

Thermaline 400 Finish Part A

ALTEX COATINGS LTD

Chemwatch: 9-43307
Version No: 1.3
Safety Data Sheet according to HSNO Regulations

Chemwatch Hazard Alert Code: 4

Issue Date: 23/12/2013
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S.GHS.NZL.EN

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

Product Identifier

Product name	Thermaline 400 Finish Part A
Chemical Name	Not Applicable
Synonyms	Not Available
Proper shipping name	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound)
Chemical formula	Not Applicable
Other means of identification	Not Available
CAS number	Not Applicable

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

Relevant identified uses	Use according to manufacturer's directions. Part A of a two pack coating
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Details of the supplier of the safety data sheet

Registered company name	ALTEX COATINGS LTD		
Address	91-111 Oropi Road 3112 Bay of Plenty New Zealand		
Telephone	+64 7 5411974		
Fax	+64 7 5411310		
Website	Not Available		
Email	neil.debenham@carboline.co.nz		

Emergency telephone number

Association / Organisation	NZ Poisons Centre (0800-1630hr Mon-Fri)		
Emergency telephone numbers	0800 764766		
Other emergency telephone numbers	0800 764766		

CHEMWATCH EMERGENCY RESPONSE

Primary Number	Alternative Number 1	Alternative Number 2
+800 2436 2255	+612 9186 1132	Not Available

Once connected and if the message is not in your preferred language then please dial 01

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

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

GHS Classification ^[1]	Flammable Liquid Category 2, Skin Corrosion/Irritation Category 2, Eye Irritation Category 2A, Reproductive Toxicity Category 2, STOT - RE Category 2, Chronic Aquatic Hazard Category 3
Legend:	1. Classified by Chemwatch; 2. Classification drawn from CCID EPA NZ ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI
Determined by Chemwatch using GHS/HSNO criteria	3.1B, 6.3A, 6.4A, 6.8B, 6.9B (inhalation), 9.1C

Label elements

GHS label elements	 
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SIGNAL WORD	DANGER
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Thermaline 400 Finish Part A

Hazard statement(s)

H225	Highly flammable liquid and vapour
H315	Causes skin irritation
H319	Causes serious eye irritation
H361	Suspected of damaging fertility or the unborn child
H373	May cause damage to organs through prolonged or repeated exposure
H412	Harmful to aquatic life with long lasting effects

Supplementary statement(s)

Not Applicable

Precautionary statement(s): Prevention

P201	Obtain special instructions before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
P233	Keep container tightly closed.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P273	Avoid release to the environment.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting/intrinsically safe equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.

Precautionary statement(s): Response

P308+P313	IF exposed or concerned: Get medical advice/attention.
P321	Specific treatment (see advice on this label).
P370+P378	In case of fire: Use... to extinguish.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes.
P314	Get medical advice/attention if you feel unwell.
P337+P313	If eye irritation persists: Get medical advice/attention.
P302+P352	IF ON SKIN: Wash with plenty of water and soap
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.

Precautionary statement(s): Storage

P403+P235	Store in a well-ventilated place.
P405	Store locked up.

Precautionary statement(s): Disposal

P501	Dispose of contents/container to authorised chemical landfill or if organic to high temperature incineration
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SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
25036-25-3	10-20	bisphenol A/ bisphenol A diglycidyl ether polymer
25068-38-6	10-20	bisphenol A/ epichlorohydrin resin, liquid
14808-60-7	1-10	silica crystalline - quartz
28064-14-4	1-10	phenyl glycidyl ether/ formaldehyde copolymer
108-88-3	1-10	toluene
107-98-2	1-10	propylene glycol monomethyl ether - mixture of isomers
1330-20-7	1-10	xylene
108-32-7	<1	propylene carbonate

SECTION 4 FIRST AID MEASURES

Thermaline 400 Finish Part A

Description of first aid measures

Eye Contact	If this product comes in contact with the eyes: ▶ Wash out immediately with fresh running water. ▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. ▶ Seek medical attention without delay; if pain persists or recurs seek medical attention. ▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin contact occurs: ▶ Immediately remove all contaminated clothing, including footwear. ▶ Flush skin and hair with running water (and soap if available). ▶ Seek medical attention in event of irritation.
Inhalation	▶ If fumes, aerosols or combustion products are inhaled remove from contaminated area. ▶ Other measures are usually unnecessary.
Ingestion	▶ Immediately give a glass of water. ▶ First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

Indication of any immediate medical attention and special treatment needed

Any material aspirated during vomiting may produce lung injury. Therefore emesis should not be induced mechanically or pharmacologically. Mechanical means should be used if it is considered necessary to evacuate the stomach contents; these include gastric lavage after endotracheal intubation. If spontaneous vomiting has occurred after ingestion, the patient should be monitored for difficult breathing, as adverse effects of aspiration into the lungs may be delayed up to 48 hours.

Treat symptomatically.

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 ($pO_2 < 50$ mm Hg or $pCO_2 > 50$ mm Hg) should be intubated.
- ▶ Arrhythmias complicate some hydrocarbon ingestion and/or inhalation and electrocardiographic evidence of myocardial injury has been reported; intravenous lines and cardiac monitors should be established in obviously symptomatic patients. The lungs excrete inhaled solvents, so that hyperventilation improves clearance.
- ▶ A chest x-ray should be taken immediately after stabilisation of breathing and circulation to document aspiration and detect the presence of pneumothorax.
- ▶ Epinephrine (adrenalin) is not recommended for treatment of bronchospasm because of potential myocardial sensitisation to catecholamines. Inhaled cardioselective bronchodilators (e.g. Alupent, Salbutamol) are the preferred agents, with aminophylline a second choice.

BIOLOGICAL EXPOSURE INDEX - BEI

These represent the determinants observed in specimens collected from a healthy worker exposed at the Exposure Standard (ES or TLV):

Determinant	Index	Sampling Time	Comments
Methylhippu-ric acids in urine	1.5 gm/gm creatinine	End of shift	
	2 mg/min	Last 4 hrs of shift	

SECTION 5 FIREFIGHTING MEASURES

Extinguishing media

	▶ Foam.
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Special hazards arising from the substrate or mixture

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	▶ Alert Fire Brigade and tell them location and nature of hazard.
Fire/Explosion Hazard	▶ Liquid and vapour are highly flammable.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Minor Spills	▶ Remove all ignition sources.
Major Spills	▶ Clear area of personnel and move upwind.

