



ARDEX RA 030

Ardex (Ardex Australia)

Chemwatch: 71-1257

Version No: 3.1.1.1

Safety Data Sheet according to WHS and ADG requirements

Chemwatch Hazard Alert Code: 3

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S.GHS.AUS.EN

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

Product Identifier

Product name	ARDEX RA 030
Synonyms	Not Available
Other means of identification	Not Available

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

Relevant identified uses	Joint treatment.
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Details of the supplier of the safety data sheet

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

Emergency telephone number

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

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

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

CHEMWATCH HAZARD RATINGS

	Min	Max
Flammability	1	1
Toxicity	1	1
Body Contact	3	3
Reactivity	1	1
Chronic	2	2

0 = Minimum
1 = Low
2 = Moderate
3 = High
4 = Extreme

Poisons Schedule	Not Applicable
Classification [1]	Skin Corrosion/Irritation Category 2, Serious Eye Damage Category 1, Specific target organ toxicity - single exposure Category 3 (respiratory tract irritation), Acute Aquatic Hazard Category 3, Chronic Aquatic Hazard Category 3
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HSIS; 3. Classification drawn from EC Directive 1272/2008 - Annex VI

Label elements

GHS label elements	
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SIGNAL WORD	DANGER
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Hazard statement(s)

H315	Causes skin irritation.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statement(s) Prevention

P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P261	Avoid breathing mist/vapours/spray.
P273	Avoid release to the environment.

Precautionary statement(s) Response

P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/physician.
P362	Take off contaminated clothing and wash before reuse.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.

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
471-34-1	30-40	<u>calcium carbonate</u>
26761-40-0	20-25	<u>diisodecyl phthalate</u>
205265-06-1	20-25	<u>silvl terminated polyether</u>
1317-65-3	10-15	<u>limestone</u>
13463-67-7	1-5	<u>titanium dioxide</u>
Not Available	1-5	micronized wax
2768-02-7	<1.2	<u>trimethoxyvinylsilane</u>
22673-19-4	<1	<u>dibutyltin bis(acetylacetonate)</u>
1760-24-3	<1	<u>N-[3-(trimethoxysilyl)propyl]ethylenediamine</u>

SECTION 4 FIRST AID MEASURES**Description of first aid measures**

Eye Contact	<p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> ▶ Immediately hold eyelids apart and flush the eye continuously with running water. ▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. ▶ Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. ▶ Transport to hospital or doctor without delay. ▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	<p>If skin contact occurs:</p> <ul style="list-style-type: none"> ▶ Immediately remove all contaminated clothing, including footwear. ▶ Flush skin and hair with running water (and soap if available). ▶ Seek medical attention in event of irritation.
Inhalation	<ul style="list-style-type: none"> ▶ If fumes or combustion products are inhaled remove from contaminated area. ▶ Lay patient down. Keep warm and rested. ▶ Prosthesis such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. ▶ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. ▶ Transport to hospital, or doctor, without delay.
Ingestion	<ul style="list-style-type: none"> ▶ If swallowed do NOT induce vomiting. ▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. ▶ Observe the patient carefully.

Continued...

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

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 FIREFIGHTING MEASURES

Extinguishing media

- ▶ Foam.
- ▶ Dry chemical powder.
- ▶ BCF (where regulations permit).
- ▶ Carbon dioxide.

Special hazards arising from the substrate or mixture

- | | |
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| Fire Incompatibility | ▶ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result |
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Advice for firefighters

Fire Fighting	<ul style="list-style-type: none"> ▶ Alert Fire Brigade and tell them location and nature of hazard. ▶ Wear breathing apparatus plus protective gloves. ▶ Prevent, by any means available, spillage from entering drains or water courses. ▶ Use water delivered as a fine spray to control fire and cool adjacent area.
Fire/Explosion Hazard	<p>''''</p> <ul style="list-style-type: none"> ▶ Combustible. ▶ Slight fire hazard when exposed to heat or flame. ▶ Heating may cause expansion or decomposition leading to violent rupture of containers. ▶ On combustion, may emit toxic fumes of carbon monoxide (CO). <p>Combustion products include: carbon monoxide (CO) carbon dioxide (CO₂) silicon dioxide (SiO₂) other pyrolysis products typical of burning organic material.</p> <p>May emit poisonous fumes. May emit corrosive fumes. Heating calcium carbonate at high temperatures(825 C.) causes decomposition, releases carbon dioxide gas and leaves a residue of alkaline lime</p>
HAZCHEM	Not Applicable

