

# 630023 Rain-X Shower Door Water Repellent Griffiths Equipment Limited

Chemwatch: **5420-49** Version No: **2.1.1.1** Safety Data Sheet according to HSNO Regulations Chemwatch Hazard Alert Code: 3

Issue Date: 24/08/2020 Print Date: 25/08/2020 S.GHS.NZL.EN

### SECTION 1 Identification of the substance / mixture and of the company / undertaking

#### **Product Identifier**

Product name	630023 Rain-X Shower Door Water Repellent
Synonyms	630023; Product Code: 35007
Proper shipping name	ALCOHOLS, N.O.S. (contains ethanol)
Other means of identification	Not Available

# 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	Griffiths Equipment Limited	BWI
Address	19 Bell Ave, Mount Wellington Auckland 1060 New Zealand	1500 Ferntree Gully Road VIC 3180 Australia
Telephone	+64 9 525 4575	+61397306000
Fax	Not Available	Not Available
Website	www.griffithsequipment.co.nz	Not Available
Email	sales@griffithsequipment.co.nz	info@brownwatson.com.au

#### Emergency telephone number

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Association / Organisation	NZ NATIONAL POISONS CENTRE
Emergency telephone numbers	0800 POISON or 0800 764-766
Other emergency telephone numbers	International: +64 3 479-7227

### **SECTION 2 Hazards identification**

#### Classification of the substance or mixture

Classification <sup>[1]</sup>	Flammable Liquid Category 2, Acute Toxicity (Oral) Category 5, Skin Corrosion/Irritation Category 3, Eye Irritation Category 2, Specific target organ toxicity - single exposure Category 3 (respiratory tract irritation)
Legend:	1. Classified by Chemwatch; 2. Classification drawn from CCID EPA NZ; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI
Determined by Chemwatch using GHS/HSNO criteria	3.1B, 6.1E (oral), 6.1E (respiratory), 6.3B, 6.4A

### Label elements

Hazard pictogram(s)	
Signal word	Danger

Hazard	sta	teme	ent	(s)	ļ
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H225	Highly flammable liquid and vapour.
H303	May be harmful if swallowed.

H316	Causes mild skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

### Precautionary statement(s) Prevention

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P271	Use only outdoors or in a well-ventilated area.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting/intrinsically safe equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P261	Avoid breathing mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

# Precautionary statement(s) Response

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P312	Call a POISON CENTER/doctor/physician/first aider/if you feel unwell.
P370+P378	In case of fire: Use alcohol resistant foam or normal protein foam to extinguish.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.

# Precautionary statement(s) Storage

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

### Precautionary statement(s) Disposal

Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

# **SECTION 3 Composition / information on ingredients**

P501

#### Substances

See section below for composition of Mixtures

# Mixtures

CAS No	%[weight]	Name
64-17-5	30-60	ethanol
67-64-1	10-30	acetone
67-63-0	10-30	isopropanol

### **SECTION 4 First aid measures**

# Description of first aid measures

Eye Contact	<ul> <li>If this product comes in contact with the eyes:</li> <li>Wash out immediately with fresh running water.</li> <li>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.</li> <li>Seek medical attention without delay; if pain persists or recurs seek medical attention.</li> <li>Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>
Skin Contact	<ul> <li>If skin contact occurs:</li> <li>Immediately remove all contaminated clothing, including footwear.</li> <li>Flush skin and hair with running water (and soap if available).</li> <li>Seek medical attention in event of irritation.</li> </ul>
Inhalation	<ul> <li>If fumes or combustion products are inhaled remove from contaminated area.</li> <li>Lay patient down. Keep warm and rested.</li> <li>Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li> <li>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.</li> <li>Transport to hospital, or doctor, without delay.</li> </ul>
Ingestion	<ul> <li>If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus.</li> <li>If swallowed do NOT induce vomiting.</li> <li>If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.</li> <li>Observe the patient carefully.</li> <li>Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.</li> <li>Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.</li> <li>Seek medical advice.</li> </ul>

Continued...

### 630023 Rain-X Shower Door Water Repellent

### 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 acute or short term repeated exposures to ethanol:

- + Acute ingestion in non-tolerant patients usually responds to supportive care with special attention to prevention of aspiration, replacement of fluid and correction of nutritional deficiencies (magnesium, thiamine pyridoxine, Vitamins C and K).
- Give 50% dextrose (50-100 ml) IV to obtunded patients following blood draw for glucose determination.
- Comatose patients should be treated with initial attention to airway, breathing, circulation and drugs of immediate importance (glucose, thiamine).
- Decontamination is probably unnecessary more than 1 hour after a single observed ingestion. Cathartics and charcoal may be given but are probably not effective in single ingestions.
- Fructose administration is contra-indicated due to side effects.

### **SECTION 5 Firefighting measures**

# Extinguishing media

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

Water spray or fog - Large fires only.