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

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Safe handling	▶ Containers, even those that have been emptied, may contain explosive vapours.
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Thermaline 400 Finish Part A

Other information

Store in original containers in approved flame-proof area.

Conditions for safe storage, including any incompatibilities

Suitable container

Packing as supplied by manufacturer.

Storage incompatibility

Toluene:



X



X



X



X



X



+

- X — Must not be stored together
 0 — May be stored together with specific precautions
 + — May be stored together

PACKAGE MATERIAL INCOMPATIBILITIES

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
New Zealand Workplace Exposure Standards (WES)	silica crystalline - quartz	Silica-Crystalline, Quartz	0.2 Respirable dust (mg/m ³)	Not Available	Not Available	Not Available
New Zealand Workplace Exposure Standards (WES)	toluene	Toluene	188 (mg/m ³) / 50 (ppm)	Not Available	Not Available	Skin absorption
New Zealand Workplace Exposure Standards (WES)	propylene glycol monomethyl ether - mixture of isomers	Propylene glycol monomethyl ether	369 (mg/m ³) / 100 (ppm)	553 (mg/m ³) / 150 (ppm)	Not Available	Not Available
New Zealand Workplace Exposure Standards (WES)	xylene	Xylene (o-, m-, p-isomers)	217 (mg/m ³) / 50 (ppm)	Not Available	Not Available	Not Available

EMERGENCY LIMITS

Ingredient	TEEL-0	TEEL-1	TEEL-2	TEEL-3
bisphenol A/ bisphenol A diglycidyl ether polymer	7.5(ppm)	25(ppm)	150(ppm)	500(ppm)
bisphenol A/ epichlorohydrin resin, liquid	125 / 50 / 4(ppm)	350 / 150 / 12.5(ppm)	500 / 100(ppm)	500(ppm)
silica crystalline - quartz	0.3(ppm)	0.3(ppm)	0.3(ppm)	50(ppm)
phenyl glycidyl ether/ formaldehyde copolymer	15(ppm)	50(ppm)	350(ppm)	500(ppm)
toluene	200(ppm)	200(ppm)	510(ppm)	2900(ppm)
propylene glycol monomethyl ether - mixture of isomers	100(ppm)	150(ppm)	300(ppm)	750(ppm)
xylene	100(ppm)	130(ppm)	920(ppm)	2500(ppm)
propylene carbonate	0.125(ppm)	0.35(ppm)	2.5(ppm)	12.5(ppm)

Ingredient	Original IDLH	Revised IDLH
silica crystalline - quartz	N.E.(mgm ³)N.E.(ppm)	50(mgm ³)
toluene	2,000(ppm)	500(ppm)
xylene	1,000(ppm)	900(ppm)

Exposure controls

Appropriate engineering controls

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard.

Personal protection



Eye and face protection

Safety glasses with side shields.

Skin protection

See Hand protection below

Hand protection

The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer.

Body protection

See Other protection below

Other protection

Overalls.

Thermal hazards

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Recommended material(s)

GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:
Thermaline 400 Finish Part A Not Available

Material	CPI
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* CPI - Chemwatch Performance Index

Respiratory protection

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	AX-AUS / Class 1 P2	-	AX-PAPR-AUS / Class 1 P2
up to 50 x ES	Air-line*	-	-
up to 100 x ES	-	AX-3 P2	-
100+ x ES	-	Air-line**	-

* - Continuous-flow; ** - Continuous-flow or positive pressure demand

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)

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	coloured viscous liquid		
Physical state	Liquid	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 Available
Flash point (°C)	4	Taste	Not Available
Evaporation rate	< 1>	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)	18
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water (g/L)	Immiscible	pH as a solution(1%)	Not Available
Vapour density (Air = 1)	>1	VOC g/L	Not Available

SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	» Presence of incompatible materials.
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 is not thought to produce either adverse health effects or irritation of the respiratory tract following inhalation (as classified by EC Directives using animal models).
Ingestion	Swallowing of the liquid may cause aspiration of vomit into the lungs with the risk of haemorrhaging, pulmonary oedema, progressing to chemical pneumonitis; serious consequences may result.

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Skin Contact	Evidence exists, or practical experience predicts, that the material either produces inflammation of the skin in a substantial number of individuals following direct contact, and/or produces significant 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.	
Eye	Evidence exists, or practical experience predicts, that the material may cause 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.	
Chronic	Harmful: danger of serious damage to health by prolonged exposure through inhalation.	
Thermaline 400 Finish Part A	TOXICITY	IRRITATION
	Not Available	Not Available
bisphenol A/ bisphenol A diglycidyl ether polymer	TOXICITY	IRRITATION
	Dermal (Rat) LD50: >2000 mg/kg *	
	Oral (Rat) LD50: >2000 mg/kg *	
	Not Available	Not Available
bisphenol A/ epichlorohydrin resin, liquid	TOXICITY	IRRITATION
	Oral (rat) LD50: 11400 mg/kg	Eye (rabbit): 100mg - Mild
	Not Available	Not Available
silica crystalline - quartz	TOXICITY	IRRITATION
	Not Available	Y Not Available
phenyl glycidyl ether/ formaldehyde copolymer	TOXICITY	IRRITATION
	Dermal (Rat) LD50: 4000 mg/kg *	* [Ciba-Geigy]
	Oral (Rat) LD50: 4000 mg/kg *	Effects transient
		Eyes * (-) (-) Slight irritant
		May cause allergic response
		Skin * (-) (-) Slight irritant
	Not Available	Not Available
toluene	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: 12124 mg/kg	Eye (rabbit): 2mg/24h - SEVERE
	Inhalation (rat) LC50: >26700 ppm/1h	Eye (rabbit):0.87 mg - mild
	Oral (rat) LD50: 636 mg/kg	Eye (rabbit):100 mg/30sec - mild
		Skin (rabbit):20 mg/24h-moderate
		Skin (rabbit):500 mg - moderate
	Not Available	Not Available
propylene glycol monomethyl ether - mixture of isomers	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: 13000 mg/kg	Eye (rabbit) 230 mg mild
	Inhalation (rat) LC50: 10000 ppm/5 h.	Eye (rabbit) 500 mg/24 h.
	Oral (rat) LD50: 3739 mg/kg	Skin (rabbit) 500 mg open - mild
xylene	TOXICITY	IRRITATION
	Inhalation (rat) LC50: 5000 ppm/4h	Eye (human): 200 ppm irritant
	Intraperitoneal (Mouse) LD50: 1548 mg/kg	Eye (rabbit): 5 mg/24h SEVERE
	Intraperitoneal (Rat) LD50: 2459 mg/kg	Eye (rabbit): 87 mg mild
	Oral (Mouse) LD50: 2119 mg/kg	Skin (rabbit):500 mg/24h moderate
	Oral (rat) LD50: 4300 mg/kg	
	Subcutaneous (Rat) LD50: 1700 mg/kg	
propylene carbonate	TOXICITY	IRRITATION
	Dermal (Rabbit) LD50: >2000 mg/kg	Eye (rabbit): 60 mg - moderate
	Dermal (rabbit) LD50: >5000 mg/kg	Skin (human): 100 mg/3d-I moderate
	Oral (Mouse) LD50: 20700 mg/kg	Skin (rabbit): 500 mg moderate

