

Reactamine Joint Seal Part A

ALTEX COATINGS LTD

Chemwatch: 9-47313

Version No: 1.2

Safety Data Sheet according to HSNO Regulations

Chemwatch Hazard Alert Code: 4

Issue Date: 05/02/2014

Print Date: 05/02/2014

S.GHS.NZLEN

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

Product Identifier

Product name	Reactamine Joint Seal Part A
Chemical Name	Not Applicable
Synonyms	Not Available
Proper shipping name	TOXIC BY INHALATION LIQUID, N.O.S. with an LC50 lower than or equal to 1000 ml/m3 and saturated vapour concentration greater than or equal to 10 LC50
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.
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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]	Acute Toxicity (Inhalation) Category 2, Skin Corrosion/Irritation Category 2, Respiratory Sensitizer Category 1, Skin Sensitizer Category 1, STOT - RE Category 1
Legend:	1. Classified by Chemwatch; 2. Classification drawn from CCID EPA NZ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI
Determined by Chemwatch using GHS/HSNO criteria	6.1B (inhalation), 6.3A, 6.5A (respiratory), 6.5B (contact), 6.9A (inhalation)

Label elements

GHS label elements	
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SIGNAL WORD	DANGER
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Reactamine Joint Seal Part A

Hazard statement(s)

H330	Fatal if inhaled
H315	Causes skin irritation
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H317	May cause an allergic skin reaction
H372	Causes damage to organs through prolonged or repeated exposure

Precautionary statement(s): Prevention

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	[In case of inadequate ventilation] wear respiratory protection.
P270	Do not eat, drink or smoke when using this product.
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.
P310	Immediately call a POISON CENTER/doctor/physician/first aider
P320	Specific treatment is urgent (see advice on this label).
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER/doctor/physician/first aider
P302+P352	IF ON SKIN: Wash with plenty of water and soap
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.

Precautionary statement(s): Storage

P403+P233	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
101-68-8	<=30	4,4'-diphenylmethane diisocyanate (MDI)
25686-28-6		MDI homopolymer
Not Available	3	modified MDI
Not Available	0	carbonic ester

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"> ▶ Immediately hold eyelids apart and flush the eye continuously with running water. ▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. ▶ Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. ▶ Transport to hospital or doctor without delay. ▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	<p>If skin contact occurs:</p> <ul style="list-style-type: none"> ▶ Immediately remove all contaminated clothing, including footwear. ▶ Flush skin and hair with running water (and soap if available). ▶ Seek medical attention in event of irritation.
Inhalation	<ul style="list-style-type: none"> ▶ If fumes or combustion products are inhaled remove from contaminated area. ▶ Lay patient down. Keep warm and rested. ▶ 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, without delay.

Continued..

Reactamine Joint Seal Part A

	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.
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.

Indication of any immediate medical attention and special treatment needed

	<p>For sub-chronic and chronic exposures to isocyanates:</p> <ul style="list-style-type: none"> ▶ 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. <p style="text-align: right;">[Ellenhorn and Barceloux; Medical Toxicology]</p> <p>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.</p> <p>[Karol & Jin, Frontiers in Molecular Toxicology, pp 56-61, 1992]</p> <p>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.</p>
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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	▶ Combustible.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Minor Spills	▶ Remove all ignition sources.
Major Spills	For isocyanate spills of less than 40 litres (2 m2):
	Personal Protective Equipment advice is contained in Section 8 of the MSDS.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Safe handling	▶ DO NOT
Other information	▶ Store in original containers.

Conditions for safe storage, including any incompatibilities

Suitable container	▶ Lined metal can, lined metal pail/ can.
Storage incompatibility	▶ Avoid reaction with water, alcohols and detergent solutions.

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
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Reactamine Joint Seal Part A


New Zealand Workplace Exposure Standards (WES)	4,4'-diphenylmethane diisocyanate (MDI)	Isocyanates, all, (as -NCO)	0.02 (mg/m ³)	0.07 (mg/m ³)	Not Available	Sensitiser; These values apply to all isocyanates, including prepolymers, present in the workplace air as vapours, mist or dust.
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EMERGENCY LIMITS

Ingredient	TEEL-0	TEEL-1	TEEL-2	TEEL-3
4,4'-diphenylmethane diisocyanate (MDI)	0.05 / 5(ppm)	0.2 / 15(ppm)	2 / 25(ppm)	25 / 125(ppm)

Ingredient	Original IDLH	Revised IDLH
4,4'-diphenylmethane diisocyanate (MDI)	100(mgm3)	75(mgm3)

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	NOTE:
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: Reactamine Joint Seal Part A 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	A-AUS P2	-	A-PAPR-AUS / Class 1 P2
up to 50 x ES	-	A-AUS / Class 1 P2	-
up to 100 x ES	-	A-2 P2	A-PAPR-2 P2 ^