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pecial 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	<ul> <li>Alert Fire Brigade and tell them location and nature of hazard.</li> <li>May be violently or explosively reactive.</li> <li>Wear breathing apparatus plus protective gloves in the event of a fire.</li> <li>Prevent, by any means available, spillage from entering drains or water course.</li> <li>Consider evacuation (or protect in place).</li> <li>Fight fire from a safe distance, with adequate cover.</li> <li>If safe, switch off electrical equipment until vapour fire hazard removed.</li> <li>Use water delivered as a fine spray to control the fire and cool adjacent area.</li> <li>Avoid spraying water onto liquid pools.</li> <li>Do not approach containers suspected to be hot.</li> <li>Cool fire exposed containers with water spray from a protected location.</li> <li>If safe to do so, remove containers from path of fire.</li> </ul>			
Fire/Explosion Hazard	<ul> <li>Liquid and vapour are highly flammable.</li> <li>Severe fire hazard when exposed to heat, flame and/or oxidisers.</li> <li>Vapour may travel a considerable distance to source of ignition.</li> <li>Heating may cause expansion or decomposition leading to violent rupture of containers.</li> <li>On combustion, may emit toxic fumes of carbon monoxide (CO).</li> <li>Combustion products include:</li> <li>carbon dioxide (CO2)</li> <li>other pyrolysis products typical of burning organic material.</li> <li>WARNING: Long standing in contact with air and light may result in the formation of potentially explosive peroxides.</li> </ul>			

### **SECTION 6 Accidental release measures**

#### Personal precautions, protective equipment and emergency procedures

See section 8

#### **Environmental precautions**

See section 12

### Methods and material for containment and cleaning up

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Minor Spills	<ul> <li>Remove all ignition sources.</li> <li>Clean up all spills immediately.</li> <li>Avoid breathing vapours and contact with skin and eyes.</li> <li>Control personal contact with the substance, by using protective equipment.</li> <li>Contain and absorb small quantities with vermiculite or other absorbent material.</li> <li>Wipe up.</li> <li>Collect residues in a flammable waste container.</li> </ul>
Major Spills	<ul> <li>Clear area of personnel and move upwind.</li> <li>Alert Fire Brigade and tell them location and nature of hazard.</li> <li>May be violently or explosively reactive.</li> <li>Wear breathing apparatus plus protective gloves.</li> <li>Prevent, by any means available, spillage from entering drains or water course.</li> <li>Consider evacuation (or protect in place).</li> <li>No smoking, naked lights or ignition sources.</li> <li>Increase ventilation.</li> <li>Stop leak if safe to do so.</li> <li>Water spray or fog may be used to disperse /absorb vapour.</li> <li>Contain spill with sand, earth or vermiculite.</li> <li>Use only spark-free shovels and explosion proof equipment.</li> <li>Collect recoverable product into labelled containers for recycling.</li> <li>Absorb remaining product with sand, earth or vermiculite.</li> <li>Collect solid residues and seal in labelled drums for disposal.</li> </ul>

Wash area and prevent runoff into drains.
 If contamination of drains or waterways occurs, advise emergency services.

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

# **SECTION 7 Handling and storage**

recautions for safe handling	
Safe handling	<ul> <li>DO NOT allow clothing wet with material to stay in contact with skin</li> <li>Avoid all personal contact, including inhalation.</li> <li>Wear protective clothing when risk of exposure occurs.</li> <li>Use in a well-ventilated area.</li> <li>Prevent concentration in hollows and sumps.</li> <li>DO NOT enter confined spaces until atmosphere has been checked.</li> <li>Avoid smoking, naked lights, heat or ignition sources.</li> <li>When handling, DO NOT eat, drink or smoke.</li> <li>Vapour may ignite on pumping or pouring due to static electricity.</li> <li>DO NOT use plastic buckets.</li> <li>Earth and secure metal containers when dispensing or pouring product.</li> <li>Use spark-free tools when handling.</li> <li>Avoid contact with incompatible materials.</li> <li>Keep containers securely sealed.</li> <li>Avoid physical damage to containers.</li> <li>Always wash hands with soap and water after handling.</li> <li>Work clothes should be laundered separately.</li> <li>Use good occupational work practice.</li> <li>Observe manufacturer's storage and handling recommendations contained within this SDS.</li> <li>Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions.</li> </ul>
Other information	<ul> <li>Store in original containers in approved flame-proof area.</li> <li>No smoking, naked lights, heat or ignition sources.</li> <li>DO NOT store in pits, depressions, basements or areas where vapours may be trapped.</li> <li>Keep containers securely sealed.</li> <li>Store away from incompatible materials in a cool, dry well ventilated area.</li> <li>Protect containers against physical damage and check regularly for leaks.</li> <li>Observe manufacturer's storage and handling recommendations contained within this SDS.</li> </ul>