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	<p>Environmental hazard - contain spillage.</p> <ul style="list-style-type: none"> ▶ Clean up all spills immediately. ▶ Avoid contact with skin and eyes. ▶ Wear impervious gloves and safety goggles. ▶ Trowel up/scrape up.
Major Spills	<p>Environmental hazard - contain spillage.</p> <ul style="list-style-type: none"> ▶ Clear area of personnel and move upwind. ▶ Alert Fire Brigade and tell them location and nature of hazard. ▶ Wear breathing apparatus plus protective gloves. ▶ Prevent, by any means available, spillage from entering drains or water course.

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

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Safe handling	<ul style="list-style-type: none"> ▶ Avoid all personal contact, including inhalation. ▶ Wear protective clothing when risk of exposure occurs. ▶ Use in a well-ventilated area. ▶ Prevent concentration in hollows and sumps.
Other information	<ul style="list-style-type: none"> ▶ Store in original containers. ▶ Keep containers securely sealed. ▶ Store in a cool, dry, well-ventilated area. ▶ Store away from incompatible materials and foodstuff containers.

Conditions for safe storage, including any incompatibilities

Suitable container	<ul style="list-style-type: none"> ▶ Metal can or drum ▶ Packaging as recommended by manufacturer. ▶ Check all containers are clearly labelled and free from leaks.
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Storage incompatibility**Calcium carbonate:**

- ▶ is incompatible with acids, ammonium salts, fluorine, germanium, lead diacetate, magnesium, mercurous chloride, silicon, silver nitrate, titanium.
- Contact with acid generates carbon dioxide gas, which may pressurise and then rupture closed containers

Phthalates:

- ▶ react with strong acids, strong oxidisers, permanganates and nitrates
- ▶ attack some form of plastics
- ▶ Avoid strong acids, acid chlorides, acid anhydrides and chloroformates.
- ▶ Avoid reaction with oxidising agents

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION**Control parameters****OCCUPATIONAL EXPOSURE LIMITS (OEL)****INGREDIENT DATA**

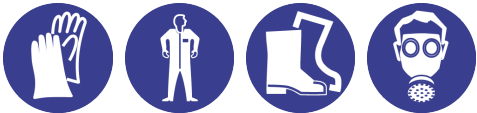
Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia Exposure Standards	calcium carbonate	Calcium carbonate	10 mg/m ³	Not Available	Not Available	Not Available
Australia Exposure Standards	limestone	Calcium carbonate	10 mg/m ³	Not Available	Not Available	Not Available
Australia Exposure Standards	titanium dioxide	Titanium dioxide	10 mg/m ³	Not Available	Not Available	Not Available
Australia Exposure Standards	dibutyltin bis(acetylacetonate)	Tin, organic compounds (as Sn)	0.1 mg/m ³	0.2 mg/m ³	Not Available	Sk

EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
calcium carbonate	Limestone; (Calcium carbonate; Dolomite)	45 mg/m ³	500 mg/m ³	3,000 mg/m ³
calcium carbonate	Carbonic acid, calcium salt	45 mg/m ³	210 mg/m ³	1,300 mg/m ³
limestone	Limestone; (Calcium carbonate; Dolomite)	45 mg/m ³	500 mg/m ³	3,000 mg/m ³
limestone	Carbonic acid, calcium salt	45 mg/m ³	210 mg/m ³	1,300 mg/m ³
titanium dioxide	Titanium oxide; (Titanium dioxide)	30 mg/m ³	330 mg/m ³	2,000 mg/m ³
trimethoxyvinylsilane	Trimethoxyvinylsilane; (Vinyltrimethoxysilane; Silane, trimethoxyvinyl-)	9.5 ppm	100 ppm	120 ppm
N-[3-(trimethoxysilyl)propyl]ethylenediamine	Trimethoxysilyl(propyl) ethylenediamine, N-(3-	23 mg/m ³	250 mg/m ³	1,500 mg/m ³

