the junction of the stomach and the intestine. This is due to accumulation in the stomach and formation of a stony concretion.</p> <p>Taken by mouth, isothiazolinones have moderate to high toxicity. The major signs of toxicity are severe stomach irritation, lethargy, and inco-ordination. Central nervous system (CNS) depression may include general discomfort, symptoms of giddiness, headache, dizziness, nausea, anaesthetic effects, slowed reaction time, slurred speech and may progress to unconsciousness. Serious poisonings may result in respiratory depression and may be fatal.</p>
Skin Contact	<p>Repeated exposure may cause skin cracking, flaking or drying following normal handling and use.</p> <p>There is some evidence to suggest that this material can cause inflammation of the skin on contact in some persons.</p> <p>A 0.5% solution of 1,2-benzisothiazoline-3-one (BIT) is irritating to the skin. Even 0.05% can cause allergy, according to patch tests, with reddening of the skin. Provocation tests with BIT showed the material to be sensitizing. Of 20 metal workers with skin inflammation, four were shown to have been sensitized to BIT in cutting oils.</p> <p>Solutions of isothiazolinones may be irritating or even damaging to the skin, depending on concentration. A concentration of over 0.1% can irritate, and over 0.5% can cause severe irritation.</p> <p>Open cuts, abraded or irritated skin should not be exposed to this material</p> <p>Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.</p>
Eye	<p>There is some evidence to suggest that this material can cause eye irritation and damage in some persons.</p> <p>Workers exposed to fumes of blown bitumens developed inflammation of the cornea and conjunctiva.</p> <p>Exposure to H<sub>2</sub>S may produce pain, blurred vision, and reaction to eyes which may be permanent in severe cases. There is usually redness of the eyes, discomfort on exposure to light, pain, and at higher concentrations blurred vision and injury to the eyes.</p> <p>Solutions containing isothiazolinones may damage the mucous membranes and cornea. Animal testing showed very low concentrations (under 0.1%) did not cause irritation, while higher levels (3-5.5%) produced severe irritation and damage to the eye.</p>
Chronic	<p>There has been concern that this material can cause cancer or mutations, but there is not enough data to make an assessment.</p> <p>Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population.</p> <p>Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.</p> <p>In animal testing, 1,2-benzisothiazoline-3-one (BIT) did not cause toxicity to the embryo or birth defects. The material does not cause mutations or an increase in cancer. Mild anaemia, reduction in food intake and changes in organ weights did occur in a long-term study.</p> <p>The isothiazolinones are known contact sensitizers. Sensitisation is more likely with the chlorinated species as opposed to the non-chlorinated species.</p> <p>Long-term exposure to bitumen or asphalt fumes, over extended periods, may cause central nervous system depression and liver and kidney changes. Chronic bitumen/asphalt poisoning may result in a decrease in the number of white and red blood cells.</p> <p>Prolonged contact with bitumens may produce irritation, inflammation, dermatitis, acne-like lesions, keratoses, melanosis and sensitivity to light.</p> <p>Animal testing for cancer-causing effects of bitumen was inconclusive, and no difference was found between the health of asphalt workers and of groups of controls in oil refineries.</p> <p>Long term low level exposure to hydrogen sulfide may produce headache, fatigue, dizziness, irritability and loss of sexual desire. These symptoms may also</p>

	result when exposed to hydrogen sulfide at high concentration for a short period of time.	
Ardex WPM 247	TOXICITY	IRRITATION
	Not Available	Not Available
bitumen (petroleum)	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >2000 mg/kg <sup>[1]</sup>	Not Available
	Oral (rat) LD50: >5000 mg/kg <sup>[1]</sup>	
sodium hydroxide	TOXICITY	IRRITATION
	Not Available	Eye (rabbit): 0.05 mg/24h SEVERE
		Eye (rabbit):1 mg/24h SEVERE
		Eye (rabbit):1 mg/30s rinsed-SEVERE
		Skin (rabbit): 500 mg/24h SEVERE
1,2-benzisothiazoline-3-one	TOXICITY	IRRITATION
	Oral (rat) LD50: 670 mg/kg(male)*n <sup>[2]</sup>	Not Available
water	TOXICITY	IRRITATION
	Not Available	Not Available