^ - Full-face

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

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Not Available		
Physical state	Liquid	Relative density (Water = 1)	1.1
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)	300-314	Molecular weight (g/mol)	Not Available
Flash point (°C)	Not Available	Taste	Not Available
Evaporation rate	>1	Explosive properties	Not Available

Reactamine Joint Seal Part A

Flammability	Not Available	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water (g/L)	Not Available	pH as a solution(1%)	Not Available
Vapour density (Air = 1)	> 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	Inhalation of aerosols (mists, fumes), generated by the material during the course of normal handling, may produce toxic effects; these may be fatal.
Ingestion	The material is not thought to produce adverse health effects following ingestion (as classified by EC Directives using animal models).
Skin Contact	Skin contact is not thought to produce harmful health effects (as classified under EC Directives using animal models).
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.

Reactamine Joint Seal Part A	TOXICITY	Not Available	IRRITATION	Not Available
	TOXICITY		IRRITATION	
4,4'-diphenylmethane diisocyanate (MDI)	Dermal (rabbit) LD50: >6200 mg/kg *		[* = Bayer CCINFO 2133615]	
	Inhalation (Rat) LC50: 178 mg/m3		Dermal Sensitiser *	
	Oral (mouse) LD50: 2200 mg/kg		Respiratory Sensitiser (g.pig) *	
	Oral (Rat) LD50: 9200 mg/kg		Skin (rabbit): 500 mg /24 hours	
	Not Available		Not Available	
MDI homopolymer	TOXICITY	Not Available	IRRITATION	Not Available
	TOXICITY		IRRITATION	

4,4'-DIPHENYLMETHANE DIISOCYANATE (MDI)	Inhalation (human) TClO: 0.13 ppm/30 mins Eye (rabbit): 0.10 mg moderate
MDI HOMOPOLYMER	as polymethylene polyphenyl isocyanate
Reactamine Joint Seal Part A, 4,4'-DIPHENYLMETHANE DIISOCYANATE (MDI), MDI HOMOPOLYMER	The following information refers to contact allergens as a group and may not be specific to this product.

Acute Toxicity	Acute Toxicity (Inhalation) Category 2	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 1
Mutagenicity	Not Applicable	Aspiration Hazard	Not Applicable

CMR STATUS

SECTION 12 ECOLOGICAL INFORMATION

Reactamine Joint Seal Part A

Toxicity**DO NOT****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	2XE

Land transport (UN)

UN number	3382
Packing group	I
UN proper shipping name	TOXIC BY INHALATION LIQUID, N.O.S. with an LC50 lower than or equal to 1000 ml/m3 and saturated vapour concentration greater than or equal to 10 LC50
Environmental hazard	No relevant data
Transport hazard class(es)	Class : 6.1 Subrisk :
Special precautions for user	Special provisions : 274 limited quantity : 0

Air transport (ICAO-IATA / DGR)

UN number	3382
Packing group	I
UN proper shipping name	Toxic by inhalation liquid, n.o.s. * with an inhalation toxicity ≤ 1000 mL/m3 and saturated vapour concentration ≥ 10 LC50
Environmental hazard	No relevant data
Transport hazard class(es)	ICAO/IATA Class : 6.1 ICAO / IATA Subrisk : ERG Code : 6L
Special precautions for user	Special provisions : Cargo Only Packing Instructions : Forbidden Cargo Only Maximum Qty / Pack : Forbidden Passenger and Cargo Packing Instructions : Forbidden Passenger and Cargo Maximum Qty / Pack : Forbidden Passenger and Cargo Limited Quantity Packing Instructions : Forbidden

Reactamine Joint Seal Part A

Passenger and Cargo Maximum Qty / Pack		Forbidden
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Sea transport (IMDG-Code / GGVSee)

UN number	3382
Packing group	I
UN proper shipping name	TOXIC BY INHALATION LIQUID, N.O.S. with an inhalation toxicity lower than or equal to 1000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC50
Environmental hazard	No relevant data
Transport hazard class(es)	IMDG Class : 6.1
	IMDG Subrisk :
Special precautions for user	EMS Number : F-A,S-A
	Special provisions : 274
	Limited Quantities : 0

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
HSR002675	Surface Coatings and Colourants (Toxic [6.1]) Group Standard 2006

4,4'-diphenylmethane diisocyanate (MDI)(101-68-8) is found on the following regulatory lists	"New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals","New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data","New Zealand Hazardous Substances and New Organisms (HSNO) Act - Chemicals (single components)","GESAMP/EHS Composite List - GESAMP Hazard Profiles","International Air Transport Association (IATA) Dangerous Goods Regulations","IMO IBC Code Chapter 17: Summary of minimum requirements","New Zealand Inventory of Chemicals (NZIoC)","International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs","Sigma-AldrichTransport Information","FisherTransport Information","OECD List of High Production Volume (HPV) Chemicals","IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk","New Zealand Workplace Exposure Standards (WES)"
MDI homopolymer(25686-28-6) is found on the following regulatory lists	"New Zealand Inventory of Chemicals (NZIoC)"