Ingredient	Original IDLH	Revised IDLH
calcium carbonate	Not Available	Not Available
diisodecyl phthalate	Not Available	Not Available
silyl terminated polyether	Not Available	Not Available
limestone	Not Available	Not Available
titanium dioxide	N.E. mg/m ³ / N.E. ppm	5,000 mg/m ³
micronized wax	Not Available	Not Available
trimethoxyvinylsilane	Not Available	Not Available
dibutyltin bis(acetylacetonate)	Unknown mg/m ³ / Unknown ppm	25 mg/m ³
N-[3-(trimethoxysilyl)propyl]ethylenediamine	Not Available	Not Available

Exposure controls

Appropriate engineering controls	<p>Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.</p> <p>The basic types of engineering controls are:</p> <p>Process controls which involve changing the way a job activity or process is done to reduce the risk.</p> <p>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>
Personal protection	
Eye and face protection	<ul style="list-style-type: none"> ▶ Safety glasses with side shields. ▶ Chemical goggles. ▶ 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.
Skin protection	See Hand protection below
Hands/feet protection	<ul style="list-style-type: none"> ▶ Wear chemical protective gloves, e.g. PVC. ▶ Wear safety footwear or safety gumboots, e.g. Rubber <p>NOTE:</p> <ul style="list-style-type: none"> ▶ 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. ▶ Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed.
Body protection	See Other protection below
Other protection	<ul style="list-style-type: none"> ▶ Overalls. ▶ P.V.C. apron. ▶ Barrier cream.
Thermal hazards	Not Available

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(SO₂), G = Agricultural chemicals, K = Ammonia(NH₃), 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.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Coloured paste with typical odour.		
Physical state	Non Slump Paste	Relative density (Water = 1)	1.46
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	Not Available	Decomposition temperature	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	Not Available	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)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water (g/L)	Not Available	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	<30

SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	Product is considered stable and hazardous polymerisation will not occur.
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	The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. Not normally a hazard due to non-volatile nature of product
Ingestion	Accidental ingestion of the material may be damaging to the health of the individual. The toxicity of phthalates is not excessive due to slow oral absorption and metabolism. Absorption is affected by fat in the diet. Repeated doses can cause cumulative toxic effects, and symptoms include an enlarged liver which often reverses if exposure is maintained. Carbohydrate metabolism is disrupted, and cholesterol and triglyceride levels in the blood falls.
Skin Contact	The material may cause moderate inflammation of the skin either following direct contact or after a delay of some time. Repeated exposure can cause contact dermatitis which is characterised by redness, swelling and blistering. Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions. 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	If applied to the eyes, this material causes severe eye damage.
Chronic	<p>Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems. Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. 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.</p> <p>Based on experience with similar materials, there is a possibility that exposure to the material may reduce fertility in humans at levels which do not cause other toxic effects.</p> <p>Pure calcium carbonate does not cause the disease pneumoconiosis probably due to its rapid elimination from the body. However, its unsterilised particulates can infect the lung and airway to cause inflammation.</p> <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>Exposure to phthalates over years leads to pain, numbness and spasms in the hands and feet. Many people have developed multiple disorders in the nervous system and the balancing system.</p>