### Conditions for safe storage, including any incompatibilities

Suitable container	<ul> <li>For low viscosity materials (i) : Drums and jerry cans must be of the non-removable head type. (ii) : Where a can is to be used as an inner package, the can must have a screwed enclosure.</li> <li>For materials with a viscosity of at least 2680 cSt. (23 deg. C)</li> <li>For manufactured product having a viscosity of at least 250 cSt. (23 deg. C)</li> <li>Manufactured product thar requires stirring before use and having a viscosity of at least 20 cSt (25 deg. C): (i) Removable head packaging; (ii) Cans with friction closures and (iii) low pressure tubes and cartridges may be used.</li> <li>Where combination packages are used, and the inner packages are of glass, there must be sufficient inert cushioning material in contact with inner and outer packages</li> <li>In addition, where inner packagings are glass and contain liquids of packing group I there must be sufficient inert absorbent to absorb any spillage, unless the outer packaging is a close fitting moulded plastic box and the substances are not incompatible with the plastic.</li> <li>Polyethylene or polypropylene container.</li> <li>Packing as recommended by manufacturer.</li> <li>Check all containers are clearly labelled and free from leaks.</li> </ul>
Storage incompatibility	<ul> <li>Avoid reaction with oxidising agents, bases and strong reducing agents.</li> <li>Avoid strong acids, acid chlorides, acid anhydrides and chloroformates.</li> </ul>

# **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)	ethanol	Ethyl alcohol (Ethanol)	1000 ppm / 1880 mg/m3	Not Available	Not Available	Not Available
New Zealand Workplace Exposure Standards (WES)	acetone	Acetone	500 ppm / 1185 mg/m3	2375 mg/m3 / 1000 ppm	Not Available	bio-Exposure can also be estimated by biological monitoring.
New Zealand Workplace Exposure Standards (WES)	isopropanol	Isopropyl alcohol	400 ppm / 983 mg/m3	1230 mg/m3 / 500 ppm	Not Available	Not Available

Emergency Limits

Ingredient	Material name	TEEL-1		TEEL-2	TEEL-3		
ethanol	Ethanol: (Ethyl alcohol)	Not Available	Not Available		15000* ppm		
acetone	Acetone	Not Available	Not Available		Not Available		
isopropanol	Isopropyl alcohol	400 ppm		2000* ppm	12000** ppm		
Ingredient	Original IDLH		Revise	d IDLH			
ethanol	3,300 ppm	3,300 ppm			Not Available		
acetone	2,500 ppm	2,500 ppm			Not Available		
isopropanol	2,000 ppm	2,000 ppm			Not Available		