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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Reactamine Joint Seal VG Part B

ALTEX COATINGS LTD

Chemwatch: 9-47320
Version No: 2.8
Safety Data Sheet according to HSNO Regulations

Chemwatch Hazard Alert Code: 3

Issue Date: 05/02/2014
Print Date: 05/02/2014
S.GHS.NZL.EN

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

Product Identifier

Product name	Reactamine Joint Seal VG Part B
Chemical Name	Not Applicable
Synonyms	Not Available
Proper shipping name	Not Applicable
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.
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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

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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]	Skin Corrosion/Irritation Category 2, Serious Eye Damage Category 1, Skin Sensitizer Category 1, 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	6.3A, 6.5B (contact), 8.3A, 9.1D

Label elements

GHS label elements	
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SIGNAL WORD	DANGER
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Hazard statement(s)

Reactamine Joint Seal VG Part B

H315	Causes skin irritation
H318	Causes serious eye damage
H317	May cause an allergic skin reaction
H402	Harmful to aquatic life

Precautionary statement(s): Prevention

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.
P272	Contaminated work clothing should not be allowed out of the workplace.

Precautionary statement(s): Response

P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes.
P310	Immediately call a POISON CENTER/doctor/physician/first aider
P321	Specific treatment (see advice on this label).
P302+P352	IF ON SKIN: Wash with plenty of water and soap
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.

Precautionary statement(s): Storage

Not Applicable

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
106264-79-3	20	di-(methylthio)toluenediamine
694-83-7	5	1,2-cyclohexanediamine
8001-79-4		castor oil
9082-00-2	NotSpec.	polyethylene/ polypropylene glycol glyceryl ether
7631-86-9	NotSpec.	silica amorphous

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"> ▶ Immediately hold eyelids apart and flush the eye continuously with running water. ▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. ▶ Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. ▶ Transport to hospital or doctor without delay. ▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	<p>If skin contact occurs:</p> <ul style="list-style-type: none"> ▶ Immediately remove all contaminated clothing, including footwear. ▶ Flush skin and hair with running water (and soap if available). ▶ Seek medical attention in event of irritation.
Inhalation	<ul style="list-style-type: none"> ▶ If fumes, aerosols or combustion products are inhaled remove from contaminated area. ▶ Other measures are usually unnecessary.
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.

Indication of any immediate medical attention and special treatment needed

	Treat symptomatically.
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SECTION 5 FIREFIGHTING MEASURES

Extinguishing media

Reactamine Joint Seal VG Part B

► 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

► Combustible.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Minor Spills

► Remove all ignition sources.

Major Spills

Moderate hazard.

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

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Safe handling

► Avoid all personal contact, including inhalation.

Other information

► Store in original containers.

Conditions for safe storage, including any incompatibilities

Suitable container

► Metal can or drum

Storage incompatibility

► Many arylamines (aromatic amines such as aniline, N-ethylaniline, o-toluidine, xylydine etc. and their mixtures) are hypergolic (ignite spontaneously) with red fuming nitric acid.

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 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 / Silica Amorphous, Diatomaceous earth (not calcined)	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

EMERGENCY LIMITS

Ingredient	TEEL-0	TEEL-1	TEEL-2	TEEL-3
castor oil	40(ppm)	125(ppm)	500(ppm)	500(ppm)
polyethylene/ polypropylene glycol glyceryl ether	40(ppm)	125(ppm)	500(ppm)	500(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)

Ingredient	Original IDLH	Revised IDLH
silica amorphous	N.E. (mgm3) N.E. (ppm)	3,000 (mgm3)

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



Reactamine Joint Seal VG Part B

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:
Reactamine Joint Seal VG 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 10 x ES	AK-AUS P2	-	AK-PAPR-AUS / Class 1 P2
up to 50 x ES	-	AK-AUS / Class 1 P2	-
up to 100 x ES	-	AK-2 P2	AK-PAPR-2 P2 ^

^ - Full-face

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

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Dark/Brown Colour with Ammonia-Like Odour		
Physical state	Liquid	Relative density (Water = 1)	1.06
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)	313	Molecular weight (g/mol)	Not Available
Flash point (°C)	Not Available	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)	Not Available
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 adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models).
Ingestion	Ingestion of amine epoxy-curing agents (hardeners) may cause severe abdominal pain, nausea, vomiting or diarrhoea.
Skin Contact	The liquid may be miscible with fats or oils and may degrease the skin, producing a skin reaction described as non-allergic contact dermatitis.
Eye	When applied to the eye(s) of animals, the material produces severe ocular lesions which are present twenty-four hours or more after instillation.
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.

