

Carboweld 11 Part A

ALTEX COATINGS Material Safety Data Sheet (REVIEW)

Issue Date: 24-Jan-2011

X9477SP

Hazard Alert Code: HIGH

ALTEX COATINGS 9-01860

Version No:2.0

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Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

Carboweld 11 Part A

CONTACTS

ALTEX COATINGS LIMITED

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RESENE PAINTS (AUSTRALIA) LIMITED; T/A ALTEX COATINGS

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STATEMENT OF HAZARDOUS NATURE

Considered a Hazardous Substance according to the criteria of the New Zealand Hazardous Substances New Organisms legislation.

CONSIDERED A DANGEROUS MIXTURE ACCORDING TO DIRECTIVE 1999/45/EC AND ITS AMENDMENTS.

CONSIDERED A HAZARDOUS SUBSTANCE ACCORDING TO OSHA 29 CFR 1910.1200.

HAZARDOUS SUBSTANCE. DANGEROUS GOODS. According to the Criteria of NOHSC, and the ADG Code.

PROPER SHIPPING NAME

PAINT RELATED MATERIAL

PRODUCT USE

■ INTEGRITY CHECK: Product contains BOTH an alcohol and an acid as ingredients.

Part A of a two pack inorganic zinc silicate weldable primer

Section 2 - HAZARDS IDENTIFICATION

GHS Classification

Acute Aquatic Hazard Category 3

Acute Toxicity Category 4

Aspiration Hazard Category 1

Eye Irritation Category 2A

Flammable Liquid Category 2

Skin Corrosion/Irritation Category 2

STOT - RE Category 2

STOT - SE Category 3

EMERGENCY OVERVIEW

HAZARD

DANGER

Determined by Chemwatch using GHS/HSNO criteria

3.1B, 6.1D, 6.1E, 6.3A, 6.4A, 6.9, 6.9B, 9.1C.

HAZARD STATEMENTS

H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H373	May cause damage to organs through prolonged or repeated exposure.
H402	Harmful to aquatic life

PRECAUTIONARY STATEMENTS

Prevention

P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion- proof electrical/ventilating/lighting/ ... /equipment
P242	Use only non- sparking tools.
P243	Take precautionary measures against static discharge.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash ... thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.

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Section 2 - HAZARDS IDENTIFICATION

P271	Use only outdoors or in a well- ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
Response	
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P301+P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P314	Get medical advice/attention if you feel unwell.
P330	Rinse mouth.
P331	Do NOT induce vomiting.
P337+P313	If eye irritation persists: Get medical advice/attention.
Storage	
P403+P233	Store in a well- ventilated place. Keep container tightly closed.
P403+P235	Store in a well- ventilated place. Keep cool.
P405	Store locked up.
Disposal	
P501	Dispose of contents/container to ...

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
alcohol, denatured	64-17-5	30 - 40
isopropanol	67-63-0	30 - 40
ethyl silicate	11099-06-2	10 - 20
methanol	67-56-1	1 - 10
xylene	1330-20-7	1 - 10
methyl isobutyl ketone	108-10-1	< 1
oxalic acid dihydrate	6153-56-6	< 1

Section 4 - FIRST AID MEASURES

NEW ZEALAND POISONS INFORMATION CENTRE 0800 POISON (0800 764 766)

NZ EMERGENCY SERVICES: 111

SWALLOWED

- IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY.
- For advice, contact a Poisons Information Centre or a doctor.
- Urgent hospital treatment is likely to be needed.
- In the mean time, qualified first-aid personnel should treat the patient following observation and employing supportive measures as indicated by the patient's condition.
- If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus.

EYE

- If this product comes in contact with the eyes:
- Wash out immediately with fresh running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- Seek medical attention without delay; if pain persists or recurs seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN

- If skin contact occurs:
- Immediately remove all contaminated clothing, including footwear.
- Flush skin and hair with running water (and soap if available).

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- Seek medical attention in event of irritation.

INHALED

- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
- Prostheses 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.

NOTES TO PHYSICIAN

- for poisons (where specific treatment regime is absent):

BASIC TREATMENT

- Establish a patent airway with suction where necessary.
 - Watch for signs of respiratory insufficiency and assist ventilation as necessary.
 - Administer oxygen by non-rebreather mask at 10 to 15 L/min.
 - Monitor and treat, where necessary, for pulmonary oedema .
- For acute or short term repeated exposures to ethanol:
- Acute ingestion in non-tolerant patients usually responds to supportive care with special attention to prevention of aspiration, replacement of fluid and correction of nutritional deficiencies (magnesium, thiamine pyridoxine, Vitamins C and K).
 - Give 50% dextrose (50-100 ml) IV to obtunded patients following blood draw for glucose determination.
 - Comatose patients should be treated with initial attention to airway, breathing, circulation and drugs of immediate importance (glucose, thiamine).
 - Decontamination is probably unnecessary more than 1 hour after a single observed ingestion. Cathartics and charcoal may be given but are probably not effective in single ingestions.

For acute or short term repeated exposures to isopropanol:

- Rapid onset respiratory depression and hypotension indicates serious ingestions that require careful cardiac and respiratory monitoring together with immediate intravenous access.
- Rapid absorption precludes the usefulness of emesis or lavage 2 hours post-ingestion. Activated charcoal and cathartics are not clinically useful. Ipecac is most useful when given 30 mins. post-ingestion.
- There are no antidotes.
- Management is supportive. Treat hypotension with fluids followed by vasopressors.

For acute or short term repeated exposures to xylene:

- Gastro-intestinal absorption is significant with ingestions. For ingestions exceeding 1-2 ml (xylene)/kg, intubation and lavage with cuffed endotracheal tube is recommended. The use of charcoal and cathartics is equivocal.
- Pulmonary absorption is rapid with about 60-65% retained at rest.
- Primary threat to life from ingestion and/or inhalation, is respiratory failure.
- Patients should be quickly evaluated for signs of respiratory distress (e.g. cyanosis, tachypnoea, intercostal retraction, obtundation) and given oxygen. Patients with inadequate tidal volumes or poor arterial blood gases (pO₂ < 50 mm Hg or pCO₂ > 50 mm Hg) should be intubated.

