

# Rain X Spot Free Car Wash

# **Griffiths Equipment Limited**

Chemwatch: 5382-66 Version No: 2.1.1.1 Safety Data Sheet according to HSNO Regulations Chemwatch Hazard Alert Code: 3

Issue Date: **21/05/2020** Print Date: **23/06/2020** S.GHS.NZL.EN

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

#### **Product Identifier**

Product name	Rain X Spot Free Car Wash
Synonyms	620034
Other means of identification	Not Available

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

Relevant identified uses	Car Wash.
Kelevant identified uses	Use according to manufacturer's directions.

## 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

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 [1]	Skin Corrosion/Irritation Category 3, Acute Aquatic Hazard Category 3	
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	6.3B, 9.1D	

# Label elements

Hazard pictogram(s)	Not Applicable
SIGNAL WORD	WARNING

# Hazard statement(s)

H316	Causes mild skin irritation.
H402	Harmful to aquatic life.

# Precautionary statement(s) Prevention

<b>P273</b> A	void release to the environment
---------------	---------------------------------

Issue Date: **21/05/2020**Print Date: **23/06/2020** 

P332+P313

If skin irritation occurs: Get medical advice/attention.

# Precautionary statement(s) Storage

Not Applicable

# Precautionary statement(s) Disposal

P501

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

## **SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS**

#### Substances

See section below for composition of Mixtures

# Mixtures

CAS No	%[weight]	Name
70851-07-9	10-30	cocamidopropylbetaine, sodium
Not Available	balance	Ingredients determined not to be hazardous
Not Available		includes
7732-18-5	>60	<u>water</u>

# **SECTION 4 FIRST AID MEASURES**

## Description of first aid measures

Eye Contact	If this product comes in contact with the eyes:  • Wash out immediately with fresh running water.  • Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.  • Seek medical attention without delay; if pain persists or recurs seek medical attention.  • Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin contact occurs:  Immediately remove all contaminated clothing, including footwear.  Flush skin and hair with running water (and soap if available).  Seek medical attention in event of irritation.
Inhalation	<ul> <li>If fumes, aerosols or combustion products are inhaled remove from contaminated area.</li> <li>Other measures are usually unnecessary.</li> </ul>
Ingestion	<ul> <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>

# Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

# **SECTION 5 FIREFIGHTING MEASURES**

# **Extinguishing media**

The product contains a substantial proportion of water, therefore there are no restrictions on the type of extinguishing media which may be used. Choice of extinguishing media should take into account surrounding areas.

Though the material is non-combustible, evaporation of water from the mixture, caused by the heat of nearby fire, may produce floating layers of combustible substances.

In such an event consider:

- ► foam.
- dry chemical powder.
- ► carbon dioxide.

## Special hazards arising from the substrate or mixture

Special flazards arising from the substrate of mixture		
Fire Incompatibility	None known.	
Advice for firefighters		
Fire Fighting	<ul> <li>Alert Fire Brigade and tell them location and nature of hazard.</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 courses.</li> <li>Use fire fighting procedures suitable for surrounding area.</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> <li>Equipment should be thoroughly decontaminated after use.</li> </ul>	
Fire/Explosion Hazard	<ul> <li>The material is not readily combustible under normal conditions.</li> <li>However, it will break down under fire conditions and the organic component may burn.</li> <li>Not considered to be a significant fire risk.</li> <li>Heat may cause expansion or decomposition with violent rupture of containers.</li> <li>Decomposes on heating and may produce toxic fumes of carbon monoxide (CO).</li> <li>May emit acrid smoke.</li> </ul>	

Chemwatch: 5382-66 Page 3 of 8

Version No: 2.1.1.1

Page 7 of 8

## Rain X Spot Free Car Wash

Issue Date: **21/05/2020**Print Date: **23/06/2020** 

Decomposes on heating and produces toxic fumes of: carbon dioxide (CO2) nitrogen oxides (NOx) other pyrolysis products typical of burning organic material. May emit corrosive fumes.

## **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

Minor Spills	<ul> <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 spill with sand, earth, inert material or vermiculite.</li> <li>Wipe up.</li> <li>Place in a suitable, labelled container for waste disposal.</li> </ul>
Major Spills	Moderate hazard.  Clear area of personnel and move upwind.  Alert Fire Brigade and tell them location and nature of hazard.  Wear breathing apparatus plus protective gloves.  Prevent, by any means available, spillage from entering drains or water course.  Stop leak if safe to do so.  Contain spill with sand, earth or vermiculite.  Collect recoverable product into labelled containers for recycling.  Neutralise/decontaminate residue (see Section 13 for specific agent).  Collect solid residues and seal in labelled drums for disposal.  Wash area and prevent runoff into drains.  After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using.  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**