be highly effective in protecting workers and will typically be in The basic types of engineering controls are: Process controls which involve changing the way a job activit Enclosure and/or isolation of emission source which keeps a "adds" and "removes" air in the work environment. Ventilation ventilation system must match the particular process and che Employers may need to use multiple types of controls to prev For flammable liquids and flammable gases, local exhaust ve equipment should be explosion-resistant. Air contaminants generated in the workplace possess varying circulating air required to effectively remove the contaminant. Type of Contaminant: solvent, vapours, degreasing etc., evaporating from tank (ir	selected hazard "physically" away from the worker and ventilation can remove or dilute an air contaminant if designed properly. Th mical or contaminant in use. ent employee overexposure. ntilation or a process enclosure ventilation system may be require "escape" velocities which, in turn, determine the "capture velocit	n that strategically e design of a ed. Ventilation	
equipment should be explosion-resistant. Air contaminants generated in the workplace possess varying circulating air required to effectively remove the contaminant. Type of Contaminant: solvent, vapours, degreasing etc., evaporating from tank (ir aerosols, fumes from pouring operations, intermittent conta	"escape" velocities which, in turn, determine the "capture velocit		
Type of Contaminant: solvent, vapours, degreasing etc., evaporating from tank (ir aerosols, fumes from pouring operations, intermittent conta			
solvent, vapours, degreasing etc., evaporating from tank (ir aerosols, fumes from pouring operations, intermittent conta		Air Speed:	
	i still air).	0.25-0.5 m/s (50-100 f/min.)	
	iner filling, low speed conveyer transfers, welding, spray drift, ne of active generation)	0.5-1 m/s (100-200 f/min.)	
direct spray, spray painting in shallow booths, drum filling, o generation into zone of rapid air motion)	conveyer loading, crusher dusts, gas discharge (active	1-2.5 m/s (200-500 f/min.)	
Within each range the appropriate value depends on:			
Lower end of the range	Upper end of the range		
1: Room air currents minimal or favourable to capture	1: Disturbing room air currents		
2: Contaminants of low toxicity or of nuisance value only.	2: Contaminants of high toxicity		
3: Intermittent, low production.	3: High production, heavy use		
accordingly, after reference to distance from the contaminatin 1-2 m/s (200-400 f/min.) for extraction of solvents generated in considerations, producing performance deficits within the extr	g source. The air velocity at the extraction fan, for example, shou n a tank 2 meters distant from the extraction point. Other mechar action apparatus, make it essential that theoretical air velocities a	Ild be a minimum of nical	
<ul> <li>Safety glasses with side shields.</li> <li>Chemical goggles.</li> <li>Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or</li> </ul>			
See Hand protection below			
<ul> <li>Elbow length PVC gloves</li> <li>The selection of suitable gloves does not only depend on the manufacturer. Where the chemical is a preparation of several and has therefore to be checked prior to the application. The exact break through time for substances has to be obtair making a final choice.</li> <li>Personal hygiene is a key element of effective hand care. Glowashed and dried thoroughly. Application of a non-perfumed Suitability and durability of glove type is dependent on usage.</li> <li>frequency and duration of contact,</li> <li>chemical resistance of glove material,</li> <li>glove thickness and</li> <li>dexterity</li> <li>Select gloves tested to a relevant standard (e.g. Europe EN 3</li> <li>When prolonged or frequently repeated contact may or 240 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recomm Some glove polymer types are less affected by movem use.</li> <li>Contaminated gloves should be replaced.</li> <li>As defined in ASTM F-739-96 in any application, gloves are in Excellent when breakthrough time &gt; 20 min</li> <li>Fair when breakthrough time &gt; 20 min</li> <li>Fair when glove material degrades</li> <li>For general applications, gloves with a thickness typically gre</li> </ul>	substances, the resistance of the glove material can not be calculed from the manufacturer of the protective gloves and has to be were must only be worn on clean hands. After using gloves, hands moisturiser is recommended. Important factors in the selection of gloves include: 74, US F739, AS/NZS 2161.1 or national equivalent). ccur, a glove with a protection class of 5 or higher (breakthrough to an equivalent) is recommended. tection class of 3 or higher (breakthrough time greater than 60 millended. ent and this should be taken into account when considering glove rated as:	ulated in advance observed when s should be time greater than inutes according to es for long-term	
	<ul> <li>Lower end of the range <ol> <li>Room air currents minimal or favourable to capture</li> <li>Contaminants of low toxicity or of nuisance value only.</li> <li>Intermittent, low production.</li> <li>Large hood or large air mass in motion</li> </ol> </li> <li>Simple theory shows that air velocity falls rapidly with distance with the square of distance from the extraction point (in simple accordingly, after reference to distance from the contaminatin 1-2 m/s (200-400 f/min.) for extraction of solvents generated i considerations, producing performance deficits within the extra factors of 10 or more when extraction systems are installed or</li> <li>Safety glasses with side shields.</li> <li>Chemical goggles.</li> <li>Contact lenses may pose a special hazard; soft contact let the wearing of lenses or restrictions on use, should be readily a remove contact lens as soon as practicable. Lens should a clean environment only after workers have washed har national equivalent]</li> <li>See Hand protection below</li> <li>Elbow length PVC gloves</li> <li>The selection of suitable gloves does not only depend on the manufacturer. Where the chemical is a preparation of several and has therefore to be checked prior to the application. The exact break through time for substances has to be obtain making a final choice.</li> <li>Personal hygiene is a key element of effective hand care. Glo washed and dried thoroughly. Application of a non-perfumed suitability of glove type is dependent on usage.</li> <li>frequency and duration of contact,</li> <li>chemical resistance of glove material,</li> <li>glove thickness and</li> <li>dexterity</li> </ul> Select gloves tested to a relevant standard (e.g. Europe EN 3 <ul> <li>When prolonged or frequently repeated contact may or</li> </ul> 240 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recomm <ul> <li>Some glove polymer types are less affected by movem use.</li> <li>Contaminated gloves should be replaced.</li> <li>As defined in ASTM F-739-96 in a</li></ul>	Lower end of the range       Upper end of the range         1. Room air currents minimal or favourable to capture       1: Disturbing room air currents         2. Contaminants of ligh toxicity       3: High production, heavy use         3. Intermittent, low production.       3: High production, heavy use         4: Large hood or large air mass in motion       4: Small hood-local control only         Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity ger with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be consideritation, apparetus, make it essential that theoretical air velocities is factors of 10 or more when extraction systems are installed or used.         12: m/s (200-400 firmi), for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechan considerations, producing performance deficits within the extraction apparetus, make it essential that theoretical air velocities is factors of 10 or more when extraction systems are installed or used.         • Cornatic lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy docu the removal and suitable equipment should be created for each workplace or task. This should include a review of an adsorption for the cases or the site of the emics in use and an account of liny respretine. Medica and first-aid personnel shou their removal and suitable equipment should be reated for each workplace or task. This should include a review of their removal and suitable equipment should be reated for each workplace or task. This should includu a review of their resigns of eye redhess o	

	efficiency of the glove will be dependent on the exact composition of the glove material. Therefore, glove selection should also be based on consideration of the task requirements and knowledge of breakthrough times. Glove thickness may also vary depending on the glove manufacturer, the glove type and the glove model. Therefore, the manufacturers' technical data should always be taken into account to ensure selection of the most appropriate glove for the task. Note: Depending on the activity being conducted, gloves of varying thickness may be required for specific tasks. For example: Thinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these gloves are only likely to give short duration protection and would normally be just for single use applications, then disposed of. Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there is abrasion or puncture potential Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.
Body protection	See Other protection below
Other protection	<ul> <li>Overalls.</li> <li>PVC Apron.</li> <li>PVC protective suit may be required if exposure severe.</li> <li>Eyewash unit.</li> <li>Ensure there is ready access to a safety shower.</li> </ul>

**Respiratory protection** 

#### Recommended material(s)

GLOVE SELECTION INDEX

### Glove selection is based on a modified presentation of the:

"Forsberg Clothing Performance Index".