For acute and short term repeated exposures to methanol:

- Toxicity results from accumulation of formaldehyde/formic acid.
- Clinical signs are usually limited to CNS, eyes and GI tract Severe metabolic acidosis may produce dyspnea and profound systemic effects which may become intractable. All symptomatic patients should have arterial pH measured. Evaluate airway, breathing and circulation.
- Stabilise obtunded patients by giving naloxone, glucose and thiamine.
- Decontaminate with Ipecac or lavage for patients presenting 2 hours post-ingestion. Charcoal does not absorb well; the usefulness of cathartic is not established.

Section 5 - FIRE FIGHTING MEASURES**EXTINGUISHING MEDIA**

- Alcohol stable foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.

FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- May be violently or explosively reactive.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course.

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Section 5 - FIRE FIGHTING MEASURES

When any large container (including road and rail tankers) is involved in a fire, consider evacuation by 500 metres in all directions.

FIRE/EXPLOSION HAZARD

- Liquid and vapour are highly flammable.
- Severe fire hazard when exposed to heat, flame and/or oxidisers.
- Vapour may travel a considerable distance to source of ignition.
- Heating may cause expansion or decomposition leading to violent rupture of containers., silicon dioxide (SiO₂).

WARNING: Long standing in contact with air and light may result in the formation of potentially explosive peroxides.

FIRE INCOMPATIBILITY

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

Section 6 - ACCIDENTAL RELEASE MEASURES**MINOR SPILLS**

- Remove all ignition sources.
- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Control personal contact by using protective equipment.

MAJOR SPILLS

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- May be violently or explosively reactive.
- Wear breathing apparatus plus protective gloves.

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

Section 7 - HANDLING AND STORAGE**PROCEDURE FOR HANDLING**

- Containers, even those that have been emptied, may contain explosive vapours.
- Do NOT cut, drill, grind, weld or perform similar operations on or near containers.
- DO NOT allow clothing wet with material to stay in contact with skin.

The substance accumulates peroxides which may become hazardous only if it evaporates or is distilled or otherwise treated to concentrate the peroxides. The substance may concentrate around the container opening for example.

Purchases of peroxidisable chemicals should be restricted to ensure that the chemical is used completely before it can become peroxidised.

- A responsible person should maintain an inventory of peroxidisable chemicals or annotate the general chemical inventory to indicate which chemicals are subject to peroxidation. An expiration date should be determined. The chemical should either be treated to remove peroxides or disposed of before this date.
- 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.

SUITABLE CONTAINER

- DO NOT use aluminium or galvanised containers.
- Packing as supplied by manufacturer.
- Plastic containers may only be used if approved for flammable liquid.
- Check that containers are clearly labelled and free from leaks.
- For low viscosity materials (i) : Drums and jerry cans must be of the non-removable head type. (ii) : Where a can is to be used as an inner package, the can must have a screwed enclosure.
- For materials with a viscosity of at least 2680 cSt. (23 deg. C)
- For manufactured product having a viscosity of at least 250 cSt. (23 deg. C)
- Manufactured product that requires stirring before use and having a viscosity of at least 20 cSt (25 deg. C).

STORAGE INCOMPATIBILITY

- Ethyl silicate:

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Section 7 - HANDLING AND STORAGE

- reacts slowly with water forming ethanol
- reacts violently with strong oxidisers
- is incompatible with acids, nitrates
- attacks some plastics and rubber.

Isopropanol (syn: isopropyl alcohol, IPA):

- forms ketones and unstable peroxides on contact with air or oxygen; the presence of ketones especially methyl ethyl ketone (MEK, 2-butanone) will accelerate the rate of peroxidation
- reacts violently with strong oxidisers, powdered aluminium (exothermic), crotonaldehyde, diethyl aluminium bromide (ignition), dioxygenyl tetrafluoroborate (ignition/ ambient temperature), chromium trioxide (ignition), potassium-tert-butoxide (ignition), nitroform (possible explosion), oleum (pressure increased in closed container), cobalt chloride, aluminium triisopropoxide, hydrogen plus palladium dust (ignition), oxygen gas, phosgene, phosgene plus iron salts (possible explosion), sodium dichromate plus sulfuric acid (exothermic/ incandescence), triisobutyl aluminium
- reacts with phosphorus trichloride forming hydrogen chloride gas
- reacts, possibly violently, with alkaline earth and alkali metals, strong acids, strong caustics, acid anhydrides, halogens, aliphatic amines, aluminium isopropoxide, isocyanates, acetaldehyde, barium perchlorate (forms highly explosive perchloric ester compound), benzoyl peroxide, chromic acid, dialkylzincs, dichlorine oxide, ethylene oxide (possible explosion), hexamethylene diisocyanate (possible explosion), hydrogen peroxide (forms explosive compound), hypochlorous acid, isopropyl chlorocarbonate, lithium aluminium hydride, lithium tetrahydroaluminate, nitric acid, nitrogen dioxide, nitrogen tetraoxide (possible explosion), pentafluoroguanidine, perchloric acid (especially hot), permonosulfuric acid, phosphorus pentasulfide, tangerine oil, triethylaluminium, triisobutylaluminium, trinitromethane.

Alcohols

- are incompatible with strong acids, acid chlorides, acid anhydrides, oxidising and reducing agents.
 - reacts, possibly violently, with alkaline metals and alkaline earth metals to produce hydrogen
 - react with strong acids, strong caustics, aliphatic amines, isocyanates, acetaldehyde, benzoyl peroxide, chromic acid, chromium oxide, dialkylzincs, dichlorine oxide, ethylene oxide, hypochlorous acid, isopropyl chlorocarbonate, lithium tetrahydroaluminate, nitrogen dioxide, pentafluoroguanidine, phosphorus halides, phosphorus pentasulfide, tangerine oil, triethylaluminium, triisobutylaluminium
 - should not be heated above 49 deg. C. when in contact with aluminium equipment.
- Secondary alcohols and some branched primary alcohols may produce potentially explosive peroxides after exposure to light and/ or heat.

