

Carbothane 133LH Part A

Altex Coatings Ltd

Chemwatch: 9-43061

Version No: 1.3

Safety Data Sheet according to HSNO Regulations

Chemwatch Hazard Alert Code: 4

Issue Date: 17/12/2013

Print Date: 10/01/2014

S.GHS.NZL.EN

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

Product Identifier

Product name	Carbothane 133LH 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 polyurethane
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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 3, Skin Corrosion/Irritation Category 2, Eye Irritation Category 2A, Skin Sensitizer Category 1, Reproductive Toxicity Category 2, STOT - RE Category 2, Acute 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	3.1C, 6.3A, 6.4A, 6.5B (contact), 6.8B, 6.9B (inhalation), 9.1D

Label elements

GHS label elements	 
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SIGNAL WORD	WARNING
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Hazard statement(s)

H226	Flammable liquid and vapour
H315	Causes skin irritation
H319	Causes serious eye irritation
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
H402	Harmful to aquatic life

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.
P272	Contaminated work clothing should not be allowed out of the workplace.

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.
P302+P352	IF ON SKIN: Wash with plenty of water and soap
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes.
P314	Get medical advice/attention if you feel unwell.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing.

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
7727-43-7	35.1	Microbytes 5 (barium sulfate)
110-43-0	14.1	amyl methyl ketone
14808-60-7	13.4	silica crystalline - quartz
1317-80-2	11.7	Ti Pure R706 (titanium dioxide (rutile))
108-88-3	2.4	toluene
7631-86-9	1.1	silica amorphous
9004-36-8	0.7	CAB 381-0.1 (cellulose acetate butyrate)
41556-26-7	0.5	bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate
1330-20-7	0.2	xylene
123-54-6	0.2	Acetyl Acetone (2,4-pentanedione)

Continued...

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111-76-2

0.1

[ethylene glycol monobutyl ether](#)

SECTION 4 FIRST AID MEASURES

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

Description of first aid measures

Eye Contact	<p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> ▶ 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	<p>If skin contact occurs:</p> <ul style="list-style-type: none"> ▶ Immediately remove all contaminated clothing, including footwear. ▶ Flush skin and hair with running water (and soap if available). ▶ Seek medical attention in event of irritation.
Inhalation	<ul style="list-style-type: none"> ▶ If dust is inhaled, remove from contaminated area. ▶ Encourage patient to blow nose to ensure clear passage of breathing. ▶ If irritation or discomfort persists seek medical attention.
Ingestion	<ul style="list-style-type: none"> ▶ If swallowed do NOT induce vomiting. ▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. ▶ Observe the patient carefully. ▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. ▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. ▶ Seek medical advice.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

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.
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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	▶ When silica dust is dispersed in air, firefighters should wear inhalation protection as hazardous substances from the fire may be adsorbed on the silica particles.
Fire/Explosion Hazard	▶ Liquid and vapour are 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.

Continued...

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SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Safe handling	Containers, even those that have been emptied, may contain explosive vapours.
Other information	Store in original containers in approved flammable liquid storage area.

Conditions for safe storage, including any incompatibilities

Suitable container	Packing as supplied by manufacturer.
Storage incompatibility	Barium sulfate (barytes)