**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

BITUMEN (PETROLEUM)	<b>WARNING:</b> This substance has been classified by the IARC as Group 2B: Possibly Carcinogenic to Humans.
SODIUM HYDROXIDE	The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. The material may cause severe 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. Repeated exposures may produce severe ulceration.
1,2-BENZISOTHIAZOLINE-3-ONE	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. <b>Acute toxicity</b> data show that 1,2-benzisothiazoline-3-one (BIT) is moderately toxic by the oral and dermal routes but that this chemical is a severe eye irritant. Irritation to the skin from acute data show only mild skin irritation, but repeated dermal application indicated a more significant skin irritation response. The neurotoxicity observed in the rat acute oral toxicity study (piloerection and upward curvature of the spine at 300 mg/kg and above; decreased activity, prostration, decreased abdominal muscle tone, reduced righting reflex, and decreased rate and depth of breathing at 900 mg/kg) and the acute dermal toxicity study (upward curvature of the spine was observed in increased incidence, but this was absent after day 5 post-dose at a dose of 2000 mg/kg) were felt to be at exposures in excess of those expected from the use pattern of this pesticide and that such effects would not be observed at estimated exposure doses. <b>Subchronic oral toxicity</b> studies showed systemic effects after repeated oral administration including decreased body weight, increased incidence of forestomach hyperplasia, and non-glandular stomach lesions in rats.
BITUMEN (PETROLEUM) & SODIUM HYDROXIDE	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. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia.
BITUMEN (PETROLEUM) & WATER	No significant acute toxicological data identified in literature search.

Acute Toxicity	✓	Carcinogenicity	✓
Skin Irritation/Corrosion	✓	Reproductivity	⊘
Serious Eye Damage/Irritation	✓	STOT - Single Exposure	✓
Respiratory or Skin sensitisation	✓	STOT - Repeated Exposure	⊘
Mutagenicity	⊘	Aspiration Hazard	⊘

**Legend:** ✗ – Data available but does not fill the criteria for classification  
 ✓ – Data available to make classification  
 ⊘ – Data Not Available to make classification

## SECTION 12 ECOLOGICAL INFORMATION

### Toxicity

	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
Ardex WPM 247	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

## Ardex WPM 247

	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	bitumen (petroleum)	Not Applicable	Not Applicable	Not Applicable	Not Applicable
sodium hydroxide	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	LC50	96	Fish	4.16158mg/L	3
	EC50	96	Algae or other aquatic plants	1034.10043mg/L	3
	EC50	384	Crustacea	27901.643mg/L	3
1,2-benzisothiazoline-3-one	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	LC50	96	Fish	1.6mg/L	4
	EC50	48	Crustacea	0.062mg/L	4
	EC50	48	Crustacea	4.4mg/L	4
water	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

**Legend:** Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

**DO NOT** discharge into sewer or waterways.

## Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
sodium hydroxide	LOW	LOW
water	LOW	LOW

## Bioaccumulative potential

Ingredient	Bioaccumulation
sodium hydroxide	LOW (LogKOW = -3.8796)
water	LOW (LogKOW = -1.38)

## Mobility in soil

Ingredient	Mobility
sodium hydroxide	LOW (KOC = 14.3)
water	LOW (KOC = 14.3)

## SECTION 13 DISPOSAL CONSIDERATIONS

## Waste treatment methods

<b>Product / Packaging disposal</b>	<ul style="list-style-type: none"> <li>▶ Containers may still present a chemical hazard/ danger when empty.</li> <li>▶ Return to supplier for reuse/ recycling if possible.</li> </ul> <p>Otherwise:</p> <ul style="list-style-type: none"> <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> </ul> <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>A Hierarchy of Controls seems to be common - the user should investigate:</p> <ul style="list-style-type: none"> <li>▶ Reduction</li> <li>▶ Reuse</li> <li>▶ Recycling</li> <li>▶ Disposal (if all else fails)</li> </ul> <p>This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use.</p> <ul style="list-style-type: none"> <li>▶ <b>DO NOT</b> allow wash water 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>▶ In all cases disposal to sewer 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>▶ 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).</li> <li>▶ Decontaminate empty containers.</li> </ul>
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Ensure that the disposal of material is carried out in accordance with Hazardous Substances (Disposal) Regulations 2001.

Continued...