STORAGE REQUIREMENTS

- Store in original containers in approved flame-proof area.
- No smoking, naked lights, heat or ignition sources.
- DO NOT store in pits, depressions, basements or areas where vapours may be trapped.
- Keep containers securely sealed.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

Source	Material	TWA ppm	TWA mg/m ³	STEL ppm	STEL mg/m ³	Peak ppm	Peak mg/m ³	TWA F/CC	Notes
New Zealand Workplace Exposure Standards (WES)	Carboweld 11 Part A (Oxalic acid)		1		2				
New Zealand Workplace Exposure Standards (WES)	Carboweld 11 Part A (Methyl alcohol)	200	262	250	328				skin; Exposure can also be estimated by biological monitoring
New Zealand Workplace Exposure Standards (WES)	Carboweld 11 Part A (Ethyl silicate)	10	85						

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Source	Material	TWA ppm	TWA mg/m ³	STEL ppm	STEL mg/m ³	Peak ppm	Peak mg/m ³	TWA F/CC	Notes
New Zealand Workplace Exposure Standards (WES)	alcohol, denatured (Ethyl alcohol)	1,000	1,880						
New Zealand Workplace Exposure Standards (WES)	isopropanol (Isopropyl alcohol)	400	983	500	1,230				
New Zealand Workplace Exposure Standards (WES)	xylene (Xylene (o-, m-, p-isomers))	50	217						
New Zealand Workplace Exposure Standards (WES)	methyl isobutyl ketone (Methyl isobutyl ketone)	50	205	75	307				

PERSONAL PROTECTION

RESPIRATOR

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

EYE

- 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 lens 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. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent].

HANDS/FEET

- Wear chemical protective gloves, eg. PVC.
 - Wear safety footwear or safety gumboots, eg. Rubber.
- Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:
- frequency and duration of contact,
 - chemical resistance of glove material,
 - glove thickness and
 - dexterity.

OTHER

- Overalls.
- PVC Apron.
- PVC protective suit may be required if exposure severe.
- Eyewash unit.
- Some plastic personal protective equipment (PPE) (e.g. gloves, aprons, overshoes) are not recommended as they may produce static electricity.
- For large scale or continuous use wear tight-weave non-static clothing (no metallic fasteners, cuffs or pockets), non sparking safety footwear.

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.

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Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

coloured liquid

PHYSICAL PROPERTIES

Liquid.			
Does not mix with water.			
Floats on water.			
State	Liquid	Molecular Weight	
Melting Range (°C)		Viscosity	Not available
Boiling Range (°C)		Solubility in water (g/L)	Immiscible
Flash Point (°C)	12	pH (1% solution)	
Decomposition Temp (°C)	Not available	pH (as supplied)	
Autoignition Temp (°C)		Vapour Pressure (kPa)	
Upper Explosive Limit (%)		Specific Gravity (water=1)	0.85
Lower Explosive Limit (%)		Relative Vapour Density (air=1)	>1
Volatile Component (%vol)	81	Evaporation Rate	faster
Material		Value	
log Kow		- 0.16- 0.28	
log Kow		- 0.82- - 0.66	
log Kow		1.19- 1.31	

Section 10 - CHEMICAL STABILITY

CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.

For incompatible materials - refer to Section 7 - Handling and Storage.

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

■ 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.

■ Ingestion of ethyl silicate may produce liver, kidney and lung damage.

A single dose of undiluted hydrolysed ethyl silicate (syn: tetraethyl orthosilicate, hydrolysed) (2000 mg/kg body weight) to 10 animals produced no deaths, nor toxicological symptoms; no abnormalities were seen during the test period nor at necroscopy.

■ Following ingestion, a single exposure to isopropyl alcohol produced lethargy and non-specific effects such as weight loss and irritation. Ingestion of near-lethal doses of isopropanol produces histopathological changes of the stomach, lungs and kidneys, incoordination, lethargy, gastrointestinal tract irritation, and inactivity or anaesthesia.<</>.

■ Central nervous system (CNS) depression may include nonspecific 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.

■ Ingestion of ethanol may produce nausea, vomiting, gastrointestinal bleeding, abdominal pain and diarrhoea. Systemic effects:

Blood concentration:
<1.5 g/l

Effects:
Mild: Impaired visual acuity, coordination and reaction time, emotional lability

continued...

1.5- 3.0 g/l

Moderate: Slurred speech, confusion, ataxia, emotional lability, perceptual and sensation disturbances possible blackout spells, and incoordination with impaired objective performance in standardised tests. Possible diplopia, flushing, tachycardia, sweating and incontinence. Bradypnoea may occur early and tachypnoea may develop in cases of metabolic acidosis, hypoglycaemia and hypokalaemia. CNS depression may progress to coma.

3- 5 g/l

Severe: Cold clammy skin, hypothermia and hypotension. Atrial fibrillation and atrioventricular block have been reported. Respiratory depression may occur, respiratory failure may follow serious intoxication, aspiration of vomitus may result in pneumonitis and pulmonary oedema. Convulsions due to severe hypoglycaemia may also occur. Acute hepatitis may develop.

■ Effects on the nervous system characterise over-exposure to higher aliphatic alcohols. These include headache, muscle weakness, giddiness, ataxia, (loss of muscle coordination), confusion, delirium and coma.

EYE

■ Evidence exists, or practical experience predicts, that the material may cause severe eye irritation in a substantial number of individuals and/or may produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals. Eye contact may cause significant inflammation with pain.

■ When 0.1 ml of the undiluted hydrolysed ethyl silicate (syn: tetraethyl orthosilicate, hydrolysed) was placed in the conjunctival sac for of the right eye of rabbits and rinsed after 24 hours, there was only slight irritation recorded within a seven day observation period.

■ Isopropanol vapour may cause mild eye irritation at 400 ppm. Splashes may cause severe eye irritation, possible corneal burns and eye damage.