ARDEX RA 030	TOXICITY	IRRITATION
	Not Available	Not Available
calcium carbonate	TOXICITY	IRRITATION
	dermal (rat) LD50: >2000 mg/kg ^[1]	Eye (rabbit): 0.75 mg/24h - SEVERE
	Oral (rat) LD50: >2000 mg/kg ^[1]	Skin (rabbit): 500 mg/24h-moderate
diisodecyl phthalate	TOXICITY	IRRITATION
	Oral (rat) LD50: 64000 mg/kg ^[2]	Not Available
silyl terminated polyether	TOXICITY	IRRITATION
	Not Available	Not Available
limestone	TOXICITY	IRRITATION
	Oral (rat) LD50: 6450 mg/kg ^[2]	Skin (rabbit): 500 mg/24h-moderate
titanium dioxide	TOXICITY	IRRITATION
	Inhalation (rat) LC50: >2.28 mg/l/4hr ^[1]	Skin (human): 0.3 mg /3D (int)-mild *
	Inhalation (rat) LC50: >3.56 mg/l/4hr ^[1]	
	Inhalation (rat) LC50: >6.82 mg/l/4hr ^[1]	
	Inhalation (rat) LC50: 3.43 mg/l/4hr ^[1]	
	Inhalation (rat) LC50: 5.09 mg/l/4hr ^[1]	
	Oral (rat) LD50: >2000 mg/kg ^[1]	
trimethoxyvinylsilane	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: 3.25 mg/kg ^[1]	Eye (rabbit): 500 mg/24h - mild
	Inhalation (rat) LC50: 2773 ppm/4hr ^[2]	Eye (rabbit): 500 mg/24h mild
		Skin (rabbit): 500 mg/24h - mild
		Skin (rabbit): 500 mg/24h mild
dibutyltin bis(acetylacetonate)	TOXICITY	IRRITATION
	dermal (rat) LD50: >2000 mg/kg ^[1]	Not Available
	Oral (rat) LD50: 1864 mg/kg ^[1]	
N-[3-(trimethoxysilyl)propyl]ethylenediamine	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: 16000 mg/kg ^[2]	Eye (rabbit): 15 mg SEVERE
	Oral (rat) LD50: 7460 mg/kg ^[2]	Skin (rabbit): 500 mg 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