	Oral (Rat) LD50: >5000 mg/kg	
	Oral (rat) LD50: 29000 mg/kg	
	Subcutaneous (Mouse) LD50: 15800 mg/kg	
	Subcutaneous (Rat) LD50: 11100 mg/kg	
	Not Available	Not Available

Thermaline 400 Finish Part A	No significant acute toxicological data identified in literature search.
BISPHENOL A/ BISPHENOL A DIGLYCIDYL ETHER POLYMER	*Hexion MSDS Epikote 1001
SILICA CRYSTALLINE - QUARTZ	WARNING:
TOLUENE	The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic).
PROPYLENE GLYCOL MONOMETHYL ETHER - MIXTURE OF ISOMERS	The material may be irritating to the eye, with prolonged contact causing inflammation. NOTE: Exposure of pregnant rats and rabbits to the substance did not give rise to teratogenic effects at concentrations up to 3000 ppm.
XYLENE	The material may produce severe irritation to the eye causing pronounced inflammation. Reproductive effector in rats
PROPYLENE CARBONATE	The material may produce moderate eye irritation leading to inflammation.
BISPHENOL A/ BISPHENOL A DIGLYCIDYL ETHER POLYMER, BISPHENOL A/ EPICHLOROHYDRIN RESIN, LIQUID, PHENYL GLYCIDYL ETHER/ FORMALDEHYDE COPOLYMER	The following information refers to contact allergens as a group and may not be specific to this product.

Acute Toxicity	Not Applicable	Carcinogenicity	Not Applicable
Skin Irritation/Corrosion	Skin Corrosion/Irritation Category 2	Reproductivity	Reproductive Toxicity Category 2
Serious Eye Damage/Irritation	Eye Irritation Category 2A	STOT - Single Exposure	Not Applicable
Respiratory or Skin sensitisation	Not Applicable	STOT - Repeated Exposure	STOT - RE Category 2
Mutagenicity	Not Applicable	Aspiration Hazard	Not Applicable

CMR STATUS

SKIN	toluene	New Zealand Workplace Exposure Standards (WES) - Skin	Skin absorption
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SECTION 12 ECOLOGICAL INFORMATION

Toxicity

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

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
Not Available	Not Available	Not Available

Bioaccumulative potential

Ingredient	Bioaccumulation
Not Available	Not Available

Mobility in soil

Ingredient	Mobility
Not Available	Not Available

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Product / Packaging disposal	Legislation addressing waste disposal requirements may differ by country, state and/ or territory.
	Insure that the disposal of material is carried out in accordance with Hazardous Substances (Disposal) Regulations 2001.

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SECTION 14 TRANSPORT INFORMATION

Labels Required

	
Marine Pollutant: NO	
HAZCHEM	+3YE; +3Y

Land transport (UN)

UN number	1263
Packing group	II
UN proper shipping name	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound)
Environmental hazard	No relevant data
Transport hazard class(es)	Class : 3 Subrisk :
Special precautions for user	Special provisions : 163,367 limited quantity : 5 L

Air transport (ICAO-IATA / DGR)

UN number	1263
Packing group	II
UN proper shipping name	Paint related material (including paint thinning or reducing compounds); Paint (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base)
Environmental hazard	No relevant data
Transport hazard class(es)	ICAO/IATA Class : 3 ICAO / IATA Subrisk : ERG Code : 3L
Special precautions for user	Special provisions : A3A72 Cargo Only Packing Instructions : 364 Cargo Only Maximum Qty / Pack : 60 L Passenger and Cargo Packing Instructions : 353 Passenger and Cargo Maximum Qty / Pack : 5 L Passenger and Cargo Limited Quantity Packing Instructions : Y341 Passenger and Cargo Maximum Qty / Pack : 1 L

Sea transport (IMDG-Code / GGVSee)

UN number	1263
Packing group	II
UN proper shipping name	PAINT (including paint, lacquer, enamel, stain, shellac solutions, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound)
Environmental hazard	No relevant data
Transport hazard class(es)	IMDG Class : 3 IMDG Subrisk :
Special precautions for user	EMS Number : F-E,S-E Special provisions : 163 Limited Quantities : 5 L

SECTION 15 REGULATORY INFORMATION

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

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

HSR Number	Group Standard
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Thermaline 400 Finish Part A