■ Direct contact of the eye with ethanol may cause immediate stinging and burning with reflex closure of the lid and tearing, transient injury of the corneal epithelium and hyperaemia of the conjunctiva. Foreign-body type discomfort may persist for up to 2 days but healing is usually spontaneous and complete.

SKIN

■ Skin contact with the material may be harmful; systemic effects may result following absorption.

■ The material produces moderate skin irritation; evidence exists, or practical experience predicts, that the material either

- produces moderate inflammation of the skin in a substantial number of individuals following direct contact, and/or
- produces significant, but moderate, inflammation when applied to the healthy intact skin of animals (for up to four hours), such inflammation being present twenty-four hours or more after the end of the exposure period. <</>.

■ Skin contact with liquid ethyl silicate may result in dryness, cracking, inflammation.

Doses of >7940 mg/kg hydrolysed ethyl silicate (syn: tetraethyl orthosilicate) produced no systemic effects in rabbits.

■ Most liquid alcohols appear to act as primary skin irritants in humans. Significant percutaneous absorption occurs in rabbits but not apparently in man.

■ Open cuts, abraded or irritated skin should not be exposed to this material.

■ Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds 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.

INHALED

■ The material is not thought to produce respiratory irritation (as classified by EC Directives using animal models).

Nevertheless inhalation, of the material, especially for prolonged periods, may produce respiratory discomfort and occasionally, distress.

CHRONIC HEALTH EFFECTS

■ On the basis, primarily, of animal experiments, concern has been expressed by at least one classification body that the material may produce carcinogenic or mutagenic effects; in respect of the available information, however, there presently exists inadequate data for making a satisfactory assessment.

There is some evidence that human exposure to the material may result in developmental toxicity. This evidence is based on animal studies where effects have been observed in the absence of marked maternal toxicity, or at around the same dose levels as other toxic effects but which are not secondary non-specific consequences of the other toxic effects.

The health hazards associated with bentonite, kaolin, and common clay, which are commercially important clay products, as well as the related phyllosilicate minerals montmorillonite, kaolinite, and illite, have an extensive literature. Fibrous clay minerals, such as sepiolite, attapulgite, and zeolites, have a separate literature.<</>.

Prolonged or repeated contact with xylenes may cause defatting dermatitis with drying and cracking. Chronic inhalation of xylenes

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Section 11 - TOXICOLOGICAL INFORMATION

has been associated with central nervous system effects, loss of appetite, nausea, ringing in the ears, irritability, thirst anaemia, mucosal bleeding, enlarged liver and hyperplasia.

Long-term exposure to ethanol may result in progressive liver damage with fibrosis or may exacerbate liver injury caused by other agents.

Repeated ingestion of ethanol by pregnant women may adversely affect the central nervous system of the developing foetus, producing effects collectively described as foetal alcohol syndrome.

Consumption of ethanol (in alcoholic beverages) may be linked to the development of Type I hypersensitivities in a small number of individuals.

Long-term exposure to methanol vapour, at concentrations exceeding 3000 ppm, may produce cumulative effects characterised by gastrointestinal disturbances (nausea, vomiting), headache, ringing in the ears, insomnia, trembling, unsteady gait, vertigo, conjunctivitis and clouded or double vision. Liver and/or kidney injury may also result.

Long term or repeated ingestion exposure of isopropanol may produce incoordination, lethargy and reduced weight gain.

Repeated inhalation exposure to isopropanol may produce narcosis, incoordination and liver degeneration.

Exposure to the material for prolonged periods may cause physical defects in the developing embryo (teratogenesis).

TOXICITY AND IRRITATION

~OTHER

■ No significant acute toxicological data identified in literature search.

Liver, kidney and lung damage may result from overexposure by inhalation or ingestion. Exposure of rats at 400 ppm for 7 hours/day for 30 days resulted in significant mortality and kidney, liver and lung damage in survivors.

For isopropanol (IPA):

Acute toxicity: Isopropanol has a low order of acute toxicity. It is irritating to the eyes, but not to the skin.

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 skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic).

This form of dermatitis is often characterised by skin redness (erythema) and swelling the epidermis.

CARCINOGEN

Ethanol in alcoholic beverages	International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs	Group	1
Isopropyl alcohol	International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs	Group	3
Xylenes	International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs	Group	3

REPROTOXIN

xylene	ILO Chemicals in the electronics industry that have toxic effects on reproduction	Reduced fertility or sterility
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SKIN

methanol	New Zealand Workplace Exposure Standards (WES) - Skin	Notes	skin
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Section 12 - ECOLOGICAL INFORMATION

alcohol, denatured 96 hr LC50 (100) mg/L Fathead minnow Fish Source: Experimental

methanol 96 hr LC50 (100) mg/L Fathead minnow Fish Source: Experimental

xylene 96 hr LC50 (13.4) mg/L Fathead minnow Fish Source: Experimental

This material and its container must be disposed of as hazardous waste.

Ecotoxicity

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
alcohol, denatured	LOW	MED	LOW	HIGH
isopropanol	LOW	MED	LOW	HIGH
ethyl silicate	No Data Available	No Data Available		

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Carboweld 11 Part A

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Issue Date: 24-Jan-2011

X9477SP

Hazard Alert Code: HIGH

ALTEX COATINGS 9-01860

Version No:2.0

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Section 12 - ECOLOGICAL INFORMATION

methanol	HIGH	No Data Available	LOW	HIGH
xylene	LOW	LOW	LOW	
methyl isobutyl ketone	LOW	LOW	LOW	HIGH
oxalic acid dihydrate	LOW	No Data Available	LOW	HIGH

Section 13 - DISPOSAL CONSIDERATIONS

- Containers may still present a chemical hazard/ danger when empty.
- Return to supplier for reuse/ recycling if possible.
- Otherwise:
 - 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.
 - Where possible retain label warnings and MSDS and observe all notices pertaining to the product.
- Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area.
- A Hierarchy of Controls seems to be common - the user should investigate:
 - Reduction.
 - 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.
 - Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.
 - Dispose of by: burial in a land-fill specifically licenced to accept chemical and / or pharmaceutical wastes or Incineration in a licenced apparatus (after admixture with suitable combustible material).
 - Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.
- Insure that the disposal of material is carried out in accordance with Hazardous Substances (Disposal) Regulations 2001.*