The effect(s) of the following substance(s) are taken into account in the *computer-generated* selection:

630023 Rain-X Shower Door Water Repellent

Material	CPI
PE/EVAL/PE	А
BUTYL	С
BUTYL/NEOPRENE	С
CPE	С
HYPALON	С
NAT+NEOPR+NITRILE	С
NATURAL RUBBER	С
NATURAL+NEOPRENE	С
NEOPRENE	С
NITRILE	С
NITRILE+PVC	С
PVA	С
PVC	С
PVDC/PE/PVDC	С
SARANEX-23	С
SARANEX-23 2-PLY	С
TEFLON	С
VITON/NEOPRENE	С

\* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

C: Poor to Dangerous Choice for other than short term immersion

**NOTE:** As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

\* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

### **SECTION 9** Physical and chemical properties

Information on basic physical and chemical properties

#### Appearance Clear colourless liquid; mixes with water. Relative density (Water = 1) 0.810-0.812 Physical state Liauid Partition coefficient n-octanol Odour Not Available Not Available / water Odour threshold Not Available Auto-ignition temperature (°C) Not Available pH (as supplied) 1.5-2.5 Decomposition temperature Not Available Melting point / freezing point Not Available Viscosity (cSt) Not Available (°C) Initial boiling point and boiling Not Available Molecular weight (g/mol) Not Applicable range (°C)

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

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required. Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	Air-line*	AX-2	AX-PAPR-2 ^
up to 20 x ES	-	AX-3	-
20+ 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)

- Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content.
- The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.
- Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used

Flash point (°C)	-3 (CC)	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	HIGHLY FLAMMABLE.	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	Miscible	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available

# **SECTION 10 Stability and reactivity**

Reactivity	See section 7
Chemical stability	<ul> <li>Unstable in the presence of incompatible materials.</li> <li>Product is considered stable.</li> <li>Hazardous polymerisation will not occur.</li> </ul>
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

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Inhaled	The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by sleepiness, reduced alertness, loss of reflexes, lack of co-ordination, and vertigo. Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may be damaging to the health of the individual. Animal testing shows that the most common signs of inhalation overdose is inco-ordination and drowsiness. Aliphatic alcohols with more than 3-carbons cause headache, dizziness, drowsiness, muscle weakness and delirium, central depression, coma, seizures and behavioural changes. Secondary respiratory depression and failure, as well as low blood pressure and irregular heart rhythms, may follow. Inhalation of high concentrations of gas/vapour causes lung irritation with coughing and nausea, central nervous depression with headache and dizziness, slowing of reflexes, fatigue and inco-ordination.		
	Overexposure to non-rin giddiness, confusion, de	lirium and coma.	e individual. These include headache, muscle weakness and inco-ordination, iting, bleeding from the digestive tract, abdominal pain, and diarrhoea.
	<1.5 g/L	Mild: impaired vision, co-ordination and reaction time; emotional instability	
Ingestion	1.5-3.0 g/L	Moderate: Slurred speech, confusion, inco-ordination, emotional instability, disturbances in perception and senses, possible blackouts, and impaired objective performance in standardized tests. Possible double vision, flushing, fast heart rate, sweating and incontinence. Slow breathing may occur rarely and fast breathing may develop in cases of metabolic acidosis, low blood sugar and low blood potassium. Central nervous system depression may progress to coma.	
	3-5 g/L	Severe: cold clammy skin, low body temperature and low blood pressure. Atrial fibrillation and heart block have been reported. Depression of breathing may occur, respiratory failure may follow serious poisoning, choking on vomit may result in lung inflammation and swelling. Convulsions due to severe low blood sugar may also occur. Acute liver inflammation may develop.	
Skin Contact	Skin contact with the material may damage the health of the individual; systemic effects may result following absorption. Most liquid alcohols appear to act as primary skin irritants in humans. Significant percutaneous absorption occurs in rabbits but not apparently in man. Open cuts, abraded or irritated skin should not be exposed to this material Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected. There is some evidence to suggest that this material can cause inflammation of the skin on contact in some persons.		
			Continued