**SECTION 14 TRANSPORT INFORMATION****Labels Required**

<b>Marine Pollutant</b>	NO
<b>HAZCHEM</b>	Not Applicable

**Land transport (UN): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS****Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS****Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS****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**

This substance is to be managed using the conditions specified in an applicable Group Standard

HSR Number	Group Standard
HSR002531	Cleaning Products (Toxic [6.7]) Group Standard 2006
HSR002596	Laboratory Chemicals and Reagent Kits Group Standard 2006
HSR002607	Lubricants (Toxic [6.7]) Group Standard 2006
HSR002586	Fuel Additives (Toxic [6.7]) Group Standard 2006
HSR002520	Aerosols (Toxic [6.7]) Group Standard 2006
HSR002521	Animal Nutritional and Animal Care Products Group Standard 2006
HSR002646	Polymers (Toxic [6.7]) Group Standard 2006
HSR002647	Reagent Kits Group Standard 2006
HSR002616	Metal Industry Products (Toxic [6.7]) Group Standard 2006
HSR002625	N.O.S. (Toxic [6.1, 6.7]) Group Standard 2006
HSR002639	Photographic Chemicals (Toxic [6.7]) Group Standard 2006
HSR002512	Additives, Process Chemicals and Raw Materials (Toxic [6.7]) Group Standard 2006
HSR002560	Dental Products (Toxic [6.7]) Group Standard 2006
HSR002568	Embalming Products (Toxic [6.7]) Group Standard 2006
HSR002679	Surface Coatings and Colourants (Toxic [6.7]) Group Standard 2006
HSR100425	Pharmaceutical Active Ingredients Group Standard 2010
HSR002601	Leather and Textile Products (Toxic [6.7]) Group Standard 2006
HSR002687	Water Treatment Chemicals (Toxic [6.7]) Group Standard 2006
HSR002648	Refining Catalysts Group Standard 2006
HSR002551	Corrosion Inhibitors (Toxic [6.7]) Group Standard 2006
HSR002552	Cosmetic Products Group Standard 2006
HSR100757	Veterinary Medicine (Limited Pack Size, Finished Dose) Standard 2012
HSR100758	Veterinary Medicines (Non-dispersive Closed System Application) Group Standard 2012
HSR002655	Solvents (Toxic [6.7]) Group Standard 2006

**BITUMEN (PETROLEUM)(8052-42-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS**International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs  
New Zealand Inventory of Chemicals (NZIoC)

New Zealand Workplace Exposure Standards (WES)

**SODIUM HYDROXIDE(1310-73-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS**New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals  
New Zealand Inventory of Chemicals (NZIoC)

New Zealand Workplace Exposure Standards (WES)

**1,2-BENZISOTHAZOLINE-3-ONE(2634-33-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals

New Zealand Inventory of Chemicals (NZIoC)

**WATER(7732-18-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

New Zealand Inventory of Chemicals (NZIoC)

**Location Test Certificate**

Subject to Regulation 55 of the Hazardous Substances (Classes 1 to 5 Controls) Regulations, a location test certificate is required when quantity greater than or equal to those indicated below are present.

Hazard Class	Quantity beyond which controls apply for closed containers	Quantity beyond which controls apply when use occurring in open containers
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Continued...

Not Applicable

Not Applicable

Not Applicable

**Approved Handler**

Subject to Regulation 56 of the Hazardous Substances (Classes 1 to 5 Controls) Regulations and Regulation 9 of the Hazardous Substances (Classes 6, 8, and 9 Controls) Regulations, the substance must be under the personal control of an Approved Handler when present in a quantity greater than or equal to those indicated below.

Class of substance	Quantities
Not Applicable	Not Applicable

Refer Group Standards for further information

**Tracking Requirements**

Not Applicable

National Inventory	Status
Australia - AICS	Y
Canada - DSL	Y
Canada - NDSL	N (1,2-benzisothiazoline-3-one; water; sodium hydroxide; bitumen (petroleum))
China - IECSC	Y
Europe - EINEC / ELINCS / NLP	Y
Japan - ENCS	N (water)
Korea - KECI	Y
New Zealand - NZIoC	Y
Philippines - PICCS	Y
USA - TSCA	Y
<b>Legend:</b>	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****Ingredients with multiple cas numbers**

Name	CAS No
sodium hydroxide	1310-73-2, 12200-64-5

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. 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

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