Section 14 - TRANSPORTATION INFORMATION



Labels Required: FLAMMABLE LIQUID

HAZCHEM:

•3YE

Land Transport UNDG:

Class or division:	3	Subsidiary risk:	None
UN No.:	1263	UN packing group:	II

Shipping Name: PAINT RELATED MATERIAL (including paint thinning or reducing compound)

Air Transport IATA:

ICAO/IATA Class:	3	UN/ID Number:	1263
Packing Group:	II	Special provisions:	A3
		Cargo Only	
		Packing Instructions:	60 L
Maximum Qty/Pack:	364	Passenger and Cargo	
Passenger and Cargo		Packing Instructions:	5 L
Maximum Qty/Pack:	353	Passenger and Cargo Limited Quantity	
Passenger and Cargo Limited Quantity		Packing Instructions:	1 L
Maximum Qty/Pack:	Y341		

Shipping name: PAINT RELATED MATERIAL

continued...

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Section 14 - TRANSPORTATION INFORMATION

Maritime Transport IMDG:

IMDG Class:	3	IMDG Subrisk:	None
UN Number:	1263	Packing Group:	II
EMS Number:	F-E,S-E	Special provisions:	163
Limited Quantities:	5 L		
Shipping name:	PAINT RELATED MATERIAL		

Section 15 - REGULATORY INFORMATION

EPA Approval number

This substance is to be managed in accordance with the classification and controls specified in the Hazardous Substances Transfer Notice, 2004, (see table below). This substance may alternatively be managed under the conditions imposed by an applicable Group Standard.

HSR No.	HSR Name
HSR002495	Additives, Process Chemicals and Raw Materials (Flammable) Group Standard 2006
HSR002528	Cleaning Products (Flammable) Group Standard 2006
HSR002548	Corrosion Inhibitors (Flammable) Group Standard 2006
HSR002552	Cosmetic Products Group Standard 2006
HSR002556	Dental Products (Flammable) Group Standard 2006
HSR002563	Embalming Products (Flammable) Group Standard 2006
HSR002576	Food Additives and Fragrance Materials (Flammable) Group Standard 2006
HSR002583	Fuel Additives (Flammable) Group Standard 2006
HSR002599	Leather and Textile Products (Flammable) Group Standard 2006
HSR002611	Metal Industry Products (Flammable) Group Standard 2006
HSR002621	N.O.S. (Flammable) Group Standard 2006
HSR002637	Photographic Chemicals (Flammable) Group Standard 2006
HSR002641	Polymers (Flammable) Group Standard 2006
HSR002650	Solvents (Flammable) Group Standard 2006
HSR002662	Surface Coatings and Colourants (Flammable) Group Standard 2006
HSR100425	Pharmaceutical Active Ingredients Group Standard 2010
HSR002603	Lubricants (Flammable) Group Standard 2006

REGULATIONS

Regulations for ingredients

alcohol, denatured (CAS: 64-17-5) is found on the following regulatory lists;

"GESAMP/EHS Composite List - GESAMP Hazard Profiles", "IMO IBC Code Chapter 18: List of products to which the Code does not apply", "IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances", "IMO Provisional Categorization of Liquid Substances - List 2: Pollutant only mixtures containing at least 99% by weight of components already assessed by IMO", "International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs", "International Air Transport Association (IATA) Dangerous Goods Regulations", "International Council of Chemical Associations (ICCA) - High Production Volume List", "International Fragrance Association (IFRA) Survey: Transparency List", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Chemicals (single components)", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Dangerous Goods", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Veterinary Medicines", "New Zealand Inventory of Chemicals (NZIoC)", "New Zealand Workplace Exposure Standards (WES)", "World Anti-Doping Agency - Prohibited List - World Anti-Doping Code - Substances Prohibited in Particular Sports", "World Anti-Doping Agency - The 2009 Prohibited List World Anti-Doping Code - Substances Prohibited in Competition (German)", "World Anti-Doping Agency - The 2009 Prohibited List World Anti-Doping Code - Substances Prohibited in Particular Sports (French)", "World Anti-Doping Agency - The 2009 Prohibited List World Anti-Doping Code - Substances Prohibited in Particular Sports (Korean)"

isopropanol (CAS: 67-63-0) is found on the following regulatory lists;

"GESAMP/EHS Composite List - GESAMP Hazard Profiles", "IMO IBC Code Chapter 18: List of products to which the Code does not apply", "IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances", "IMO Provisional Categorization of Liquid Substances - List 2: Pollutant only mixtures containing at least 99% by weight of components already assessed by IMO", "International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs", "International Fragrance Association (IFRA) Survey: Transparency List", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Chemicals (single components)", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Dangerous Goods", "New Zealand Inventory of Chemicals (NZIoC)", "New Zealand Workplace Exposure Standards (WES)"

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Section 15 - REGULATORY INFORMATION

ethyl silicate (CAS: 11099-06-2,26352-16-9,72162-09-5) is found on the following regulatory lists;

"International Council of Chemical Associations (ICCA) - High Production Volume List", "New Zealand Inventory of Chemicals (NZIoC)"

methanol (CAS: 67-56-1) is found on the following regulatory lists;

"GESAMP/EHS Composite List - GESAMP Hazard Profiles", "IMO IBC Code Chapter 17: Summary of minimum requirements", "IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances", "International Council of Chemical Associations (ICCA) - High Production Volume List", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Chemicals (single components)", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Dangerous Goods", "New Zealand Inventory of Chemicals (NZIoC)", "New Zealand Workplace Exposure Standards (WES)"

xylene (CAS: 1330-20-7) is found on the following regulatory lists;

"International Council of Chemical Associations (ICCA) - High Production Volume List", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Chemicals (single components)", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data"

methyl isobutyl ketone (CAS: 108-10-1) is found on the following regulatory lists;