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)	Microbytes 5 (barium sulfate)	Barium sulphate	10 (mg/m3)	Not Available	Not Available	2011 correction;The value for inhalable dust containing no asbestos and less than 1% free silica.
New Zealand Workplace Exposure Standards (WES)	amyl methyl ketone	Methyl n-amyl ketone	233 (mg/m3) / 50 (ppm)	Not Available	Not Available	Not Available
New Zealand Workplace Exposure Standards (WES)	silica crystalline - quartz	Silica-Crystalline, Quartz	0.2 Respirable dust (mg/m3)	Not Available	Not Available	Not Available
New Zealand Workplace Exposure Standards (WES)	Ti Pure R706 (titanium dioxide (rutile))	Titanium dioxide	10 (mg/m3)	Not Available	Not Available	The value for inhalable dust containing no asbestos and less than 1% free silica.
New Zealand Workplace Exposure Standards (WES)	toluene	Toluene	188 (mg/m3) / 50 (ppm)	Not Available	Not Available	Skin absorption
New Zealand Workplace Exposure Standards (WES)	silica amorphous	Silica Amorphous,Precipitated silica	10 (mg/m3)	Not Available	Not Available	The value for inhalable dust containing no asbestos and less than 1% free silica.;
New Zealand Workplace Exposure Standards (WES)	silica amorphous	Silica fume	2 (Respirable dust) (mg/m3)	Not Available	Not Available	Not Available
New Zealand Workplace Exposure Standards (WES)	silica amorphous	Silica Amorphous, Diatomaceous earth (not calcined) / Silica-Amorphous	10 (mg/m3)	Not Available	Not Available	The value for inhalable dust containing no asbestos and less than 1% free silica.;
New Zealand Workplace Exposure Standards (WES)	silica amorphous	Silica Amorphous, fused	0.2 (Respirable dust) (mg/m3)	Not Available	Not Available	Not Available
New Zealand Workplace Exposure Standards (WES)	xylene	Xylene (o-, m-, p-isomers)	217 (mg/m3) / 50 (ppm)	Not Available	Not Available	Not Available
New Zealand Workplace Exposure Standards (WES)	ethylene glycol monobutyl ether	2-Butoxyethanol	121 (mg/m3) / 25 (ppm)	Not Available	Not Available	Skin absorption

EMERGENCY LIMITS






Ingredient	TEEL-0	TEEL-1	TEEL-2	TEEL-3
Microbytes 5 (barium sulfate)	15(ppm)	30(ppm)	350(ppm)	500(ppm)
amyl methyl ketone	100(ppm)	100(ppm)	125(ppm)	800(ppm)
silica crystalline - quartz	0.3(ppm)	0.3(ppm)	0.3(ppm)	50(ppm)
Ti Pure R706 (titanium dioxide (rutile))	15(ppm)	15(ppm)	15(ppm)	500(ppm)
toluene	200(ppm)	200(ppm)	510(ppm)	2900(ppm)
silica amorphous	6 / 0.3 / 2 / 10(ppm)	30 / 0.9 / 6 / 15 / 18(ppm)	50 / 1.5 / 200 / 125 / 10 / 30(ppm)	500 / 250 / 50(ppm)
CAB 381-0.1 (cellulose acetate butyrate)	10(ppm)	30(ppm)	50(ppm)	250(ppm)
xylene	100(ppm)	130(ppm)	920(ppm)	2500(ppm)
Acetyl Acetone (2,4-pentanedione)	15(ppm)	50(ppm)	100(ppm)	100(ppm)

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ethylene glycol monobutyl ether	50(ppm)	50(ppm)	100(ppm)	700(ppm)
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Ingredient	Original IDLH	Revised IDLH
amyl methyl ketone	4,000(ppm)	800(ppm)
silica crystalline - quartz	N.E.(mgm3)N.E.(ppm)	50(mgm3)
Ti Pure R706 (titanium dioxide (rutile))	N.E.(mgm3)N.E.(ppm)	5,000(mgm3)
toluene	2,000(ppm)	500(ppm)
silica amorphous	N.E.(mgm3)N.E.(ppm)	3,000(mgm3)
xylene	1,000(ppm)	900(ppm)
ethylene glycol monobutyl ether	700(ppm)	700 [Unch](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	» 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:
Carbothane 133LH 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 with Characteristic Odour		
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Physical state	Liquid	Relative density (Water = 1)	1.77
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	413
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)	146	Molecular weight (g/mol)	Not Available

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Flash point (°C)	34	Taste	Not Available
Evaporation rate	0.4	Explosive properties	Not Available
Flammability	Not Available	Oxidising properties	Not Available
Upper Explosive Limit (%)	7.8	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	1.1	Volatile Component (%vol)	17
Vapour pressure (kPa)	0.68	Gas group	Not Available
Solubility in water (g/L)	Immiscible	pH as a solution(1%)	Not Available
Vapour density (Air = 1)	3.8	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	Limited evidence or practical experience suggests that the material may produce irritation of the respiratory system, in a significant number of individuals, following inhalation.
Ingestion	Accidental ingestion of the material may be damaging to the health of the individual.
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	Practical experience shows that skin contact with the material is capable either of inducing a sensitisation reaction in a substantial number of individuals, and/or of producing a positive response in experimental animals.