Eye	Direct contact of the eye with ethanol (alcohol) may cause an immediate stinging and burning sensation, with reflex closure of the lid, and a temporary, tearing injury to the cornea together with redness of the conjunctiva. Discomfort may last 2 days but usually the injury heals without treatment. This material can cause eye irritation and damage in some persons.		
Chronic	Long-term exposure to respiratory irritants may result in airways disease, involving difficulty breathing and related whole-body problems. Based on experiments and other information, there is ample evidence to presume that exposure to this material can cause genetic defects that can be inherited. Toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed. This material can cause serious damage if one is exposed to it for long periods. It can be assumed that it contains a substance which can produce severe defects. Ample evidence exists from experimentation that reduced human fertility is directly caused by exposure to the material. Ample evidence exists, from results in experimentation, that developmental disorders are directly caused by human exposure to the material. Based on experience with animal studies, exposure to the material may result in toxic effects to the development of the foetus, at levels which do not cause significant toxic effects to the mother. Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. Prolonged exposure to ethanol may cause damage to the liver and cause scarring. It may also worsen damage caused by other agents. Prolonged or repeated skin contact may cause drying with cracking, irritation and possible dermatitis following.		
630023 Rain-X Shower Door	ΤΟΧΙCΙΤΥ	IRRITATION	
Water Repellent	Not Available	Not Available	
	ΤΟΧΙΟΙΤΥ	IRRITATION	
	1.40 mg/kg <sup>[2]</sup>	Eye (rabbit): 500 mg SEVERE	
	1400 mg/kg <sup>[2]</sup>	Eye (rabbit):100mg/24hr-moderate	
	4070 mg/kg <sup>[2]</sup>	Eye: adverse effect observed (irritating) <sup>[1]</sup>	
	4070 mg/kg <sup>[2]</sup>	Skin (rabbit):20 mg/24hr-moderate	
	5100 mg/kg <sup>[2]</sup>	Skin (rabbit):400 mg (open)-mild	
	6030 mg/kg <sup>[2]</sup>	Skin: no adverse effect observed (not irritating) <sup>[1]</sup>	
	6030 mg/kg <sup>[2]</sup>		
	6080 mg/kg <sup>[2]</sup>		
ethanol	6080 mg/kg <sup>[2]</sup>		
	9200 mg/kg <sup>[2]</sup>		
	9710 mg/kg <sup>[2]</sup>		
	Inhalation (rat) LC50: 0 mg/l/10h <sup>[2]</sup>		
	Inhalation (rat) LC50: 124.7 mg/l/4H <sup>[2]</sup>		
	Inhalation (rat) LC50: 63926.976 mg/l/4h <sup>[2]</sup>		
	mg/kg <sup>[2]</sup>		
	Oral (rat) LD50: =1501 mg/kg <sup>[2]</sup>		
	Oral (rat) LD50: 7060 mg/kg <sup>[2]</sup>		
	TOWNTY		
		IRRITATION Eye (human): 500 ppm - irritant	
	= 1159 fild/kgl <sup>23</sup> 10 mg/kg <sup>[2]</sup>	Eye (rabbit): 20mg/24hr -moderate	
	10 mg/kg <sup>[2]</sup>	Eye (rabbit): 3.95 mg - SEVERE	
	3100 mg/kg <sup>[2]</sup>	Eye: adverse effect observed (irritating) <sup>[1]</sup>	
	4000-8000 mg/kg <sup>[2]</sup>	Skin (rabbit): 500 mg/24hr - mild	
	500 mg/kg <sup>[2]</sup>	Skin (rabbit):395mg (open) - mild	
	5000 mg/kg <sup>[2]</sup>	Skin: no adverse effect observed (not irritating) <sup>[1]</sup>	
acetone	5000 mg/kg <sup>[2]</sup>		
	5600-8000 mg/kg <sup>[2]</sup>		
	8000 mg/kg <sup>[2]</sup>		
	Dermal (rabbit) LD50: 20000 mg/kg <sup>[2]</sup>		
	Inhalation (rat) LC50: 100.2 mg/l/8hr <sup>[2]</sup>		
	Oral (mouse) LD50: 3000 mg/kg <sup>[2]</sup>		
	Oral (rat) LD50: =5800 mg/kg <sup>[2]</sup>		
	Oral (rat) LD50: =8450 mg/kg <sup>[2]</sup>		
	Oral (rat) LD50: 1800-7300 mg/kg <sup>[2]</sup>		
	ТОХІСІТҮ	IRRITATION	
isopropanol	223 mg/kg <sup>[2]</sup>	Eye (rabbit): 10 mg - moderate	
	Inhalation (rat) LC50: 72.6 mg/l/4h <sup>[2]</sup>	Eye (rabbit): 100 mg - SEVERE	

Continued...

	Oral (dog) LD50: =4828 mg/kg <sup>[2]</sup>	Eye (rabbit): 100mg/24hr-moderate
	Oral (mouse) LD50: =4475 mg/kg <sup>[2]</sup>	Skin (rabbit): 500 mg - mild
	Oral (mouse) LD50: 3600 mg/kg <sup>[2]</sup>	
	Oral (rabbit) LD50: 6410 mg/kg <sup>[2]</sup>	
	Oral (rat) LD50: =4396 mg/kg <sup>[2]</sup>	
	Oral (rat) LD50: =5045 mg/kg <sup>[2]</sup>	
	Oral (rat) LD50: =5338 mg/kg <sup>[2]</sup>	
Legend:	<ol> <li>Value obtained from Europe ECHA Registered Substances - Acute to specified data extracted from RTECS - Register of Toxic Effect of chemic</li> </ol>	•