"GESAMP/EHS Composite List - GESAMP Hazard Profiles", "IMO IBC Code Chapter 17: Summary of minimum requirements", "IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk", "International Fragrance Association (IFRA) Survey: Transparency List", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Dangerous Goods", "New Zealand Inventory of Chemicals (NZIoC)", "New Zealand Workplace Exposure Standards (WES)"

oxalic acid dihydrate (CAS: 6153-56-6) is found on the following regulatory lists;

"International Fragrance Association (IFRA) Survey: Transparency List", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Chemicals (single components)", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data", "New Zealand Inventory of Chemicals (NZIoC)"

No data for Carboweld 11 Part A (CW: 9-01860)

Specific advice on controls required for materials used in New Zealand can be found at www.epa.govt.nz/search-databases/Pages/controls-search.aspx

Section 16 - OTHER INFORMATION

NEW ZEALAND POISONS INFORMATION CENTRE
0800 POISON (0800 764 766)
NZ EMERGENCY SERVICES: 111

INGREDIENTS WITH MULTIPLE CAS NUMBERS

Ingredient Name	CAS
ethyl silicate	11099-06-2, 26352-16-9, 72162-09-5

■ 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.

A list of reference resources used to assist the committee may be found at:
www.chemwatch.net/references.

■ The (M)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.

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Print Date: 30-Dec-2011

Zinc Filler

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Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

Zinc Filler

STATEMENT OF HAZARDOUS NATURE

Considered a Hazardous Substance according to the criteria of the New Zealand Hazardous Substances New Organisms legislation.

CONSIDERED A DANGEROUS MIXTURE ACCORDING TO DIRECTIVE 1999/45/EC AND ITS AMENDMENTS.

CONSIDERED A HAZARDOUS SUBSTANCE ACCORDING TO OSHA 29 CFR 1910.1200.

DANGEROUS GOODS. NON-HAZARDOUS SUBSTANCE. According to NOHSC Criteria, and ADG Code.

PROPER SHIPPING NAME

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

PRODUCT USE

Part B of two pack inorganic zinc silicate

CONTACTS

ALTEX COATINGS LIMITED

91-111 Oropi Road, Tauranga, New Zealand, 3112 - ☎+64 7 5411221, Fax +64 7 5411310

RESENE PAINTS (AUSTRALIA) LIMITED; T/A ALTEX COATINGS

7 Production Avenue, Molendinar, QLD 4214, Australia - ☎+61 7 32870222, Fax +61 7 32870226

Section 2 - HAZARDS IDENTIFICATION

GHS Classification

Chronic Aquatic Hazard Category 1

EMERGENCY OVERVIEW

HAZARD

WARNING

Determined by Chemwatch using GHS/HSNO criteria
9.1A.

HAZARD STATEMENTS

H410 Very toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention

P273 Avoid release to the environment.

Response

P391 Collect spillage.

Disposal

P501 Dispose of contents/container to ...

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
zinc powder, non- water reactive	7440-66-6.	100

Section 4 - FIRST AID MEASURES

NEW ZEALAND POISONS INFORMATION CENTRE 0800 POISON (0800 764 766)
NZ EMERGENCY SERVICES: 111

SWALLOWED

- Immediately give a glass of water.
- First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

continued...

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Section 4 - FIRST AID MEASURES

EYE

■ If this product comes in contact with eyes:

- Wash out immediately with water.
- If irritation continues, seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
- DO NOT attempt to remove particles attached to or embedded in eye .
- Lay victim down, on stretcher if available and pad BOTH eyes, make sure dressing does not press on the injured eye by placing thick pads under dressing, above and below the eye.
- Seek urgent medical assistance, or transport to hospital.

SKIN

■ If skin contact occurs:

- Immediately remove all contaminated clothing, including footwear.
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

INHALED

- If fumes, aerosols or combustion products are inhaled remove from contaminated area.
- Other measures are usually unnecessary.

NOTES TO PHYSICIAN

■ Treat symptomatically.

Copper, magnesium, aluminium, antimony, iron, manganese, nickel, zinc (and their compounds) in welding, brazing, galvanising or smelting operations all give rise to thermally produced particulates of smaller dimension than may be produced if the metals are divided mechanically. Where insufficient ventilation or respiratory protection is available these particulates may produce "metal fume fever" in workers from an acute or long term exposure.

- Onset occurs in 4-6 hours generally on the evening following exposure. Tolerance develops in workers but may be lost over the weekend. (Monday Morning Fever)
- Pulmonary function tests may indicate reduced lung volumes, small airway obstruction and decreased carbon monoxide diffusing capacity but these abnormalities resolve after several months.
- Absorption of zinc compounds occurs in the small intestine.
- The metal is heavily protein bound.
- Elimination results primarily from faecal excretion.
- The usual measures for decontamination (Ipecac Syrup, lavage, charcoal or cathartics) may be administered, although patients usually have sufficient vomiting not to require them.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

■ Metal dust fires need to be smothered with sand, inert dry powders.

DO NOT USE WATER, CO2 or FOAM.

- Use DRY sand, graphite powder, dry sodium chloride based extinguishers, G-1 or Met L-X to smother fire.
- Confining or smothering material is preferable to applying water as chemical reaction may produce flammable and explosive hydrogen gas.
- DO NOT use halogenated fire extinguishing agents.

FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves for fire only.
- Prevent, by any means available, spillage from entering drains or water courses.
- Use fire fighting procedures suitable for surrounding area.

When any large container (including road and rail tankers) is involved in a fire, consider evacuation by 100 metres in all directions.

FIRE/EXPLOSION HAZARD

- Zinc dust clouds are potentially explosive.
- Electric sparks may ignite the dust cloud even in atmospheres containing low oxygen (10%).
- In air the dust may be ignited in contact with hot surfaces or flame where temperatures exceed 600 deg C.
- DO NOT disturb burning dust. Explosion may result if dust is stirred into a cloud, by providing oxygen to a large surface of hot metal.
- DO NOT use water or foam as generation of explosive hydrogen may result. <</>.

continued...