### Precautions for safe handling Limit all unnecessary personal contact. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. Avoid contact with incompatible materials. ▶ When handling, **DO NOT** eat, drink or smoke Keep containers securely sealed when not in use. Safe handling Avoid physical damage to containers. Always wash hands with soap and water after handling. Work clothes should be laundered separately. Use good occupational work practice. ▶ Observe manufacturer's storage and handling recommendations contained within this SDS. Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained. ► Store in original containers. Keep containers securely sealed. Store in a cool, dry, well ventilated area. Other information ► DO NOT allow to freeze ▶ Store away from incompatible materials. Protect containers against physical damage and check regularly for leaks. ▶ Observe manufacturer's storage and handling recommendations contained within this SDS.

# Conditions for safe storage, including any incompatibilities

Suitable container	<ul> <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

Not Available

EMERGENCY LIMITS

Ingredient Material name TELL-1 TELL-2 TELL-3

# Rain X Spot Free Car Wash

Issue Date: **21/05/2020**Print Date: **23/06/2020** 

Rain X Spot Free Car Wash	Not Available	Not Available	Not Available	Not Available
Ingredient	Original IDLH		Revised IDLH	
cocamidopropylbetaine, sodium	Not Available		Not Available	
water	Not Available		Not Available	

### **Exposure controls**

sure controls	
Appropriate engineering controls	General exhaust is adequate under normal operating conditions.
Personal protection	
Eye and face protection	No special equipment for minor exposure i.e. when handling small quantities.  OTHERWISE:  Safety glasses with side shields.  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 national equivalent]
Skin protection	See Hand protection below
Hands/feet protection	No special equipment needed when handling small quantities.  OTHERWISE: Wear general protective gloves, e.g. light weight rubber gloves.
Body protection	See Other protection below
Other protection	No special equipment needed when handling small quantities.  OTHERWISE:  Overalls.  Barrier cream.  Eyewash unit.

## 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:

Rain X Spot Free Car Wash

Material	СРІ
BUTYL	A
NEOPRENE	A
VITON	A
NATURAL RUBBER	С
PVA	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

 $\mbox{\bf NOTE}.$  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.

## Respiratory protection

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

Selection of the Class and Type of respirator will depend upon the level of breathing zone contaminant and the chemical nature of the contaminant. Protection Factors (defined as the ratio of contaminant outside and inside the mask) may also be important.

Required minimum protection factor	Maximum gas/vapour concentration present in air p.p.m. (by volume)	Half-face Respirator	Full-Face Respirator
up to 10	1000	AK-AUS / Class1 P2	-
up to 50	1000	-	AK-AUS / Class 1 P2
up to 50	5000	Airline *	-
up to 100	5000	-	AK-2 P2
up to 100	10000	-	AK-3 P2
100+			Airline**

- \* Continuous Flow \*\* Continuous-flow or positive pressure demand A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B = 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

## **SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES**

Page 5 of 8

Rain X Spot Free Car Wash

Issue Date: **21/05/2020**Print Date: **23/06/2020** 

Appearance	Clear blue liquid with a mild odour; mixes with water		
Physical state	Liquid	Relative density (Water = 1)	1.010-1.020
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	4-5	Decomposition temperature	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	100	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	Not Available	Taste	Not Available
Evaporation rate	Not Available	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)	0
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

Inhaled	The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.  Not normally a hazard due to non-volatile nature of product		
Ingestion	Accidental ingestion of the material may be damaging t	o the health of the individual.	
Skin Contact	There is some evidence to suggest that this material ca	an cause inflammation of the skin on contact in some persons.	
Еуе	There is some evidence to suggest that this material ca	an cause eye irritation and damage in some persons.	
Chronic	Long-term exposure to the product is not thought to produce chronic effects adverse to the health (as classified by EC Directives using animal models); nevertheless exposure by all routes should be minimised as a matter of course.		
Rain X Spot Free Car Wash	TOXICITY	IRRITATION	
Kalli X Spot Free Car Wash	Not Available	Not Available	
	TOXICITY	IRRITATION	
cocamidopropylbetaine, sodium	Oral (rat) LD50: 2700 mg/kg <sup>[2]</sup>	Eye: primary irritant *	
Soulum		Skin: primary irritant *	
	TOXICITY	IRRITATION	
water	Oral (rat) LD50: >90000 mg/kg <sup>[2]</sup>	Not Available	
Legend:	Value obtained from Europe ECHA Registered Substances - Acute toxicity 2.* Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances		

# COCAMIDOPROPYLBETAINE, SODIUM

The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

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.