ACETONE	For acetone: The acute toxicity of acetone is low. Acetone is not a skin irritant or sensitizer, but it removes fat from the skin, and it also irritates the eye. Animal testing shows acetone may cause macrocytic anaemia. Studies in humans have shown that exposure to acetone at a level of 2375 mg/cubic metre has not caused neurobehavioural deficits.		
ISOPROPANOL	Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. On the other hand, industrial bronchitis is a disorder that occurs as a result of exposure due to high concentrations of irritating substance (often particles) and is completely reversible after exposure ceases. The disorder is characterized by difficultly breathing, cough and mucus production. Isopropanol is irritating to the eyes, nose and throat but generally not to the skin. Prolonged high dose exposure may also produce depression of the central nervous system and drowsiness. Few have reported skin irritation. It can be absorbed from the skin or when inhaled. Intentional swallowing is common particularly among alcoholics or suicide victims and also leads to fainting, breathing difficulty, nausea, vomiting and headache. In the absence of unconsciousness, recovery usually occurred. Repeated doses may damage the kidneys. A decrease in the frequency of mating has been found in among animals, and newborns have been found to have a greater incidence of low birth weight. Tumours of the testes have been observed in the male rat. The substance is classified by IARC as Group 3: <b>NOT</b> classifiable as to its car		
ETHANOL & ACETONE & ISOPROPANOL	The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.		
Acute Toxicity	✓ Carcinogenicity ×		
Skin Irritation/Corrosion	✓	Reproductivity	×
Serious Eye Damage/Irritation	✓	STOT - Single Exposure	✓
Respiratory or Skin sensitisation	×	STOT - Repeated Exposure	×
Mutagenicity	×	Aspiration Hazard	×

Legend:

 $\mathbf{X}$  – Data either not available or does not fill the criteria for classification ✔ – Data available to make classification

# **SECTION 12 Ecological information**

#### Toxicity Endpoint Test Duration (hr) Species Value Source 630023 Rain-X Shower Door Not Not Not Water Repellent Not Available Not Available Available Available Available Endpoint Test Duration (hr) Species Value Source LC50 96 Fish 11-mg/L 2 48 Crustacea 2 EC50 >10-mg/L ethanol EC50 96 Algae or other aquatic plants ca.22-mg/L 2 NOEC 168 Algae or other aquatic plants 1-296mg/L 2 Test Duration (hr) Endpoint Species Value Source LC50 96 Fish 5-540mg/L 2 acetone EC50 48 Crustacea 6098.4mg/L 5 2 NOEC 240 Crustacea 1-866mg/L Endpoint Test Duration (hr) Species Value Source LC50 96 Fish 9-640mg/L 2 EC50 48 Crustacea 12500mg/L 5 isopropanol EC50 72 Algae or other aquatic plants >1000mg/L 1 EC0 24 Crustacea 5-102mg/L 2

	NOEC	504	Crustacea		=30mg/L	1
Legend:	V3.12 (QSAR	?) - Aquatic Toxicity Data (Est	Europe ECHA Registered Substances - Ecotoxicological In. timated) 4. US EPA, Ecotox database - Aquatic Toxicity Dat. Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Dat	a 5. ECETOC Aqu		

#### DO NOT discharge into sewer or waterways.

#### Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
ethanol	LOW (Half-life = 2.17 days)	LOW (Half-life = 5.08 days)
acetone	LOW (Half-life = 14 days)	MEDIUM (Half-life = 116.25 days)
isopropanol	LOW (Half-life = 14 days)	LOW (Half-life = 3 days)

#### Bioaccumulative potential

Ingredient	Bioaccumulation
ethanol	LOW (LogKOW = -0.31)
acetone	LOW (BCF = 0.69)
isopropanol	LOW (LogKOW = 0.05)

#### Mobility in soil

Ingredient	Mobility
ethanol	HIGH (KOC = 1)
acetone	HIGH (KOC = 1.981)
isopropanol	HIGH (KOC = 1.06)

### **SECTION 13 Disposal considerations**

#### Waste treatment methods Containers may still present a chemical hazard/ danger when empty. Return to supplier for reuse/ recycling if possible. Otherwise: If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill. Where possible retain label warnings and SDS and observe all notices pertaining to the product. Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked. A Hierarchy of Controls seems to be common - the user should investigate: Reduction Reuse Recycling Disposal (if all else fails) This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been Product / Packaging disposal contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate DO NOT allow wash water from cleaning or process equipment to enter drains It may be necessary to collect all wash water for treatment before disposal. In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first. Where in doubt contact the responsible authority. Recycle wherever possible. Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified. Dispose of by: burial in a land-fill specifically licensed to accept chemical and / or pharmaceutical wastes or Incineration in a licensed apparatus (after admixture with suitable combustible material) Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.