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Section 5 - FIRE FIGHTING MEASURES

FIRE INCOMPATIBILITY

- Reacts with acids producing flammable / explosive hydrogen (H₂) gas.
- None known.

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS

- Environmental hazard - contain spillage.
- Clean up all spills immediately.
- Avoid contact with skin and eyes.
- Wear impervious gloves and safety glasses.
- Use dry clean up procedures and avoid generating dust.

MAJOR SPILLS

- Environmental hazard - contain spillage.
- Moderate hazard.
- CAUTION: Advise personnel in area.
- Alert Emergency Services and tell them location and nature of hazard.
- Control personal contact by wearing protective clothing.
- Prevent, by any means available, spillage from entering drains or water courses.

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

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- 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.

SUITABLE CONTAINER

- Lined metal can, lined metal pail/ can.
- Plastic pail.
- Polyliner drum.
- Packing as recommended by manufacturer.
- Bulk bags: Reinforced bags required for dense materials.
- CARE: Packing of high density product in light weight metal or plastic packages may result in container collapse with product release.
- Heavy gauge metal packages / Heavy gauge metal drums.

STORAGE INCOMPATIBILITY

- WARNING: Avoid or control reaction with peroxides. All transition metal peroxides should be considered as potentially explosive. For example transition metal complexes of alkyl hydroperoxides may decompose explosively.
 - The pi-complexes formed between chromium(0), vanadium(0) and other transition metals (haloarene-metal complexes) and mono-or poly-fluorobenzene show extreme sensitivity to heat and are explosive.
 - Avoid reaction with borohydrides or cyanoborohydrides.
 - Many metals may incandesce, react violently, ignite or react explosively upon addition of concentrated nitric acid.
 - Reacts slowly with water.
 - CAUTION contamination with moisture will liberate explosive hydrogen gas, causing pressure build up in sealed containers.
 - Reacts violently with caustic soda, other alkalis - generating heat, highly flammable hydrogen gas.
 - If alkali is dry, heat generated may ignite hydrogen - if alkali is in solution may cause violent foaming.
 - Segregate from alcohol, water.
- Metals exhibit varying degrees of activity. Reaction is reduced in the massive form (sheet, rod, or drop), compared with finely divided forms.
- can react exothermically with oxidising acids to form noxious gases.
 - catalyse polymerisation and other reactions, particularly when finely divided.
 - Many metals in elemental form react exothermically with compounds having active hydrogen atoms (such as acids and water) to form flammable hydrogen gas and caustic products.
 - Elemental metals may react with azo/diazo compounds to form explosive products.
 - Some elemental metals form explosive products with halogenated hydrocarbons.

continued...

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Section 7 - HANDLING AND STORAGE

- Reacts with acids producing flammable / explosive hydrogen (H₂) gas.
- Avoid contamination with water, alkalies and detergent solutions.
- Material reacts with water and generates gas, pressurises containers with even drum rupture resulting.
- DO NOT reseal container if contamination is suspected.
- Open all containers with care.
- Avoid reaction with oxidising agents.
- Finely divided metal powders develop pyrophoricity when a critical specific surface area is exceeded; this is ascribed to high heat of oxide formation on exposure to air.
- Safe handling is possible in relatively low concentrations of oxygen in an inert gas
- Several pyrophoric metals, stored in glass bottles have ignited when the container is broken on impact. Storage of these materials moist and in metal containers is recommended.
- The reaction residues from various metal syntheses (involving vacuum evaporation and co-deposition with a ligand) are often pyrophoric.

STORAGE REQUIREMENTS

- Store in original containers.
- Keep containers securely sealed.
- Store in a cool, dry area protected from environmental extremes.
- Store away from incompatible materials and foodstuff containers.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

Source	Material	TWA ppm	TWA mg/m ³	STEL ppm	STEL mg/m ³	Peak ppm	Peak mg/m ³	TWA F/CC	Notes
New Zealand Workplace Exposure Standards (WES)	zinc powder, non-water reactive (Particulates not otherwise classified)		10mg/m ³						
			Inhalable dust 3mg/m ³						
			Respirable dust						

PERSONAL PROTECTION

RESPIRATOR

- Particulate. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

EYE

- 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 lens 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. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent].

HANDS/FEET

- Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:

- frequency and duration of contact,
- chemical resistance of glove material,
- glove thickness and
- dexterity.
- Protective gloves eg. Leather gloves or gloves with Leather facing.

Experience indicates that the following polymers are suitable as glove materials for protection against undissolved, dry solids, where abrasive particles are not present.

- polychloroprene

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

- nitrile rubber
- butyl rubber
- fluorocaoutchouc.

OTHER

- Overalls.
- P.V.C. apron.
- Barrier cream.
- Skin cleansing cream.

ENGINEERING CONTROLS

- Metal dusts must be collected at the source of generation as they are potentially explosive.
- Vacuum cleaners, of flame-proof design, should be used to minimise dust accumulation.
- Metal spraying and blasting should, where possible, be conducted in separate rooms. This minimises the risk of supplying oxygen, in the form of metal oxides, to potentially reactive finely divided metals such as aluminium, zinc, magnesium or titanium.
- Work-shops designed for metal spraying should possess smooth walls and a minimum of obstructions, such as ledges, on which dust accumulation is possible.
- Wet scrubbers are preferable to dry dust collectors.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

grey powder

PHYSICAL PROPERTIES

Does not mix with water.
Sinks in water.

State	Divided Solid	Molecular Weight	
Melting Range (°C)		Viscosity	Not available
Boiling Range (°C)		Solubility in water (g/L)	Immiscible
Flash Point (°C)	Not Applicable	pH (1% solution)	
Decomposition Temp (°C)	Not available	pH (as supplied)	
Autoignition Temp (°C)		Vapour Pressure (kPa)	
Upper Explosive Limit (%)		Specific Gravity (water=1)	7.6
Lower Explosive Limit (%)		Relative Vapour Density (air=1)	
Volatile Component (%vol)	Negligible	Evaporation Rate	Not Applicable

Section 10 - CHEMICAL STABILITY

CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.

For incompatible materials - refer to Section 7 - Handling and Storage.