HSR002662

Surface Coatings and Colourants (Flammable) Group Standard 2006

bisphenol A/ bisphenol A diglycidyl ether polymer(25036-25-3) is found on the following regulatory lists	"New Zealand Inventory of Chemicals (NZIoC)", "Sigma-AldrichTransport Information"
bisphenol A/ epichlorohydrin resin, liquid(25068-38-6) is found on the following regulatory lists	"New Zealand Inventory of Chemicals (NZIoC)", "OECD List of High Production Volume (HPV) Chemicals", "Sigma-AldrichTransport Information", "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 Land Transport Rule: Dangerous Goods 2005 - Schedule 1 Quantity limits", "International Air Transport Association (IATA) Dangerous Goods Regulations", "International Maritime Dangerous Goods Requirements (IMDG Code)", "Belgium Federal Public Service Mobility and Transport, Regulations concerning the International Carriage of Dangerous Goods by Rail - Table A: Dangerous Goods List - RID 2013 (Dutch)", "International Maritime Dangerous Goods Requirements (IMDG Code) - Substance Index", "OSPAR National List of Candidates for Substitution – United Kingdom"
silica crystalline - quartz(14808-60-7) is found on the following regulatory lists	"International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs", "New Zealand Inventory of Chemicals (NZIoC)", "United Nations Consolidated List of Products Whose Consumption and/or Sale Have Been Banned, Withdrawn, Severely Restricted or Not Approved by Governments", "OECD List of High Production Volume (HPV) Chemicals", "FisherTransport Information", "Sigma-AldrichTransport Information", "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 Workplace Exposure Standards (WES)"
phenyl glycidyl ether/ formaldehyde copolymer(28064-14-4) is found on the following regulatory lists	"New Zealand Inventory of Chemicals (NZIoC)", "Sigma-AldrichTransport Information", "New Zealand Land Transport Rule: Dangerous Goods 2005 - Schedule 1 Quantity limits", "International Air Transport Association (IATA) Dangerous Goods Regulations", "International Maritime Dangerous Goods Requirements (IMDG Code)", "Belgium Federal Public Service Mobility and Transport, Regulations concerning the International Carriage of Dangerous Goods by Rail - Table A: Dangerous Goods List - RID 2013 (Dutch)", "International Maritime Dangerous Goods Requirements (IMDG Code) - Substance Index"
toluene(108-88-3) is found on the following regulatory lists	"International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs", "New Zealand Inventory of Chemicals (NZIoC)", "IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk", "IMO IBC Code Chapter 17: Summary of minimum requirements", "IMO Provisional Categorization of Liquid Substances - List 3: (Trade-named) mixtures containing at least 99% by weight of components already assessed by IMO, presenting safety hazards", "United Nations Consolidated List of Products Whose Consumption and/or Sale Have Been Banned, Withdrawn, Severely Restricted or Not Approved by Governments", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Dangerous Goods", "OECD List of High Production Volume (HPV) Chemicals", "New Zealand Cosmetic Products Group Standard - Schedule 5 - Table 1: Components Cosmetic Products Must Not Contain Except Subject to the Restrictions and Conditions Laid Down", "International Fragrance Association (IFRA) Standards Prohibited", "WHO Guidelines for Drinking-water Quality - Guideline values for chemicals that are of health significance in drinking-water", "FisherTransport Information", "Sigma-AldrichTransport Information", "Acros Transport Information", "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 Workplace Exposure Standards (WES)", "International Air Transport Association (IATA) Dangerous Goods Regulations", "International Maritime Dangerous Goods Requirements (IMDG Code)", "Belgium Federal Public Service Mobility and Transport, Regulations concerning the International Carriage of Dangerous Goods by Rail - Table A: Dangerous Goods List - RID 2013 (Dutch)", "International Maritime Dangerous Goods Requirements (IMDG Code) - Substance Index", "OSPAR List of Chemicals for Priority Action", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "United Nations Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances - Table II", "United Nations List of Precursors and Chemicals Frequently used in the Illicit Manufacture of Narcotic Drugs and Psychotropic Substances Under International Control (Red List) - Table II"
propylene glycol monomethyl ether - mixture of isomers(107-98-2) is found on the following regulatory lists	"New Zealand Inventory of Chemicals (NZIoC)", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Dangerous Goods", "OECD List of High Production Volume (HPV) Chemicals", "International Council of Chemical Associations (ICCA) - High Production Volume List", "International Fragrance Association (IFRA) Survey: Transparency List", "FisherTransport Information", "Sigma-AldrichTransport Information", "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 Workplace Exposure Standards (WES)", "International Air Transport Association (IATA) Dangerous Goods Regulations", "International Maritime Dangerous Goods Requirements (IMDG Code)", "Belgium Federal Public Service Mobility and Transport, Regulations concerning the International Carriage of Dangerous Goods by Rail - Table A: Dangerous Goods List - RID 2013 (Dutch)", "International Maritime Dangerous Goods Requirements (IMDG Code) - Substance Index", "IMO IBC Code Chapter 17: Summary of minimum requirements", "IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "OSPAR National List of Candidates for Substitution – Norway"
xylene(1330-20-7) is found on the following regulatory lists	"International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs", "New Zealand Inventory of Chemicals (NZIoC)", "International Council of Chemical Associations (ICCA) - High Production Volume List", "International Fragrance Association (IFRA) Survey: Transparency List", "FisherTransport Information", "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", "International Air Transport Association (IATA) Dangerous Goods Regulations", "International Maritime Dangerous Goods Requirements (IMDG Code)", "Belgium Federal Public Service Mobility and Transport, Regulations concerning the International Carriage of Dangerous Goods by Rail - Table A: Dangerous Goods List - RID 2013 (Dutch)", "International Maritime Dangerous Goods Requirements (IMDG Code) - Substance Index", "OECD List of High Production Volume (HPV) Chemicals", "OSPAR List of Chemicals for Priority Action", "IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk", "IMO IBC Code Chapter 17: Summary of minimum requirements", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "IMO Provisional Categorization of Liquid Substances - List 3: (Trade-named) mixtures containing at least 99% by weight of components already assessed by IMO, presenting safety hazards", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Dangerous Goods", "WHO Guidelines for Drinking-water Quality - Guideline values for chemicals that are of health significance in drinking-water", "New Zealand Workplace Exposure Standards (WES)"
propylene carbonate(108-32-7) is found on the following regulatory lists	"New Zealand Inventory of Chemicals (NZIoC)", "OECD List of High Production Volume (HPV) Chemicals", "International Council of Chemical Associations (ICCA) - High Production Volume List", "IMO IBC Code Chapter 18: List of products to which the Code does not apply", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "FisherTransport Information", "Sigma-AldrichTransport Information", "Acros Transport Information", "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", "IMO IBC Code Chapter 17: Summary of minimum requirements"

SECTION 16 OTHER INFORMATION

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using

Continued...

Thermaline 400 Finish Part A

available literature references.

The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment.