The chemicals in the Fatty Nitrogen Derived (FND) Amides are generally similar in terms of physical and chemical properties, environmental fate and toxicity. Its low acute oral toxicity is well established across all subcategories by the available data and show no apparent organ specific toxicity, mutation, reproductive or developmental defects.

for similar product: \* [Van Waters and Rogers] \*\* [Canada Colors and Chemicals Ltd.]

Page 6 of 8 Issue Date: 21/05/2020 Print Date: 23/06/2020 Rain X Spot Free Car Wash

WATER	No significant acute toxicological data identified in litera	iture search.	
Acute Toxicity	×	Carcinogenicity	×
Skin Irritation/Corrosion	✓	Reproductivity	×
Serious Eye Damage/Irritation	×	STOT - Single Exposure	×
Respiratory or Skin sensitisation	×	STOT - Repeated Exposure	×
Mutagenicity	×	Aspiration Hazard	X

Legend:

★ - Data either not available or does not fill the criteria for classification

– Data available to make classification

## **SECTION 12 ECOLOGICAL INFORMATION**

#### Toxicity

Rain X Spot Free Car Wash	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	Not Available	Not Available	Not Available	Not Availab	Not le Available
	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
cocamidopropylbetaine, sodium	Not Available	Not Available	Not Available	Not Availab	Not le Available
	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURC
water	LC50	96	Fish	897.520mg/l	. 3
	EC50	96	Algae or other aquatic plants	8768.874mg	/L 3
Legend:	V3.12 (QSAR) -	Aquatic Toxicity Data (Estimated) 4. U	A Registered Substances - Ecotoxicological Infor S EPA, Ecotox database - Aquatic Toxicity Data & (Japan) - Bioconcentration Data & Vendor Data	,	

Harmful to aquatic organisms.

DO NOT discharge into sewer or waterways

# Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
water	LOW	LOW

## **Bioaccumulative potential**

Ingredient	Bioaccumulation
water	LOW (LogKOW = -1.38)

# Mobility in soil

Ingredient	Mobility
water	LOW (KOC = 14.3)

# **SECTION 13 DISPOSAL CONSIDERATIONS**

# Waste treatment methods

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 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.

- Product / Packaging disposal ▶ 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.

## Rain X Spot Free Car Wash

Issue Date: 21/05/2020 Print Date: 23/06/2020

### **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. Only dispose to the environment if a tolerable exposure limit has been set for the substance.

Only deposit the hazardous substance into or onto a landfill or sewage facility or incinerator, where the hazardous substance can be handled and treated appropriately.

# **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

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
HSR002530	Cleaning Products (Subsidiary Hazard) Group Standard 2017

## COCAMIDOPROPYLBETAINE, SODIUM IS FOUND ON THE FOLLOWING REGULATORY LISTS

New Zealand Inventory of Chemicals (NZIoC)

# WATER IS FOUND ON THE FOLLOWING REGULATORY LISTS

New Zealand Inventory of Chemicals (NZIoC)

# **Hazardous Substance Location**

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

Hazard Class	Quantity beyond which controls apply for closed containers	Quantity beyond which controls apply when use occurring in open containers
Not Applicable	Not Applicable	Not Applicable

## **Certified Handler**

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

Class of substance	Quantities
Not Applicable	Not Applicable

Refer Group Standards for further information

## **Tracking Requirements**

Not Applicable

# **National Inventory Status**

rational involtory otatao	
National Inventory	Status
Australia - AICS	Yes
Canada - DSL	Yes
Canada - NDSL	No (cocamidopropylbetaine, sodium; water)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	Yes
Japan - ENCS	No (cocamidopropylbetaine, sodium)
Korea - KECI	No (cocamidopropylbetaine, sodium)
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	Yes
Taiwan - TCSI	Yes
Mexico - INSQ	No (cocamidopropylbetaine, sodium)
Vietnam - NCI	Yes

Chemwatch: 5382-66 Page 8 of 8 Issue Date: 21/05/2020 Version No: 2.1.1.1 Print Date: 23/06/2020

## Rain X Spot Free Car Wash

Russia - ARIPS	No (cocamidopropylbetaine, sodium)
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	21/05/2020
Initial Date	21/05/2020

#### 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.

#### **Definitions and abbreviations**

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。

IDLH: Immediately Dangerous to Life or Health Concentrations

OSF: Odour Safety Factor

NOAEL :No Observed Adverse Effect Level LOAEL: Lowest Observed Adverse Effect Level

TLV: Threshold Limit Value LOD: Limit Of Detection OTV: Odour Threshold Value BCF: BioConcentration Factors BEI: Biological Exposure Index

This document is copyright.

Apart from any fair dealing for the purposes of private study, research, review or criticism, as permitted under the Copyright Act, no part may be reproduced by any process without written permission from CHEMWATCH.

TEL (+61 3) 9572 4700.