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

■ Although ingestion is not thought to produce harmful effects (as classified under EC Directives), the material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (e.g liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally based on doses producing mortality rather than those producing morbidity (disease, ill-health).

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Section 11 - TOXICOLOGICAL INFORMATION

EYE

■ Although the material is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).

SKIN

■ The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.

INHALED

■ The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.

CHRONIC HEALTH EFFECTS

■ Long-term exposure to the product is not thought to produce chronic effects adverse to health (as classified by EC Directives using animal models); nevertheless exposure by all routes should be minimised as a matter of course.
Long term exposure to high dust concentrations may cause changes in lung function (i.e. pneumoconiosis) caused by particles less than 0.5 micron penetrating and remaining in the lung.

TOXICITY AND IRRITATION

No data for this material.

Section 12 - ECOLOGICAL INFORMATION

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
This material and its container must be disposed of as hazardous waste.
Avoid release to the environment.
Refer to special instructions/ safety data sheets.

Ecotoxicity

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
zinc powder, non- water reactive	No Data Available	No Data Available	LOW	

Section 13 - DISPOSAL CONSIDERATIONS

■ Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area.
A Hierarchy of Controls seems to be common - the user should investigate:
• Reduction.
• 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 Management Authority for disposal.
• Bury residue in an authorised landfill.
• Recycle containers if possible, or dispose of in an authorised landfill.
Insure that the disposal of material is carried out in accordance with Hazardous Substances (Disposal) Regulations 2001.

continued...

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Section 14 - TRANSPORTATION INFORMATION



Labels Required: MISCELLANEOUS

HAZCHEM:

2Z

Land Transport UNDG:

Class or division:	9	Subsidiary risk:	None
UN No.:	3077	UN packing group:	III
Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.			

Air Transport IATA:

ICAO/IATA Class:	9	UN/ID Number:	3077
Packing Group:	III	Special provisions:	A97
		Cargo Only	
		Packing Instructions:	400 kg
Maximum Qty/Pack:	956	Passenger and Cargo	
Passenger and Cargo		Packing Instructions:	400 kg
Maximum Qty/Pack:	956	Passenger and Cargo Limited Quantity	
Passenger and Cargo Limited Quantity		Packing Instructions:	30 kg G
Maximum Qty/Pack:	Y956		
Shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.			

Maritime Transport IMDG:

IMDG Class:	9	IMDG Subrisk:	None
UN Number:	3077	Packing Group:	III
EMS Number:	F-A,S-F	Special provisions:	274 335
Limited Quantities:	5 kg	Marine Pollutant:	Yes
Shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.			

Section 15 - REGULATORY INFORMATION

EPA Approval number

This substance is to be managed in accordance with the classification and controls specified in the Hazardous Substances Transfer Notice, 2004, (see table below). This substance may alternatively be managed under the conditions imposed by an applicable Group Standard.

HSR No.	HSR Name
HSR002503	Additives, Process Chemicals and Raw Materials (Subsidiary Hazard) Group Standard 2006
HSR002519	Aerosols (Subsidiary Hazard) Group Standard 2006
HSR002521	Animal Nutritional and Animal Care Products Group Standard 2006
HSR002530	Cleaning Products (Subsidiary Hazard) Group Standard 2006
HSR002535	Compressed Gas Mixtures (Subsidiary Hazard) Group Standard 2006
HSR002544	Construction Products (Subsidiary Hazard) Group Standard 2006
HSR002549	Corrosion Inhibitors (Subsidiary Hazard) Group Standard 2006
HSR002552	Cosmetic Products Group Standard 2006
HSR002558	Dental Products (Subsidiary Hazard) Group Standard 2006
HSR002565	Embalming Products (Subsidiary Hazard) Group Standard 2006
HSR002571	Fertilisers (Subsidiary Hazard) Group Standard 2006
HSR002573	Fire Fighting Chemicals Group Standard 2006
HSR002578	Food Additives and Fragrance Materials (Subsidiary Hazard) Group Standard 2006
HSR002585	Fuel Additives (Subsidiary Hazard) Group Standard 2006
HSR002647	Reagent Kits Group Standard 2006
HSR002612	Metal Industry Products (Subsidiary Hazard) Group Standard 2006

continued...

Zinc Filler

ALTEX COATINGS Material Safety Data Sheet (REVIEW)

Issue Date: 21-Jan-2011

X9477SP

Hazard Alert Code: MODERATE

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Section 15 - REGULATORY INFORMATION

HSR002638	Photographic Chemicals (Subsidiary Hazard) Group Standard 2006
HSR002644	Polymers (Subsidiary Hazard) Group Standard 2006
HSR002648	Refining Catalysts Group Standard 2006
HSR002653	Solvents (Subsidiary Hazard) Group Standard 2006
HSR002670	Surface Coatings and Colourants (Subsidiary Hazard) Group Standard 2006
HSR002684	Water Treatment Chemicals (Subsidiary Hazard) Group Standard 2006
HSR100425	Pharmaceutical Active Ingredients Group Standard 2010
HSR002598	Leather and Textile products (Corrosive) Group Standard 2006
HSR002600	Leather and Textile Products (Subsidiary Hazard) Group Standard 2006
HSR002606	Lubricants, Lubricant Additives, Coolants and Anti- freeze Agents (Subsidiary Hazard) Group Standard 2006

REGULATIONS

Regulations for ingredients

zinc powder, non-water reactive (CAS: 7440-66-6) is found on the following regulatory lists;

"New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Dangerous Goods", "New Zealand Inventory of Chemicals (NZIoC)", "WHO Guidelines for Drinking-water Quality - Chemicals for which guideline values have not been established"

No data for Zinc Filler (CW: 9-01807)

Specific advice on controls required for materials used in New Zealand can be found at www.epa.govt.nz/search-databases/Pages/controls-search.aspx

Section 16 - OTHER INFORMATION

NEW ZEALAND POISONS INFORMATION CENTRE

0800 POISON (0800 764 766)

NZ EMERGENCY SERVICES: 111

■ 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/references.

■ The (M)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.

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