Carbothane 133LH Part A	TOXICITY	IRRITATION
	Not Available	Not Available
Microbytes 5 (barium sulfate)	TOXICITY	IRRITATION
	Not Available	Not Available
amyl methyl ketone	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: 12600 mg/kg	Skin (rabbit): 14 mg/24h Mild
	Inhalation (rat) LC50: 4000 ppm/4h	Skin (rabbit): Primary Irritant
	Oral (rat) LD50: 1670 mg/kg	
	Not Available	Not Available
silica crystalline - quartz	TOXICITY	IRRITATION
	Not Available	Y Not Available
Ti Pure R706 (titanium dioxide (rutile))	TOXICITY	IRRITATION
	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

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silica amorphous	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >5000 mg/kg *	* [Grace]
	Inhalation (rat) LC50: >0.139 mg/l/14h *	Eye (rabbit): non-irritating *
	Oral (rat) LD50: 3160 mg/kg	Skin (rabbit): non-irritating *
	Not Available	Not Available
CAB 381-0.1 (cellulose acetate butyrate)	TOXICITY	IRRITATION
	Dermal (guinea pig) LD50: >1000 mg/kg	[Van Waters & Rogers]
	Oral (rat) LD50: 6400 mg/kg	Skin (guinea pig): Slight
	Not Available	Not Available
bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate	TOXICITY	IRRITATION
	Oral (rat) LD50: 3100 mg/kg *	*[Ameron]
	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
Acetyl Acetone (2,4-pentanedione)	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: 810 mg/kg	*[Union Carbide]
	Oral (rat) LD50: 55 mg/kg	Skin (rabbit): 0.476 - SEVERE
	Oral (rat) LD50: 970 mg/kg *	Skin (rabbit): 10 mg/24h
		Skin (rabbit): 488 mg - mild
ethylene glycol monobutyl ether	TOXICITY	IRRITATION
	Dermal (Guinea pig) LD50: 210 mg/kg **	* [Union Carbide]
	Dermal (rabbit) LD50: 220 mg/kg	Eye (rabbit): 100 mg SEVERE
	Inhalation (Rat) LC50: 2210 mg/m3 **	Eye (rabbit): 100 mg/24h-moderate
	Inhalation (Rat) LC50: 450 ppm *	Skin (rabbit): 500 mg, open; mild
	Oral (Rat) LD50: 300 mg/kg **	
	Oral (rat) LD50: 470 mg/kg	
	Not Available	Not Available
MICROBYTES 5 (BARIUM SULFATE)	No significant acute toxicological data identified in literature search.	
SILICA CRYSTALLINE - QUARTZ	WARNING:	
TI PURE R706 (TITANIUM DIOXIDE (RUTILE))	Skin (human) 0.3: mg/3d-I mild The material may produce moderate eye irritation leading to inflammation.	
SILICA AMORPHOUS	For silica amorphous: Reports indicate high/prolonged exposures to amorphous silicas induced lung fibrosis in experimental animals; in some experiments these effects were reversible.	
XYLENE	Reproductive effector in rats	
ETHYLENE GLYCOL MONOBUTYL ETHER	NOTE: Changes in kidney, liver, spleen and lungs are observed in animals exposed to high concentrations of this substance by all routes. ** ASCC (NZ) SDS	
Carbothane 133LH Part A, BIS(1,2,2,6,6-PENTAMETHYL-4-PIPERIDYL)SEBACATE	The following information refers to contact allergens as a group and may not be specific to this product.	

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AMYL METHYL KETONE, TOLUENE	The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic).
XYLENE, ACETYL ACETONE (2,4-PENTANEDIONE), ETHYLENE GLYCOL MONOBUTYL ETHER	The material may produce severe irritation to the eye causing pronounced inflammation.

Acute Toxicity	Not Applicable	Carcinogenicity	Not Applicable
Skin Irritation/Corrosion	Skin Corrosion/Irritation Category 2	Reproductive	Reproductive Toxicity Category 2
Serious Eye Damage/Irritation	Eye Irritation Category 2A	STOT - Single Exposure	Not Applicable
Respiratory or Skin sensitisation	Skin Sensitizer Category 1	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
	ethylene glycol monobutyl ether	New Zealand Workplace Exposure Standards (WES) - Skin	Skin absorption

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

Harmful to aquatic organisms.