DIISODECYL PHTHALATE	<p>for bis(2-propylheptyl)phthalate</p> <p>A substance thought to be comparable to bis(2-propylheptyl)phthalate is diisodecyl phthalate (syn: DIDP)</p> <p>Acute toxicity: Bis(2-propylheptyl)phthalate is of low acute oral, dermal and inhalation toxicity and is slightly irritating to eyes and skin. The result of the non-adjuvant skin sensitisation test provided for assessment was negative and additional information available in the EU report for DIDP indicates that the material has low sensitising potential.</p> <p>Repeat dose toxicity: Based on repeated dose studies using DIDP, the more complex analogue of the substance, the target organ in subacute and subchronic studies in rats is the liver, the effects observed being increased liver weight and changes in liver peroxisome proliferator enzyme activities. As the NOAELs derived are due to the latter, which is considered to be species-specific and of little relevance to humans, the NOAEL of 15 mg/kg/day from a 90-day dog study was used in the EU risk assessment.</p>
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	High Molecular Weight Phthalate Esters (HMWPEs) Category The HMWPE group includes chemically similar substances produced from alcohols. These substances have been demonstrated to have few biological effects. They demonstrate minimal acute toxicity, with effect on the liver and kidney at high doses. They also cause reproductive and developmental toxicity, also, liver cancer. Effects, Chronic Exposure General liver damage reported in rodents and dogs fed DIDP; not a route of industrial exposure Sensitising not a sensitiser in humans or animals; very few reports of human sensitisation usually associated with monomers or oligomers in incompletely cured polymer, not the plasticiser Carcinogen/Tumorigen not considered a tumorigen or a carcinogen in humans or animals Reproductive Effect rodent fetotoxicity on prolonged feeding; no known effect in humans or animals Mutagen no known effect on humans or animals
LIMESTONE	Eye (rabbit) 0.75: mg/24h -
TITANIUM DIOXIDE	Exposure to titanium dioxide is via inhalation, swallowing or skin contact. When inhaled, it may deposit in lung tissue and lymph nodes causing dysfunction of the lungs and immune system. Absorption by the stomach and intestines depends on the size of the particle. It penetrated only the outermost layer of the skin, suggesting that healthy skin may be an effective barrier. WARNING: This substance has been classified by the IARC as Group 2B: Possibly Carcinogenic to Humans. * IUCLID
TRIMETHOXYVINYL SILANE	Low molecular weight alkoxysilane can cause irreversible lung damage when inhaled at low dose. It is not an obvious skin irritant. However, studies suggest with repeated occupational exposure, methoxysilane may cause damage to the eye and skin as well as cancer. The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. Manufacturers Data:
DIBUTYL TIN BIS(ACETYLACETONATE)	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.
N-[3-(TRIMETHOXSILYL)PROPYL]ETHYLENEDIAMINE	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. Exogenous allergic alveolitis is induced essentially by allergen specific immune-complexes of the IgG type; cell-mediated reactions (T lymphocytes) may be involved. Such allergy is of the delayed type with onset up to four hours following exposure. For N-[3-(trimethoxysilyl)propyl]-ethylenediamine (AEAPTMS) and its analogues: Animal testing shows that AEAPTMS is moderately irritating to (and can sensitise) the skin and severely irritating to the eyes. It also causes salivation and laboured breathing. There is no evidence that AEAPTMS causes genetic damage or reproductive or developmental toxicity to date.
ARDEX RA 030 & CALCIUM CARBONATE & TRIMETHOXYVINYL SILANE & DIBUTYL TIN BIS(ACETYLACETONATE) & N-[3-(TRIMETHOXSILYL)PROPYL]ETHYLENEDIAMINE	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.
ARDEX RA 030 & SILYL TERMINATED POLYETHER & DIBUTYL TIN BIS(ACETYLACETONATE)	No significant acute toxicological data identified in literature search.
ARDEX RA 030 & DIISODECYL PHTHALATE	The material may produce peroxisome proliferation. Peroxisomes are single, membrane limited organelles in the cytoplasm that are found in the cells of animals, plants, fungi, and protozoa.
ARDEX RA 030 & N-[3-(TRIMETHOXSILYL)PROPYL]ETHYLENEDIAMINE	Allergic reactions involving the respiratory tract are usually due to interactions between IgE antibodies and allergens and occur rapidly. Allergic potential of the allergen and period of exposure often determine the severity of symptoms. Some people may be genetically more prone than others, and exposure to other irritants may aggravate symptoms. Allergy causing activity is due to interactions with proteins.
ARDEX RA 030 & N-[3-(TRIMETHOXSILYL)PROPYL]ETHYLENEDIAMINE	Attention should be paid to atopic diathesis, characterised by increased susceptibility to nasal inflammation, asthma and eczema.
ARDEX RA 030 & CALCIUM CARBONATE & LIMESTONE & N-[3-(TRIMETHOXSILYL)PROPYL]ETHYLENEDIAMINE	The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.
ARDEX RA 030 & CALCIUM CARBONATE & LIMESTONE & TITANIUM DIOXIDE & TRIMETHOXYVINYL SILANE & N-[3-(TRIMETHOXSILYL)PROPYL]ETHYLENEDIAMINE	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.
CALCIUM CARBONATE & LIMESTONE	No evidence of carcinogenic properties. No evidence of mutagenic or
CALCIUM CARBONATE & LIMESTONE	teratogenic effects.
TITANIUM DIOXIDE & DIBUTYL TIN BIS(ACETYLACETONATE)	The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

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 required to make classification available
☒ – Data Not Available to make classification