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Thermaline 400 Part B

Altex Coatings Ltd

Chemwatch: 9-43310
Version No: 1.4
Safety Data Sheet according to HSNO Regulations

Chemwatch Hazard Alert Code: 3

Issue Date: 23/12/2013
Print Date: 13/01/2014
S.GHS.NZL.EN

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

Product Identifier

Product name	Thermaline 400 Part B
Chemical Name	Not Applicable
Synonyms	Not Available
Proper shipping name	PAINT, FLAMMABLE, CORROSIVE (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL, FLAMMABLE, CORROSIVE (including paint thinning or reducing compound)
Chemical formula	Not Applicable
Other means of identification	Not Available
CAS number	Not Applicable

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

Relevant identified uses	Use according to manufacturer's directions. Part B of a two pack coating
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Details of the supplier of the safety data sheet

Registered company name	Altex Coatings Ltd
Address	New Zealand
Telephone	+64 7 5411221
Fax	+64 7 5411310
Website	www.altexcoatings.co.nz
Email	Not Available

Emergency telephone number

Association / Organisation	Not Available
Emergency telephone numbers	0800 764766
Other emergency telephone numbers	0800 764766

CHEMWATCH EMERGENCY RESPONSE

Primary Number	Alternative Number 1	Alternative Number 2
+800 2436 2255	+612 9186 1132	Not Available

Once connected and if the message is not in your preferred language then please dial 01

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

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

GHS Classification ^[1]	Flammable Liquid Category 2, Metal Corrosion Category 1, Acute Toxicity (Oral) Category 4, Acute Toxicity (Dermal) Category 3, Skin Corrosion/Irritation Category 1A, Serious Eye Damage Category 1, Respiratory Sensitizer Category 1, Skin Sensitizer Category 1, Reproductive Toxicity Category 2, STOT - RE Category 2
Legend:	1. Classified by Chemwatch; 2. Classification drawn from CCID EPA NZ ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI
Determined by Chemwatch using GHS/HSNO criteria	3.1B, 6.1C (dermal), 6.1D (oral), 6.5A (respiratory), 6.5B (contact), 6.8B, 6.9B (inhalation), 8.1A, 8.2A, 8.3A

Label elements

GHS label elements	   
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SIGNAL WORD	DANGER
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Thermaline 400 Part B

Hazard statement(s)

H225	Highly flammable liquid and vapour
H290	May be corrosive to metals
H302	Harmful if swallowed
H311	Toxic in contact with skin
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H317	May cause an allergic skin reaction
H361	Suspected of damaging fertility or the unborn child
H373	May cause damage to organs through prolonged or repeated exposure

Supplementary statement(s)

Not Applicable

Precautionary statement(s): Prevention

P201	Obtain special instructions before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
P233	Keep container tightly closed.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	[In case of inadequate ventilation] wear respiratory protection.
P234	Keep only in original container.
P270	Do not eat, drink or smoke when using this product.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting/intrinsically safe equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P272	Contaminated work clothing should not be allowed out of the workplace.

Precautionary statement(s): Response

P301+P330+P331	IF SWALLOWED: Rinse mouth.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P310	Immediately call a POISON CENTER/doctor/physician/first aider
P321	Specific treatment (see advice on this label).
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER/doctor/physician/first aider
P370+P378	In case of fire: Use... to extinguish.
P302+P352	IF ON SKIN: Wash with plenty of water and soap
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P361+P364	Take off immediately all contaminated clothing and wash it before reuse.
P363	Wash contaminated clothing before reuse.
P390	Absorb spillage to prevent material damage.
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor/physician/first aider/if you feel unwell.

Precautionary statement(s): Storage

P403+P235	Store in a well-ventilated place.
P405	Store locked up.

Precautionary statement(s): Disposal

P501	Dispose of contents/container to authorised chemical landfill or if organic to high temperature incineration
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SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
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Continued...

Not Available	30-40	Adduct
108-10-1	20-30	methyl isobutyl ketone
67-63-0	10-20	isopropanol
107-98-2	10-20	propylene glycol monomethyl ether - mixture of isomers
111-40-0	1-10	diethylenetriamine
1330-20-7	1-10	xylene

SECTION 4 FIRST AID MEASURES

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

Description of first aid measures

Eye Contact	If this product comes in contact with the eyes: ▶ 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	If skin or hair contact occurs: ▶ Immediately flush body and clothes with large amounts of water, using safety shower if available. ▶ Quickly remove all contaminated clothing, including footwear. ▶ Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre. ▶ Transport to hospital, or doctor.
Inhalation	▶ 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. ▶ Transport to hospital, or doctor.
Ingestion	▶ For advice, contact a Poisons Information Centre or a doctor at once. ▶ Urgent hospital treatment is likely to be needed. ▶ 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. ▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. ▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. ▶ Transport to hospital or doctor without delay. ▶ If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus.

Indication of any immediate medical attention and special treatment needed

	Treat symptomatically. Any material aspirated during vomiting may produce lung injury. Therefore emesis should not be induced mechanically or pharmacologically. Mechanical means should be used if it is considered necessary to evacuate the stomach contents; these include gastric lavage after endotracheal intubation. If spontaneous vomiting has occurred after ingestion, the patient should be monitored for difficult breathing, as adverse effects of aspiration into the lungs may be delayed up to 48 hours. for simple ketones: ----- BASIC TREATMENT ----- ▶ Establish a patent airway with suction where necessary. ▶ Watch for signs of respiratory insufficiency and assist ventilation as necessary. ▶ Administer oxygen by non-rebreather mask at 10 to 15 l/min. ▶ Monitor and treat, where necessary, for pulmonary oedema . ▶ Monitor and treat, where necessary, for shock. ▶ DO NOT use emetics. Where ingestion is suspected rinse mouth and give up to 200 ml water (5mL/kg recommended) for dilution where patient is able to swallow, has a strong gag reflex and does not drool. ▶ Give activated charcoal. ----- ADVANCED TREATMENT ----- ▶ Consider orotracheal or nasotracheal intubation for airway control in unconscious patient or where respiratory arrest has occurred. ▶ Consider intubation at first sign of upper airway obstruction resulting from oedema. ▶ Positive-pressure ventilation using a bag-valve mask might be of use. ▶ Monitor and treat, where necessary, for arrhythmias. ▶ Start an IV D5W TKO. If signs of hypovolaemia are present use lactated Ringers solution. Fluid overload might create complications. ▶ Drug therapy should be considered for pulmonary oedema. ▶ Hypotension with signs of hypovolaemia requires the cautious administration of fluids. Fluid overload might create complications. ▶ Treat seizures with diazepam. ▶ Proparacaine hydrochloride should be used to assist eye irrigation. ----- EMERGENCY DEPARTMENT ----- ▶ Laboratory analysis of complete blood count, serum electrolytes, BUN, creatinine, glucose, urinalysis, baseline for serum aminotransferases (ALT and AST), calcium, phosphorus and magnesium, may assist in establishing a treatment regime. Other useful analyses include anion and osmolar gaps, arterial blood gases (ABGs), chest radiographs and electrocardiograph.
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Thermaline 400 Part B

- Positive end-expiratory pressure (PEEP)-assisted ventilation may be required for acute parenchymal injury or adult respiratory distress syndrome.
- Consult a toxicologist as necessary.