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	*3YE; *3Y

Land transport (UN)

UN number	1263
Packing group	III
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;223;367 limited quantity : 5 L

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Air transport (ICAO-IATA / DGR)

UN number	1263														
Packing group	III														
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)	<table> <tr> <td>ICAO/IATA Class</td><td>3</td></tr> <tr> <td>ICAO / IATA Subrisk</td><td></td></tr> <tr> <td>ERG Code</td><td>3L</td></tr> </table>	ICAO/IATA Class	3	ICAO / IATA Subrisk		ERG Code	3L								
ICAO/IATA Class	3														
ICAO / IATA Subrisk															
ERG Code	3L														
Special precautions for user	<table> <tr> <td>Special provisions</td><td>A3A72</td></tr> <tr> <td>Cargo Only Packing Instructions</td><td>366</td></tr> <tr> <td>Cargo Only Maximum Qty / Pack</td><td>220 L</td></tr> <tr> <td>Passenger and Cargo Packing Instructions</td><td>355</td></tr> <tr> <td>Passenger and Cargo Maximum Qty / Pack</td><td>60 L</td></tr> <tr> <td>Passenger and Cargo Limited Quantity Packing Instructions</td><td>Y344</td></tr> <tr> <td>Passenger and Cargo Maximum Qty / Pack</td><td>10 L</td></tr> </table>	Special provisions	A3A72	Cargo Only Packing Instructions	366	Cargo Only Maximum Qty / Pack	220 L	Passenger and Cargo Packing Instructions	355	Passenger and Cargo Maximum Qty / Pack	60 L	Passenger and Cargo Limited Quantity Packing Instructions	Y344	Passenger and Cargo Maximum Qty / Pack	10 L
Special provisions	A3A72														
Cargo Only Packing Instructions	366														
Cargo Only Maximum Qty / Pack	220 L														
Passenger and Cargo Packing Instructions	355														
Passenger and Cargo Maximum Qty / Pack	60 L														
Passenger and Cargo Limited Quantity Packing Instructions	Y344														
Passenger and Cargo Maximum Qty / Pack	10 L														

Sea transport (IMDG-Code / GGVSee)

UN number	1263						
Packing group	III						
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)	<table> <tr> <td>IMDG Class</td><td>3</td></tr> <tr> <td>IMDG Subrisk</td><td></td></tr> </table>	IMDG Class	3	IMDG Subrisk			
IMDG Class	3						
IMDG Subrisk							
Special precautions for user	<table> <tr> <td>EMS Number</td><td>F-E,S-E</td></tr> <tr> <td>Special provisions</td><td>163 223 955</td></tr> <tr> <td>Limited Quantities</td><td>5 L</td></tr> </table>	EMS Number	F-E,S-E	Special provisions	163 223 955	Limited Quantities	5 L
EMS Number	F-E,S-E						
Special provisions	163 223 955						
Limited Quantities	5 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	ethylene glycol monobutyl ether	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
HSR002662	Surface Coatings and Colourants (Flammable) Group Standard 2006

Microbytes 5 (barium sulfate)(7727-43-7) is found on the following regulatory lists	"New Zealand Inventory of Chemicals (NZIoC)", "International Air Transport Association (IATA) Dangerous Goods Regulations", "OECD List of High Production Volume (HPV) Chemicals", "International Council of Chemical Associations (ICCA) - High Production Volume List", "New Zealand Cosmetic Products Group Standard - Schedule 6 Colouring Agents Cosmetic Products May Contain With Restrictions- Table 1: List of Colouring Agents Allowed for use in Cosmetic Products", "FisherTransport Information", "Sigma-AldrichTransport Information", "Acros Transport Information", "New Zealand Workplace Exposure Standards (WES)", "WHO Guidelines for Drinking-water Quality - Chemicals for which guideline values have not been established"
amyl methyl ketone(110-43-0) 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", "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"
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