Ensure that the hazardous substance is disposed in accordance with the Hazardous Substances (Disposal) Notice 2017

#### **Disposal Requirements**

Packages that have been in direct contact with the hazardous substance must be only disposed if the hazardous substance was appropriately removed and cleaned out from the package. The package must be disposed according to the manufacturer's directions taking into account the material it is made of. Packages which hazardous content have been appropriately treated and removed may be recycled.

The hazardous substance must only be disposed if it has been treated by a method that changed the characteristics or composition of the substance and it is no longer hazardous. DO NOT deposit the hazardous substance into or onto a landfill or a sewage facility.

Burning the hazardous substance must happen under controlled conditions with no person or place exposed to

(1) a blast overpressure of more than 9 kPa; or

(2) an unsafe level of heat radiation.

The disposed hazardous substance must not come into contact with class 1 or 5 substances.

#### **SECTION 14 Transport information**

Marine Pollutant	NO
HAZCHEM	•3YE

### Land transport (UN)

UN number	1987
UN proper shipping name	ALCOHOLS, N.O.S. (contains ethanol)
Transport hazard class(es)	Class     3       Subrisk     Not Applicable
Packing group	Ш
Environmental hazard	Not Applicable
Special precautions for user	Special provisions     274       Limited quantity     1 L

# Air transport (ICAO-IATA / DGR)

UN number	1987		
UN proper shipping name	Alcohols, n.o.s. * (contains ethanol)		
	ICAO/IATA Class	3	
Transport hazard class(es)	ICAO / IATA Subrisk	Not Applicable	
	ERG Code	3L	
Packing group	11		
Environmental hazard	Not Applicable		
Special precautions for user	Special provisions		A3 A180
	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 Limited Maximum Qty / Pack		1 L

# Sea transport (IMDG-Code / GGVSee)

1987		
ALCOHOLS, N.O.S. (	(contains ethanol)	
IMDG Class 3 IMDG Subrisk N	3 Not Applicable	
П		
Not Applicable		
EMS Number Special provisions Limited Quantities	F-E , S-D 274 1 L	
	1987       ALCOHOLS, N.O.S. I       IMDG Class       IMDG Subrisk       II       Not Applicable       EMS Number       Special provisions	

Transport in bulk according to Annex II of MARPOL and the IBC code Not Applicable

# **SECTION 15 Regulatory information**

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

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

HSR Number	Group Standard
HSR002528	Cleaning Products (Flammable) Group Standard 2017

ethanol is found on the following regulatory lists

New Zealand Approved Hazardous Substances with controls	New Zealand Inventory of Chemicals (NZIoC)
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals	New Zealand Workplace Exposure Standards (WES)
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data	
acetone is found on the following regulatory lists	
New Zealand Approved Hazardous Substances with controls	New Zealand Inventory of Chemicals (NZIoC)
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals	New Zealand Workplace Exposure Standards (WES)
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data	
isopropanol is found on the following regulatory lists	
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs	New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data
New Zealand Approved Hazardous Substances with controls	New Zealand Inventory of Chemicals (NZIoC)
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals	New Zealand Workplace Exposure Standards (WES)

#### **Hazardous Substance Location**

Subject to the Health and Safety at Work (Hazardous Substances) Regulations 2017.

Hazard Class	Quantity (Closed Containers)	Quantity (Open Containers)
3.1B	100 L in containers greater than 5 L 250 L in containers up to and including 5 L	50 L 50 L

#### **Certified Handler**

Subject to Part 4 of the Health and Safety at Work (Hazardous Substances) Regulations 2017.

Class of substance	Quantities
3.1B	250 L (when in containers greater than 5 L) 500 L (when in containers up to and including 5 L)

Refer Group Standards for further information

#### **Tracking Requirements**

Not Applicable

### **National Inventory Status**

National Inventory	Status
Australia - AIIC	Yes
Australia Non-Industrial Use	No (ethanol; acetone; isopropanol)
Canada - DSL	Yes
Canada - NDSL	No (ethanol; acetone; isopropanol)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	Yes
Japan - ENCS	Yes
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	Yes
Taiwan - TCSI	Yes
Mexico - INSQ	Yes
Vietnam - NCI	Yes
Russia - ARIPS	Yes
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)

### **SECTION 16 Other information**

Revision Date	24/08/2020
Initial Date	24/08/2020

#### 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 SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

end of SDS

# 630023 Rain-X Shower Door Water Repellent

PC – TWA: Permissible Concentration-Time Weighted Average PC – STEL: Permissible Concentration-Short Term Exposure Limit IARC: International Agency for Research on Cancer ACGIH: American Conference of Governmental Industrial Hygienists STEL: Short Term Exposure Limit TEEL: Temporary Emergency Exposure Limit<sub>o</sub> IDLH: Immediately Dangerous to Life or Health Concentrations OSF: Odour Safety Factor NOAEL :No Observed Adverse Effect Level LOAEL: Lowest Observed Adverse Effect Level TLY: Threshold Limit Value

LOD: Limit Of Detection

OTV: Odour Threshold Value

BCF: BioConcentration Factors BEI: Biological Exposure Index

BEII Biological Expectate in

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