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

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

For acute or short term repeated exposures to 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.
- Arrhythmias complicate some hydrocarbon ingestion and/or inhalation and electrocardiographic evidence of myocardial injury has been reported; intravenous lines and cardiac monitors should be established in obviously symptomatic patients. The lungs excrete inhaled solvents, so that hyperventilation improves clearance.
- A chest x-ray should be taken immediately after stabilisation of breathing and circulation to document aspiration and detect the presence of pneumothorax.
- Epinephrine (adrenalin) is not recommended for treatment of bronchospasm because of potential myocardial sensitisation to catecholamines. Inhaled cardioselective bronchodilators (e.g. Alupent, Salbutamol) are the preferred agents, with aminophylline a second choice.

BIOLOGICAL EXPOSURE INDEX - BEI

These represent the determinants observed in specimens collected from a healthy worker exposed at the Exposure Standard (ES or TLV):

Determinant	Index	Sampling Time	Comments
Methylhippu-ric acids in urine	1.5 gm/gm creatinine	End of shift	
	2 mg/min	Last 4 hrs of shift	

SECTION 5 FIREFIGHTING MEASURES

Extinguishing media

- Foam.

Special hazards arising from the substrate or mixture

Fire Incompatibility

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

Advice for firefighters

Fire Fighting

- Alert Fire Brigade and tell them location and nature of hazard.

Fire/Explosion Hazard

- Liquid and vapour are highly flammable.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Minor Spills

Environmental hazard - contain spillage.

Major Spills

Environmental hazard - contain spillage.

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

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Safe handling

- Containers, even those that have been emptied, may contain explosive vapours.

Other information

for bulk storages:

Conditions for safe storage, including any incompatibilities

Suitable container

- Packing as supplied by manufacturer.

Storage incompatibility

Xylenes:



X

X

X

X

X

+

X — Must not be stored together

0 — May be stored together with specific precautions

+ — May be stored together

PACKAGE MATERIAL INCOMPATIBILITIES

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Thermaline 400 Part B

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
New Zealand Workplace Exposure Standards (WES)	methyl isobutyl ketone	Methyl isobutyl ketone	205 (mg/m3) / 50 (ppm)	307 (mg/m3) / 75 (ppm)	Not Available	Not Available
New Zealand Workplace Exposure Standards (WES)	isopropanol	Isopropyl alcohol	983 (mg/m3) / 400 (ppm)	1230 (mg/m3) / 500 (ppm)	Not Available	Not Available
New Zealand Workplace Exposure Standards (WES)	propylene glycol monomethyl ether - mixture of isomers	Propylene glycol monomethyl ether	369 (mg/m3) / 100 (ppm)	553 (mg/m3) / 150 (ppm)	Not Available	Not Available
New Zealand Workplace Exposure Standards (WES)	diethylenetriamine	Diethylene triamine	4.2 (mg/m3) / 1 (ppm)	Not Available	Not Available	Skin absorption
New Zealand Workplace Exposure Standards (WES)	xylene	Xylene (o-, m-, p-isomers)	217 (mg/m3) / 50 (ppm)	Not Available	Not Available	Not Available

EMERGENCY LIMITS

Ingredient	TEEL-0	TEEL-1	TEEL-2	TEEL-3
methyl isobutyl ketone	75(ppm)	75(ppm)	500(ppm)	500(ppm)
isopropanol	400(ppm)	400(ppm)	2000(ppm)	2000(ppm)
propylene glycol monomethyl ether - mixture of isomers	100(ppm)	150(ppm)	300(ppm)	750(ppm)
diethylenetriamine	1(ppm)	1(ppm)	1.25(ppm)	100(ppm)
xylene	100(ppm)	130(ppm)	920(ppm)	2500(ppm)

Ingredient	Original IDLH	Revised IDLH
methyl isobutyl ketone	3,000(ppm)	500(ppm)
isopropanol	12,000(ppm)	2,000 [LEL](ppm)
xylene	1,000(ppm)	900(ppm)

Exposure controls

Appropriate engineering controls	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard.
Personal protection	
Eye and face protection	» Chemical goggles.
Skin protection	See Hand protection below
Hand protection	» Wear chemical protective gloves, e.g. PVC.
Body protection	See Other protection below
Other protection	» Overalls.
Thermal hazards	

Recommended material(s)

GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:
Thermaline 400 Part B Not Available

Material	CPI
----------	-----

* CPI - Chemwatch Performance Index

Respiratory protection

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	AK-AUS / Class 1 P2	-	AK-PAPR-AUS / Class 1 P2
up to 50 x ES	Air-line*	-	-
up to 100 x ES	-	AK-3 P2	-
100+ x ES	-	Air-line**	-

* - Continuous-flow; ** - Continuous-flow or positive pressure demand

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen

Thermaline 400 Part B

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)

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Note that all of the monopropylene glycol ethers may exist in two isomeric forms, alpha or beta. Coloured with Characteristic Odour		
Physical state	Liquid	Relative density (Water = 1)	0.92
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	418
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)	82 -138	Molecular weight (g/mol)	Not Available
Flash point (°C)	20	Taste	Not Available
Evaporation rate	1.6	Explosive properties	Not Available
Flammability	Not Available	Oxidising properties	Not Available
Upper Explosive Limit (%)	10.2	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	1.6	Volatile Component (%vol)	58
Vapour pressure (kPa)	2.1	Gas group	Not Available
Solubility in water (g/L)	Immiscible	pH as a solution(1%)	Not Available
Vapour density (Air = 1)	3.0	VOC g/L	Not Available

SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	▮ Presence of incompatible materials.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

Inhaled	Inhalation of epoxy resin amine hardener vapours (including polyamines and amine adducts) may produce bronchospasm and coughing episodes lasting days after cessation of the exposure.
Ingestion	The material can produce chemical burns within the oral cavity and gastrointestinal tract following ingestion.
Skin Contact	Skin contact with the material may produce toxic effects; systemic effects may result following absorption.
Eye	The material can produce chemical burns to the eye following direct contact.
Chronic	Repeated or prolonged exposure to corrosives may result in the erosion of teeth, inflammatory and ulcerative changes in the mouth and necrosis (rarely) of the jaw.