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	New Organisms (HSNO) Act - Classification of Chemicals - Classification Data", "New Zealand Workplace Exposure Standards (WES)"
Ti Pure R706 (titanium dioxide (rutile)) (1317-80-2) is found on the following regulatory lists	"New Zealand Inventory of Chemicals (NZIoC)", "OECD List of High Production Volume (HPV) Chemicals", "Sigma-AldrichTransport Information", "International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs", "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 Cosmetic Products Group Standard - Schedule 8: UV Filters Cosmetic Products May Contain With Restrictions - Table 1: List of Permitted UV Filters which Cosmetic Products may contain", "International Numbering System for Food Additives", "International Fragrance Association (IFRA) Survey: Transparency List", "New Zealand Cosmetic Products Group Standard - Schedule 6 Colouring Agents Cosmetic Products May Contain With Restrictions- Table 1: List of Colouring Agents Allowed for use in Cosmetic Products", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "CODEX General Standard for Food Additives (GSFA) - Additives Permitted for Use in Food in General, Unless Otherwise Specified, in Accordance with GMP", "FisherTransport Information", "New Zealand Workplace Exposure Standards (WES)"
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"
silica amorphous(7631-86-9) 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)", "OECD List of High Production Volume (HPV) Chemicals", "International Numbering System for Food Additives", "International Council of Chemical Associations (ICCA) - High Production Volume List", "International Fragrance Association (IFRA) Survey: Transparency List", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "CODEX General Standard for Food Additives (GSFA) - Additives Permitted for Use in Food in General, Unless Otherwise Specified, in Accordance with GMP", "FisherTransport Information", "Sigma-AldrichTransport Information", "Acros Transport Information", "New Zealand Workplace Exposure Standards (WES)", "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 Data"
CAB 381-0.1 (cellulose acetate butyrate) (9004-36-8) is found on the following regulatory lists	"New Zealand Inventory of Chemicals (NZIoC)", "Sigma-AldrichTransport Information", "Acros Transport Information"
bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate(41556-26-7) is found on the following regulatory lists	"New Zealand Inventory of Chemicals (NZIoC)", "OECD List of High Production Volume (HPV) Chemicals", "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"
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)"
Acetyl Acetone (2,4-pentanedione) (123-54-6) 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", "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", "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", "New Zealand Cosmetic Products Group Standard - Schedule 4: Components Cosmetic Products Must Not Contain - Table 1", "IMO IBC Code Chapter 17: Summary of minimum requirements"
ethylene glycol monobutyl ether(111-76-2) 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", "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", "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", "IOFI Global Reference List of Chemically Defined Substances", "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", "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 Provisional Categorization of Liquid Substances - List 3: (Trade-named) mixtures containing at least 99% by weight of components already assessed by

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IMO, presenting safety hazards", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "OSPAR National List of Candidates for Substitution – Norway"

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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Carbothane 133LH Part B

ALTEX COATINGS LTD

Chemwatch: 9-43064

Version No: 1.2

Safety Data Sheet according to HSNO Regulations

Chemwatch Hazard Alert Code: 3

Issue Date: 17/12/2013

Print Date: 10/01/2014

S.GHS.NZL.EN

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

Product Identifier

Product name	Carbothane 133LH Part B
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	The use of a quantity of material in an unventilated or confined space may result in increased exposure and an irritating atmosphere developing. Part B of a two pack polyurethane
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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, Respiratory Sensitizer Category 1, Skin Sensitizer Category 1, STOT - RE Category 2, Acute 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, 6.5A (respiratory), 6.5B (contact), 6.9B (inhalation), 9.1D

Label elements

GHS label elements	 
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SIGNAL WORD	DANGER
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Continued...

Carbothane 133LH Part B

Hazard statement(s)

H225	Highly flammable liquid and vapour
H315	Causes skin irritation
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H317	May cause an allergic skin reaction
H373	May cause damage to organs through prolonged or repeated exposure
H402	Harmful to aquatic life

Supplementary statement(s)

Not Applicable

Precautionary statement(s): Prevention

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.
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.
P272	Contaminated work clothing should not be allowed out of the workplace.

Precautionary statement(s): Response

P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
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
P314	Get medical advice/attention if you feel unwell.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing.

Precautionary statement(s): Storage

P403+P235	Store in a well-ventilated place.
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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
28182-81-2	60.9	hexamethylene diisocyanate polymer
78-93-3	32.3	methyl ethyl ketone
64742-95-6.	3.4	aromatic hydrocarbon solvent
123-86-4	3.4	n-butyl acetate

SECTION 4 FIRST AID MEASURES

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

Description of first aid measures

Eye Contact	<p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> 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.
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Continued...