	TOXICITY	IRRITATION
Reactamine Joint Seal VG Part B	Not Available	Not Available
di-(methylthio)toluenediamine	Dermal (rabbit) LD50: >2000 mg/kg Oral (rat) LD50: 1515 mg/kg * Not Available	** [Abermarle Corp.] Not Available
1,2-cyclohexanediamine	Oral (rat) LD50: 1000 mg/kg Not Available	Skin (rabbit): 500 mg/24h mod. Not Available
castor oil	Not Available	Eye (rabbit): 500 mg mild Skin (human): 50 mg/48h mild Skin (rabbit): 100 mg/24h SEVERE Not Available
polyethylene/ polypropylene glycol glyceryl ether	Not Available	Not Available
silica amorphous	Dermal (rabbit) LD50: >5000 mg/kg * Inhalation (rat) LC50: >0.139 mg/l/14h * Oral (rat) LD50: 3160 mg/kg Not Available	* [Grace] Eye (rabbit): non-irritating * Skin (rabbit): non-irritating * Not Available

CASTOR OIL	The material may be irritating to the eye, with prolonged contact causing inflammation. Some tumorigenic effects have been reported in animal studies
POLYETHYLENE/ POLYPROPYLENE GLYCOL GLYCERYL ETHER	No significant acute toxicological data identified in literature search.
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.
Reactamine Joint Seal VG Part B, DI-(METHYLTHIO)TOLUENEDIAMINE, 1,2-CYCLOHEXANEDIAMINE	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	Not Applicable
Serious Eye Damage/Irritation	Serious Eye Damage Category 1	STOT - Single Exposure	Not Applicable
Respiratory or Skin sensitisation	Skin Sensitizer Category 1	STOT - Repeated Exposure	Not Applicable
Mutagenicity	Not Applicable	Aspiration Hazard	Not Applicable

CMR STATUS

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	
	Not Applicable

Land transport (UN): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

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
HSR002670	Surface Coatings and Colourants (Subsidiary Hazard) Group Standard 2006

<p>di-(methylthio)toluenediamine(106264-79-3) is found on the following regulatory lists</p>	<p>"New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Chemicals (single components)", "New Zealand Inventory of Chemicals (NZIoC)", "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)", "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) - Substance Index"</p>
<p>1,2-cyclohexanediamine(694-83-7) is found on the following regulatory lists</p>	<p>"New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Chemicals (single components)", "New Zealand Inventory of Chemicals (NZIoC)", "Sigma-AldrichTransport Information", "Acros Transport Information", "OECD List of High Production Volume (HPV) Chemicals", "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 Air Transport Association (IATA) Dangerous Goods Regulations", "International Maritime Dangerous Goods Requirements (IMDG Code) - Substance Index", "FisherTransport Information"</p>
<p>castor oil(8001-79-4) is found on the following regulatory lists</p>	<p>"IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "IMO IBC Code Chapter 17: Summary of minimum requirements", "New Zealand Inventory of Chemicals (NZIoC)", "OSPAR National List of Candidates for Substitution – Norway", "Sigma-AldrichTransport Information", "Acros Transport Information", "International Fragrance Association (IFRA) Survey: Transparency List", "IOFI Global Reference List of Natural Complex Substances/Natural Flavouring Complexes", "International Numbering System for Food Additives", "OECD List of High Production Volume (HPV) Chemicals"</p>
<p>polyethylene/ polypropylene glycol glyceryl ether(9082-00-2) is found on the following regulatory lists</p>	<p>"New Zealand Inventory of Chemicals (NZIoC)", "OSPAR National List of Candidates for Substitution – United Kingdom", "Sigma-AldrichTransport Information", "OECD List of High Production Volume (HPV) Chemicals", "OSPAR National List of Candidates for Substitution – Norway"</p>

Reactamine Joint Seal VG Part B

silica amorphous(7631-86-9) is found on the following regulatory lists

"New Zealand Workplace Exposure Standards (WES)", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "New Zealand Inventory of Chemicals (NZIoC)", "International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs", "Sigma-Aldrich Transport Information", "Acros Transport Information", "Fisher Transport Information", "International Fragrance Association (IFRA) Survey: Transparency List", "International Council of Chemical Associations (ICCA) - High Production Volume List", "International Numbering System for Food Additives", "CODEX General Standard for Food Additives (GSFA) - Additives Permitted for Use in Food in General, Unless Otherwise Specified, in Accordance with GMP", "OECD List of High Production Volume (HPV) Chemicals", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Chemicals (single components)"

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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