Thermaline 400 Part B	TOXICITY Not Available	IRRITATION Not Available
Adduct	TOXICITY Not Available	IRRITATION Not Available
methyl isobutyl ketone	TOXICITY Oral (rat) LD50: 2080 mg/kg	IRRITATION Eye (human): 200 ppm/15m
	Oral (rat) LD50: 2460 mg/kg	Eye (rabbit): 40 mg - SEVERE
		Eye (rabbit): 500 mg/24h - mild
		Skin (rabbit): 500 mg/24h - mild
	Not Available	Not Available

Thermaline 400 Part B

isopropanol	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: 12800 mg/kg	Eye (rabbit): 10 mg - moderate
	Inhalation (Mouse) LC50: 53000 mg/m3/4h	Eye (rabbit): 100 mg - SEVERE
	Inhalation (Rat) LC50: 72600 mg/m3/4h	Eye (rabbit): 100mg/24hr-moderate
	Intraperitoneal (Guinea pig) LD50: 2560 mg/kg	Skin (rabbit): 500 mg - mild
	Intraperitoneal (Mouse) LD50: 4477 mg/kg	
	Intraperitoneal (Rabbit) LD50: 667 mg/kg	
	Intraperitoneal (Rat) LD50: 2735 mg/kg	
	Intravenous (Mouse) LD50: 1509 mg/kg	
	Intravenous (Rabbit) LD50: 1184 mg/kg	
	Intravenous (Rat) LD50: 1088 mg/kg	
	Oral (Mouse) LD50: 3600 mg/kg	
	Oral (Rabbit) LD50: 6410 mg/kg	
	Oral (Rat) LD50: 5000 mg/kg	
	Oral (rat) LD50: 5045 mg/kg	
	Not Available	Not Available
propylene glycol monomethyl ether - mixture of isomers	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: 13000 mg/kg	Eye (rabbit) 230 mg mild
	Inhalation (rat) LC50: 10000 ppm/5 h.	Eye (rabbit) 500 mg/24 h.
	Oral (rat) LD50: 3739 mg/kg	Skin (rabbit) 500 mg open - mild
	Not Available	Not Available
diethylenetriamine	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: 1090 mg/kg	Skin (rabbit): 10 mg/24h - SEVERE
	Intraperitoneal (Mouse) LD50: 71 mg/kg	Skin (rabbit): 500 mg open moderate
	Intraperitoneal (Rat) LD50: 74 mg/kg	
	Oral (rat) LD50: 1080 mg/kg	
	Not Available	Not Available
xylene	TOXICITY	IRRITATION
	Inhalation (rat) LC50: 5000 ppm/4h	Eye (human): 200 ppm irritant
	Intraperitoneal (Mouse) LD50: 1548 mg/kg	Eye (rabbit): 5 mg/24h SEVERE
	Intraperitoneal (Rat) LD50: 2459 mg/kg	Eye (rabbit): 87 mg mild
	Oral (Mouse) LD50: 2119 mg/kg	Skin (rabbit): 500 mg/24h moderate
	Oral (rat) LD50: 4300 mg/kg	
	Subcutaneous (Rat) LD50: 1700 mg/kg	
	Not Available	Not Available

METHYL ISOBUTYL KETONE	Asthma-like symptoms may continue for months or even years after exposure to the material ceases.
ISOPROPANOL	For isopropanol (IPA):
PROPYLENE GLYCOL MONOMETHYL ETHER - MIXTURE OF ISOMERS	The material may be irritating to the eye, with prolonged contact causing inflammation. NOTE: Exposure of pregnant rats and rabbits to the substance did not give rise to teratogenic effects at concentrations up to 3000 ppm.
XYLENE	The material may produce severe irritation to the eye causing pronounced inflammation. Reproductive effector in rats
Thermaline 400 Part B, DIETHYLENETRIAMINE	The following information refers to contact allergens as a group and may not be specific to this product.

Acute Toxicity	Acute Toxicity (Oral) Category 4 Acute Toxicity (Dermal) Category 3	Carcinogenicity	Not Applicable
Skin Irritation/Corrosion	Skin Corrosion/Irritation Category 1A	Reproductivity	Reproductive Toxicity Category 2
Serious Eye Damage/Irritation	Serious Eye Damage Category 1	STOT - Single Exposure	Not Applicable

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Respiratory or Skin sensitisation	Respiratory Sensitizer Category 1 Skin Sensitizer Category 1	STOT - Repeated Exposure	STOT - RE Category 2
Mutagenicity	Not Applicable	Aspiration Hazard	Not Applicable

CMR STATUS

SKIN	diethylenetriamine	New Zealand Workplace Exposure Standards (WES) - Skin	Skin absorption
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SECTION 12 ECOLOGICAL INFORMATION

Toxicity

Toxic to fauna.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
Not Available	Not Available	Not Available

Bioaccumulative potential

Ingredient	Bioaccumulation
Not Available	Not Available

Mobility in soil

Ingredient	Mobility
Not Available	Not Available

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Product / Packaging disposal	Containers may still present a chemical hazard/ danger when empty.
	Insure that the disposal of material is carried out in accordance with Hazardous Substances (Disposal) Regulations 2001.

SECTION 14 TRANSPORT INFORMATION

Labels Required

	 
Marine Pollutant: NO	
HAZCHEM	*3WE*, *3W*

Land transport (UN)

UN number	3469
Packing group	II
UN proper shipping name	PAINT, FLAMMABLE, CORROSIVE (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL, FLAMMABLE, CORROSIVE (including paint thinning or reducing compound)
Environmental hazard	No relevant data
Transport hazard class(es)	Class : 3 Subrisk : 8
Special precautions for user	Special provisions : 163;367 limited quantity : 1 L

Air transport (ICAO-IATA / DGR)

UN number	3469
Packing group	II
UN proper shipping name	Paint, flammable, corrosive (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base); Paint related material, flammable, corrosive (including paint thinning or reducing compound)
Environmental hazard	No relevant data

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Transport hazard class(es)	ICAO/IATA Class	3
	ICAO / IATA Subrisk	8
	ERG Code	3CH
Special precautions for user	Special provisions	A3A72
	Cargo Only Packing Instructions	363
	Cargo Only Maximum Qty / Pack	5 L
	Passenger and Cargo Packing Instructions	352
	Passenger and Cargo Maximum Qty / Pack	1 L
	Passenger and Cargo Limited Quantity Packing Instructions	Y340
	Passenger and Cargo Maximum Qty / Pack	0.5 L

Sea transport (IMDG-Code / GGVSee)