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Skin Contact	<p>If skin contact occurs:</p> <ul style="list-style-type: none"> Immediately remove all contaminated clothing, including footwear. Flush skin and hair with running water (and soap if available). Seek medical attention in event of irritation.
Inhalation	<ul style="list-style-type: none"> If fumes, aerosols or combustion products are inhaled remove from contaminated area. Other measures are usually unnecessary. <p>Following uptake by inhalation, move person to an area free from risk of further exposure. Oxygen or artificial respiration should be administered as needed. Asthmatic-type symptoms may develop and may be immediate or delayed up to several hours. Treatment is essentially symptomatic. A physician should be consulted.</p>
Ingestion	<ul style="list-style-type: none"> Immediately give a glass of water. First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor. 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

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.
- 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 sub-chronic and chronic exposures to isocyanates:

- This material may be a potent pulmonary sensitiser which causes bronchospasm even in patients without prior airway hyperreactivity.
- Clinical symptoms of exposure involve mucosal irritation of respiratory and gastrointestinal tracts.
- Conjunctival irritation, skin inflammation (erythema, pain vesiculation) and gastrointestinal disturbances occur soon after exposure.
- Pulmonary symptoms include cough, burning, substernal pain and dyspnoea.
- Some cross-sensitivity occurs between different isocyanates.
- Noncardiogenic pulmonary oedema and bronchospasm are the most serious consequences of exposure. Markedly symptomatic patients should receive oxygen, ventilatory support and an intravenous line.
- Treatment for asthma includes inhaled sympathomimetics (epinephrine [adrenalin], terbutaline) and steroids.
- Activated charcoal (1 g/kg) and a cathartic (sorbitol, magnesium citrate) may be useful for ingestion.
- Mydriatics, systemic analgesics and topical antibiotics (Sulamyd) may be used for corneal abrasions.
- There is no effective therapy for sensitised workers.

[Ellenhorn and Barceloux; Medical Toxicology]

NOTE: Isocyanates cause airway restriction in naive individuals with the degree of response dependant on the concentration and duration of exposure. They induce smooth muscle contraction which leads to bronchoconstrictive episodes. Acute changes in lung function, such as decreased FEV1, may not represent sensitivity.

[Karol & Jin, Frontiers in Molecular Toxicology, pp 56-61, 1992]

Personnel who work with isocyanates, isocyanate prepolymers or polyisocyanates should have a pre-placement medical examination and periodic examinations thereafter, including a pulmonary function test. Anyone with a medical history of chronic respiratory disease, asthmatic or bronchial attacks, indications of allergic responses, recurrent eczema or sensitisation conditions of the skin should not handle or work with isocyanates. Anyone who develops chronic respiratory distress when working with isocyanates should be removed from exposure and examined by a physician. Further exposure must be avoided if a sensitivity to isocyanates or polyisocyanates has developed.

SECTION 5 FIREFIGHTING MEASURES

Extinguishing media

Carbothane 133LH Part B

- Small quantities of water in contact with hot liquid may react violently with generation of a large volume of rapidly expanding hot sticky semi-solid 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

- Remove all ignition sources.

Major Spills

- Liquid Isocyanates and high isocyanate vapour concentrations will penetrate seals on self contained breathing apparatus - SCBA should be used inside encapsulating suit where this exposure may occur.

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 commercial quantities of isocyanates:

Conditions for safe storage, including any incompatibilities

Suitable container

- Packing as supplied by manufacturer.