Toxicity

Ingredient	Endpoint	Test Duration (hr)	Species	Value	Source
calcium carbonate	LC50	96	Fish	>56000mg/L	4
calcium carbonate	EC50	72	Algae or other aquatic plants	>14mg/L	2
calcium carbonate	NOEC	72	Algae or other aquatic plants	14mg/L	2
diisodecyl phthalate	LC50	96	Fish	0.002mg/L	3
diisodecyl phthalate	EC50	48	Crustacea	>0.02mg/L	4
diisodecyl phthalate	EC50	96	Algae or other aquatic plants	0.000244mg/L	3
diisodecyl phthalate	BCF	504	Crustacea	0.1mg/L	4
diisodecyl phthalate	EC50	96	Crustacea	>0.08mg/L	4
diisodecyl phthalate	NOEC	504	Crustacea	0.03mg/L	4
limestone	LC50	96	Fish	>56000mg/L	4
limestone	EC50	72	Algae or other aquatic plants	>14mg/L	2
limestone	NOEC	72	Algae or other aquatic plants	14mg/L	2
titanium dioxide	LC50	96	Fish	9.214mg/L	3
titanium dioxide	EC50	48	Crustacea	>10mg/L	2
titanium dioxide	EC50	72	Algae or other aquatic plants	5.83mg/L	4
titanium dioxide	EC20	72	Algae or other aquatic plants	1.81mg/L	4
titanium dioxide	NOEC	336	Fish	0.089mg/L	4
trimethoxyvinylsilane	LC50	96	Fish	1243.230mg/L	3
trimethoxyvinylsilane	EC50	96	Algae or other aquatic plants	<1.000mg/L	3
trimethoxyvinylsilane	EC50	384	Crustacea	282.717mg/L	3
N-[3-(trimethoxysilyl)propyl]ethylenediamine	LC50	96	Fish	597mg/L	2
N-[3-(trimethoxysilyl)propyl]ethylenediamine	EC50	96	Algae or other aquatic plants	<1.000mg/L	3
N-[3-(trimethoxysilyl)propyl]ethylenediamine	EC50	96	Algae or other aquatic plants	334.072mg/L	3
N-[3-(trimethoxysilyl)propyl]ethylenediamine	NOEC	96	Fish	344mg/L	2

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

On the basis of available evidence concerning either toxicity, persistence, potential to accumulate and/or observed environmental fate and behaviour, the material may present a danger, immediate or long-term and/or delayed, to the structure and/or functioning of natural ecosystems.

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

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

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

For Bis (2-Propylheptyl) Phthalate (DHP) and Diisodecyl Phthalate (DIDP): BCF (Fish): 14.4; BCF Di (2-Ethylhexyl) Phthalate (DEHP): 1.3-29.7.

Environmental Fate: DIDP is a mixture of isomeric compounds including bis(2-propylheptyl) phthalate. DIDP is not expected to split into smaller particles in the environmental range of pH 4-9.

Terrestrial Fate: DPHP is potentially persistent in some soils and sediments in spite of its readily biodegradability status.

For high molecular weight phthalate esters:

Environmental fate:

Hydrolysis half lives and atmospheric photodegradation rates are calculated by EPI Suite (2000). Phthalate ester hydrolysis rates are quite low and not a significant fate route.

Ecotoxicity:

Ecotoxicity test data in fish, invertebrates, and algae are available for most of the members of this subcategory and reference compounds. These phthalates all contain side groups in the range of C7 to C13.

For Phthalate Esters:

Terrestrial Fate: Phthalate esters have been observed to broken down by a wide range of bacteria. Biodegradation is, therefore, expected to be the dominant fate in surface soils and sediments.

Little information is available on the fate of phthalate esters in soil, even though the primary point of entry, (landfills). The migration of phthalate esters out of plastics is slow.

DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
diisodecyl phthalate	HIGH	HIGH
titanium dioxide	HIGH	HIGH
trimethoxyvinylsilane	HIGH	HIGH
N-[3-(trimethoxysilyl)propyl]ethylenediamine	HIGH	HIGH

Bioaccumulative potential

Ingredient	Bioaccumulation
diisodecyl phthalate	HIGH (BCF = 3500)
titanium dioxide	LOW (BCF = 10)
trimethoxyvinylsilane	LOW (LogKOW = -0.3169)
N-[3-(trimethoxysilyl)propyl]ethylenediamine	LOW (LogKOW = -1.6744)