UN number	3469		
Packing group	II		
UN proper shipping name	PAINT, FLAMMABLE, CORROSIVE (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL, FLAMMABLE, CORROSIVE (including paint thinning or reducing compound)		
Environmental hazard	No relevant data		
Transport hazard class(es)	IMDG Class	:	3
	IMDG Subrisk	:	8
Special precautions for user	EMS Number	:	F-E,S-C
	Special provisions	:	163
	Limited Quantities	:	1 L

Transport in bulk according to Annex II of MARPOL 73 / 78 and the IBC code

Source	Ingredient	Pollution Category	Residual Concentration - Outside Special Area (% w/w)	Residual Concentration
IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances	isopropanol	Not Available	Not Available	Not Available

SECTION 15 REGULATORY INFORMATION

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

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

HSR Number	Group Standard
HSR100425	Pharmaceutical Active Ingredients Group Standard 2010

methyl isobutyl ketone(108-10-1) is found on the following regulatory lists	"International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs","New Zealand Inventory of Chemicals (NZIoC)","IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk","IMO IBC Code Chapter 17: Summary of minimum requirements","New Zealand Hazardous Substances and New Organisms (HSNO) Act - Dangerous Goods","OECD List of High Production Volume (HPV) Chemicals","International Fragrance Association (IFRA) Survey: Transparency List","IOFI Global Reference List of Chemically Defined Substances","GESAMP/EHS Composite List - GESAMP Hazard Profiles","FisherTransport Information","Sigma-AldrichTransport Information","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 Workplace Exposure Standards (WES)","International Air Transport Association (IATA) Dangerous Goods Regulations","International Maritime Dangerous Goods Requirements (IMDG Code)","Belgium Federal Public Service Mobility and Transport, Regulations concerning the International Carriage of Dangerous Goods by Rail - Table A: Dangerous Goods List - RID 2013 (Dutch)","International Maritime Dangerous Goods Requirements (IMDG Code) - Substance Index","OSPAR National List of Candidates for Substitution – Norway"
isopropanol(67-63-0) is found on the following regulatory lists	"International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs","New Zealand Inventory of Chemicals (NZIoC)","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","New Zealand Hazardous Substances and New Organisms (HSNO) Act - Dangerous Goods","OECD List of High Production Volume (HPV) Chemicals","International Fragrance Association (IFRA) Survey: Transparency List","IOFI Global Reference List of Chemically Defined Substances","IMO IBC Code Chapter 18: List of products to which the Code does not apply","GESAMP/EHS Composite List - GESAMP Hazard Profiles","FisherTransport Information","Sigma-AldrichTransport Information","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 Workplace Exposure Standards (WES)","International Air Transport Association (IATA) Dangerous Goods Regulations","International Maritime Dangerous Goods Requirements (IMDG Code)","Belgium Federal Public Service Mobility and Transport, Regulations concerning the International Carriage of Dangerous Goods by Rail - Table A: Dangerous Goods List - RID 2013 (Dutch)","International Maritime Dangerous Goods Requirements (IMDG Code) - Substance Index","IMO IBC Code Chapter 17: Summary of minimum requirements","OSPAR National List of Candidates for Substitution – Norway"
propylene glycol monomethyl ether - mixture of isomers(107-98-2) is found on the following regulatory lists	"New Zealand Inventory of Chemicals (NZIoC)","New Zealand Hazardous Substances and New Organisms (HSNO) Act - Dangerous Goods","OECD List of High Production Volume (HPV) Chemicals","International Council of Chemical Associations (ICCA) - High Production Volume List","International Fragrance Association (IFRA) Survey: Transparency List","FisherTransport Information","Sigma-AldrichTransport Information","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 Workplace Exposure Standards

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	(WES)", "International Air Transport Association (IATA) Dangerous Goods Regulations", "International Maritime Dangerous Goods Requirements (IMDG Code)", "Belgium Federal Public Service Mobility and Transport, Regulations concerning the International Carriage of Dangerous Goods by Rail - Table A: Dangerous Goods List - RID 2013 (Dutch)", "International Maritime Dangerous Goods Requirements (IMDG Code) - Substance Index", "IMO IBC Code Chapter 17: Summary of minimum requirements", "IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "OSPAR National List of Candidates for Substitution – Norway"
diethylenetriamine(111-40-0) is found on the following regulatory lists	"New Zealand Inventory of Chemicals (NZIoC)", "IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk", "IMO IBC Code Chapter 17: Summary of minimum requirements", "OECD List of High Production Volume (HPV) Chemicals", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "OSPAR National List of Candidates for Substitution – United Kingdom", "Sigma-AldrichTransport Information", "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 Workplace Exposure Standards (WES)", "International Air Transport Association (IATA) Dangerous Goods Regulations", "International Maritime Dangerous Goods Requirements (IMDG Code)", "Belgium Federal Public Service Mobility and Transport, Regulations concerning the International Carriage of Dangerous Goods by Rail - Table A: Dangerous Goods List - RID 2013 (Dutch)", "International Maritime Dangerous Goods Requirements (IMDG Code) - Substance Index", "OSPAR National List of Candidates for Substitution – Norway", "New Zealand Cosmetic Products Group Standard - Schedule 5 - Table 1: Components Cosmetic Products Must Not Contain Except Subject to the Restrictions and Conditions Laid Down"
xylene(1330-20-7) is found on the following regulatory lists	"International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs", "New Zealand Inventory of Chemicals (NZIoC)", "International Council of Chemical Associations (ICCA) - High Production Volume List", "International Fragrance Association (IFRA) Survey: Transparency List", "FisherTransport Information", "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", "International Air Transport Association (IATA) Dangerous Goods Regulations", "International Maritime Dangerous Goods Requirements (IMDG Code)", "Belgium Federal Public Service Mobility and Transport, Regulations concerning the International Carriage of Dangerous Goods by Rail - Table A: Dangerous Goods List - RID 2013 (Dutch)", "International Maritime Dangerous Goods Requirements (IMDG Code) - Substance Index", "OECD List of High Production Volume (HPV) Chemicals", "OSPAR List of Chemicals for Priority Action", "IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk", "IMO IBC Code Chapter 17: Summary of minimum requirements", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "IMO Provisional Categorization of Liquid Substances - List 3: (Trade-named) mixtures containing at least 99% by weight of components already assessed by IMO, presenting safety hazards", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Dangerous Goods", "WHO Guidelines for Drinking-water Quality - Guideline values for chemicals that are of health significance in drinking-water", "New Zealand Workplace Exposure Standards (WES)"

SECTION 16 OTHER INFORMATION

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment.

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