Storage incompatibility

Methyl ethyl ketone:



- X — Must not be stored together
 O — 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)	hexamethylene diisocyanate polymer	Isocyanates, all, (as -NCO)	0.02 (mg/m3)	0.07 (mg/m3)	Not Available	Sensitiser; These values apply to all isocyanates, including prepolymers, present in the workplace air as vapours, mist or dust.
New Zealand Workplace Exposure Standards (WES)	methyl ethyl ketone	Methyl ethyl ketone	445 (mg/m3) / 150 (ppm)	890 (mg/m3) / 300 (ppm)	Not Available	Exposure can also be estimated by biological monitoring.
New Zealand Workplace Exposure Standards (WES)	n-butyl acetate	n-Butyl acetate	713 (mg/m3) / 150 (ppm)	950 (mg/m3) / 200 (ppm)	Not Available	Not Available






EMERGENCY LIMITS

Ingredient	TEEL-0	TEEL-1	TEEL-2	TEEL-3
hexamethylene diisocyanate polymer	7.5(ppm)	25(ppm)	200(ppm)	500(ppm)
methyl ethyl ketone	200(ppm)	200(ppm)	2700(ppm)	4000(ppm)
aromatic hydrocarbon solvent	500(ppm)	750(ppm)	750(ppm)	750(ppm)
n-butyl acetate	5(ppm)	5(ppm)	200(ppm)	3000(ppm)

Ingredient	Original IDLH	Revised IDLH
methyl ethyl ketone	3,000(ppm)	3,000 [Unch](ppm)
n-butyl acetate	10,000(ppm)	1,700 [LEL](ppm)

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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	

Recommended material(s)

GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:
Carbothane 133LH Part B 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 5 x ES	A-AUS / Class 1	-	A-PAPR-AUS / Class 1
up to 25 x ES	Air-line*	A-2	A-PAPR-2
up to 50 x ES	-	A-3	-
50+ x ES	-	Air-line**	-

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

^ - Full-face

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO₂), G = Agricultural chemicals, K = Ammonia(NH₃), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Not Available		
Physical state	Liquid	Relative density (Water = 1)	1.00
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	469
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)	88	Molecular weight (g/mol)	Not Available
Flash point (°C)	0	Taste	Not Available
Evaporation rate	4.9	Explosive properties	Not Available
Flammability	Not Available	Oxidising properties	Not Available
Upper Explosive Limit (%)	11.2	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	1.7	Volatile Component (%vol)	40
Vapour pressure (kPa)	8.07	Gas group	Not Available
Solubility in water (g/L)	Immiscible	pH as a solution(1%)	Not Available
Vapour density (Air = 1)	2.7	VOC g/L	Not Available

SECTION 10 STABILITY AND REACTIVITY

Carbothane 133LH Part B

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	The material has
Skin Contact	The material produces moderate skin irritation; evidence exists, or practical experience predicts, that the material either
Eye	Although the liquid 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).
Chronic	Practical evidence shows that inhalation of the material is capable of inducing a sensitisation reaction in a substantial number of individuals at a greater frequency than would be expected from the response of a normal population.

Carbothane 133LH Part B	TOXICITY	IRRITATION
	Not Available	Not Available
hexamethylene diisocyanate polymer	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >5000 mg/kg*	Skin (rabbit): 500 mg - moderate
	Inhalation (rat) LC50: 18500 mg/m3/1h	
	Oral (rat) LD50: >10000 mg/kg*	
	Not Available	Not Available
methyl ethyl ketone	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: 20000 mg/kg	- mild
	Dermal (rabbit) LD50: 6480 mg/kg	Eye (human): 350 ppm -irritant
	Inhalation (rat) LC50: 50100 mg/m3/8 hr	Eye (rabbit): 80 mg - irritant
	Inhalation (rat) LD50: 23500 mg/m3/8 hr	Skin (rabbit): 402 mg/24 hr - mild
	Oral (rat) LD50: 2737 mg/kg	Skin (rabbit):13.78mg/24 hr open
aromatic hydrocarbon solvent	TOXICITY	IRRITATION
	Not Available	Not Available
n-butyl acetate	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: 3200 mg/kg*	* [PPG]
	Inhalation (rat) LC50: 2000 ppm/4H	Eye (human): 300 mg
	Inhalation (Rat) LC50: 390 ppm/4h	Eye (rabbit): 20 mg (open)-SEVERE
	Intraperitoneal (Mouse) LD50: 1230 mg/kg	Eye (rabbit): 20 mg/24h - moderate
	Oral (Guinea pig) LD50: 4700 mg/kg	g
	Oral (Rabbit) LD50: 3200 mg/kg	Skin (rabbit): 500 mg/24h-moderate
	Oral (Rat) LD50: 10768 mg/kg	
	Oral (rat) LD50: 13100 mg/kg	
	Not Available	Not Available