Mobility in soil

Ingredient	Mobility
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diisodecyl phthalate	LOW (KOC = 1589000)
titanium dioxide	LOW (KOC = 23.74)
trimethoxyvinylsilane	LOW (KOC = 757.6)
N-[3-(trimethoxysilyl)propyl]ethylenediamine	LOW (KOC = 6856)

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Product / Packaging disposal	<ul style="list-style-type: none"> ▶ DO NOT allow wash water from cleaning or process equipment to enter drains. ▶ It may be necessary to collect all wash water for treatment before disposal. ▶ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first. ▶ Where in doubt contact the responsible authority. ▶ Recycle wherever possible or consult manufacturer for recycling options. ▶ Consult State Land Waste Authority for disposal. ▶ Bury or incinerate residue at an approved site. ▶ Recycle containers if possible, or dispose of in an authorised landfill.
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SECTION 14 TRANSPORT INFORMATION

Labels Required

Marine Pollutant	NO
HAZCHEM	Not Applicable

Land transport (ADG): 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

CALCIUM CARBONATE(471-34-1) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards

Australia Inventory of Chemical Substances (AICS)

DIISODECYL PHTHALATE(26761-40-0) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

SILYL TERMINATED POLYETHER(205265-06-1) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Not Applicable

LIMESTONE(1317-65-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards

Australia Inventory of Chemical Substances (AICS)

TITANIUM DIOXIDE(13463-67-7) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards

Australia Inventory of Chemical Substances (AICS)

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

TRIMETHOXYVINYLILANE(2768-02-7) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

DIBUTYL TIN BIS(ACETYLACETONATE)(22673-19-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards

Australia Inventory of Chemical Substances (AICS)

Australia Hazardous Substances Information System - Consolidated Lists

N-[3-(TRIMETHOXSILYL)PROPYL]ETHYLENEDIAMINE(1760-24-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

International Air Transport Association (IATA) Dangerous Goods Regulations - Prohibited List Passenger and Cargo Aircraft

National Inventory	Status
Australia - AICS	N (silyl terminated polyether)
Canada - DSL	N (silyl terminated polyether)
Canada - NDSL	N (diisodecyl phthalate; dibutyltin bis(acetylacetonate); silyl terminated polyether; N-[3-(trimethoxysilyl)propyl]ethylenediamine; trimethoxyvinylsilane)
China - IECSC	N (silyl terminated polyether)
Europe - EINEC / ELINCS / NLP	N (silyl terminated polyether)
Japan - ENCS	N (diisodecyl phthalate; silyl terminated polyether)
Korea - KECI	N (silyl terminated polyether)

New Zealand - NZIoC	N (silyl terminated polyether)
Philippines - PICCS	N (silyl terminated polyether)
USA - TSCA	N (silyl terminated polyether)
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

Ingredients with multiple cas numbers

Name	CAS No
calcium carbonate	471-34-1, 13397-26-7, 15634-14-7, 1317-65-3, 72608-12-9, 878759-26-3, 63660-97-9, 459411-10-0, 198352-33-9, 146358-95-4
diisodecyl phthalate	26761-40-0, 68515-49-1
titanium dioxide	13463-67-7, 1317-70-0, 1317-80-2, 12188-41-9, 1309-63-3, 100292-32-8, 101239-53-6, 116788-85-3, 12000-59-8, 12701-76-7, 12767-65-6, 12789-63-8, 1344-29-2, 185323-71-1, 185828-91-5, 188357-76-8, 188357-79-1, 195740-11-5, 221548-98-7, 224963-00-2, 246178-32-5, 252962-41-7, 37230-92-5, 37230-94-7, 37230-95-8, 37230-96-9, 39320-58-6, 39360-64-0, 39379-02-7, 416845-43-7, 494848-07-6, 494848-23-6, 494851-77-3, 494851-98-8, 55068-84-3, 55068-85-4, 552316-51-5, 62338-64-1, 767341-00-4, 97929-50-5, 98084-96-9

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.

A list of reference resources used to assist the committee may be found at:

www.chemwatch.net

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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