Carbothane 133LH Part B	Allergic reactions which develop in the respiratory passages as bronchial asthma or rhinoconjunctivitis, are mostly the result of reactions of the allergen with specific antibodies of the IgE class and belong in their reaction rates to the manifestation of the immediate type.
HEXAMETHYLENE DIISOCYANATE POLYMER	The following information refers to contact allergens as a group and may not be specific to this product. Eye (rabbit) 100: mg - [* BAYER]

Carbothane 133LH Part B

AROMATIC HYDROCARBON SOLVENT	Asthma-like symptoms may continue for months or even years after exposure to the material ceases.
N-BUTYL ACETATE	The material may produce severe irritation to the eye causing pronounced inflammation.

Acute Toxicity	Not Applicable	Carcinogenicity	Not Applicable
Skin Irritation/Corrosion	Skin Corrosion/Irritation Category 2	Reproductivity	Not Applicable
Serious Eye Damage/Irritation	Not Applicable	STOT - Single Exposure	Not Applicable
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

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	» 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	*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

Carbothane 133LH Part B

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)	<table> <tr> <td>ICAO/IATA Class</td><td>3</td></tr> <tr> <td>ICAO / IATA Subrisk</td><td></td></tr> <tr> <td>ERG Code</td><td>3L</td></tr> </table>	ICAO/IATA Class	3	ICAO / IATA Subrisk		ERG Code	3L								
ICAO/IATA Class	3														
ICAO / IATA Subrisk															
ERG Code	3L														
Special precautions for user	<table> <tr> <td>Special provisions</td><td>A3A72</td></tr> <tr> <td>Cargo Only Packing Instructions</td><td>364</td></tr> <tr> <td>Cargo Only Maximum Qty / Pack</td><td>60 L</td></tr> <tr> <td>Passenger and Cargo Packing Instructions</td><td>353</td></tr> <tr> <td>Passenger and Cargo Maximum Qty / Pack</td><td>5 L</td></tr> <tr> <td>Passenger and Cargo Limited Quantity Packing Instructions</td><td>Y341</td></tr> <tr> <td>Passenger and Cargo Maximum Qty / Pack</td><td>1 L</td></tr> </table>	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
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)	<table> <tr> <td>IMDG Class</td><td>3</td></tr> <tr> <td>IMDG Subrisk</td><td></td></tr> </table>	IMDG Class	3	IMDG Subrisk			
IMDG Class	3						
IMDG Subrisk							
Special precautions for user	<table> <tr> <td>EMS Number</td><td>F-E,S-E</td></tr> <tr> <td>Special provisions</td><td>163</td></tr> <tr> <td>Limited Quantities</td><td>5 L</td></tr> </table>	EMS Number	F-E,S-E	Special provisions	163	Limited Quantities	5 L
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
HSR002662	Surface Coatings and Colourants (Flammable) Group Standard 2006

hexamethylene diisocyanate polymer(28182-81-2) is found on the following regulatory lists	"New Zealand Inventory of Chemicals (NZIoC)", "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)"
methyl ethyl ketone(78-93-3) 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", "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 - 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", "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", "OSPAR National List of Candidates for Substitution - Norway"
aromatic hydrocarbon solvent(64742-95-6.) is found on the following regulatory lists	"New Zealand Inventory of Chemicals (NZIoC)", "OECD List of High Production Volume (HPV) Chemicals", "International Chemical Secretariat (ChemSec) SIN List (*Substitute It Now!)", "International Council of Chemical Associations (ICCA) - High Production Volume List", "New Zealand Land Transport Rule; Dangerous Goods 2005 - Schedule 2 Dangerous Goods in Limited Quantities and Consumer Commodities", "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"
n-butyl acetate(123-86-4) is found on the following regulatory lists	"New Zealand Inventory of Chemicals (NZIoC)", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Dangerous Goods", "International Council of Chemical Associations (ICCA) - High Production Volume List", "International Fragrance Association (IFRA) Survey: Transparency List", "FisherTransport Information", "Sigma-AldrichTransport Information", "Acros Transport Information", "New Zealand

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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 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", "IOFI Global Reference List of Chemically Defined Substances", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Chemicals (single components)", "OSPAR National List of Candidates for Substitution – Norway"

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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