

Safety Data Sheet

Suma Block Whitener

Revision: 2015-04-24 *Version: 01.0*

SECTION 1: Identification of the substance/mixture and supplier

1.1 Product identifier

Product name: Suma Block Whitener

1.2 Recommended use and restrictions on use

Identified uses:

Destainer

Restrictions of use:

Uses other than those identified are not recommended

1.3 Details of the supplier

Diversey Australia Pty. Limited 29 Chifley St, Smithfield, NSW, 2164, Australia

Telephone: (02) 9757 0300 Fax: (02) 9725 5767

Email: aucustserv@sealedair.com Website: http://www.diversey.com

1.4 Emergency telephone number

Call 1800 033 111 (24hrs)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classified as hazardous according to Safe Work Australia criteria.

AUH031

Skin corrosion, Category 1B Corrosive to metals, Category 1

2.2 Label elements



Signal word: Danger

Hazard statements:

AUH031 - Contact with acids liberates toxic gas.

H314 - Causes severe skin burns and eye damage.

H410 - Very toxic to aquatic life with long lasting effects.

H290 - May be corrosive to metals.

Prevention statement(s):

P234 - Keep only in original container.

P260 - Do not breathe vapours.

P264 - Wash face, hands and any exposed skin thoroughly after handling.

P280 - Wear protective gloves, protective clothing and eye or face protection.

Response statement(s):

P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

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.

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 - Immediately call a POISON CENTRE, doctor or physician.

P321 - Specific treatment (see supplemental first aid instructions on this label).

P363 - Wash contaminated clothing before reuse.



P390 - Absorb spillage to prevent material damage.

Storage statement(s):

P405 - Store locked up.

P406 - Store in corrosive-resistant container with a resistant inner liner.

Disposal statement(s):

P501 - Dispose of unused content as chemical waste.

2.3 Other hazards

No other hazards known.

SECTION 3: Composition/information on ingredients

3.1 Substances / Mixtures

Ingredient(s)	CAS number	EC number	Classification	Weight percent
sodium hypochlorite	7681-52-9	231-668-3	AUH031 Skin Corr. 1B (H314) STOT SE 3 (H335) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) Met. Corr. 1 (H290)	3-10
Lauryl dimethyl amine oxide	1643-20-5	216-700-6	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Aquatic Acute 1 (H400) Aquatic Chronic 2 (H411)	1-3
sodium hydroxide	1310-73-2	215-185-5	Skin Corr. 1A (H314) Met. Corr. 1 (H290)	1-3

Non-hazardous ingredients are the remainder and add up to 100%.

Workplace exposure limit(s), if available, are listed in subsection 8.1.

For the full text of the H and AUH phrases mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

Inhalation Remove person to fresh air and keep comfortable for breathing. Get medical attention or advice if

Take off immediately all contaminated clothing and wash it before re-use. Immediately call a Skin contact:

POISON CENTRE, doctor or physician.

Eye contact: Immediately rinse eyes cautiously with lukewarm water for several minutes. Remove contact lenses,

if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE, doctor or

physician.

Rinse mouth. Immediately drink 1 glass of water. Do NOT induce vomiting. Keep at rest. Ingestion: Immediately call a POISON CENTRE, doctor or physician.

Self-protection of first aider: Consider personal protective equipment as indicated in subsection 8.2.

Shower and eyewash facilities should be considered in a workplace where necessary. First aid facilities:

4.2 Most important symptoms and effects, both acute and delayed

Inhalation: May cause bronchospasm in chlorine sensitive individuals.

Skin contact: Causes severe burns.

Eye contact: Causes severe or permanent damage.

Ingestion will lead to a strong caustic effect on mouth and throat and to the danger of perforation of Ingestion:

oesophagus and stomach.

4.3 Indication of any immediate medical attention and special treatment needed

No information available on clinical testing and medical monitoring. Specific toxicological information on substances, if available, can be found in section 11.

Poison Information Center: Call 13 11 26 (Australia Wide).

SECTION 5: Firefighting measures

5.1 Extinguishing media

Carbon dioxide. Dry powder. Water spray jet. Fight larger fires with water spray jet or alcohol-resistant foam.

5.2 Special hazards arising from the substance or mixture

No special hazards known.

5.3 Advice for firefighters

As in any fire, wear self contained breathing apparatus and suitable protective clothing including gloves and eye/face protection.

5.4 Hazchem code

2X

- 2 Fine water spray.
- X Liquid-tight chemical protective clothing and breathing apparatus. Contain.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Do not breathe dust or vapour. In case of an incident in a confined area wear suitable respiratory protection. Wear suitable protective clothing, gloves and eye/face protection.

6.2 Environmental precautions

Do not allow to enter drainage system, surface or ground water. Do not allow to enter the ground/soil. Dilute with plenty of water. Inform responsible authorities in case undiluted product reaches drainage system, surface or ground water or the ground/soil.

6.3 Methods and material for containment and cleaning up

Use neutralising agent. Absorb with liquid-binding material (sand, diatomite, universal binders, sawdust). Ensure adequate ventilation.

6.4 Reference to other sections

For personal protective equipment see subsection 8.2. For disposal considerations see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Measures to prevent fire and explosions:

No special precautions required.

Measures required to protect the environment:

For environmental exposure controls see subsection 8.2.

Advices on general occupational hygiene:

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not mix with other products unless adviced by Sealed Air. Wash hands before breaks and at the end of workday. Wash face, hands and any exposed skin thoroughly after handling. Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. Use personal protective equipment as required. Avoid contact with skin and eyes. Do not breathe vapours. Use only with adequate ventilation.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local and national regulations. Keep only in original container. Store in a closed container.

For conditions to avoid see subsection 10.4. For incompatible materials see subsection 10.5.

7.3 Specific end use(s)

No specific advice for end use available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters Workplace exposure limits

Air limit values, if available:

Ingredient(s)	Long term value(s) (TWA)	Short term value(s) (STEL)	Peak value(s)
sodium hydroxide			2 mg/m ³

Biological limit values, if available:

8.2 Exposure controls

The following information applies for the uses indicated in subsection 1.2.

If available, please refer to the product information sheet for application and handling instructions.

Normal use conditions are assumed for this section.

Recommended safety measures for handling the $\underline{\textit{undiluted}}$ product:

Appropriate engineering controls: No special requirements under normal use conditions.

Appropriate organisational controls: Avoid direct contact and/or splashes where possible. Train personnel.

Personal protective equipment

Eye / face protection: Safety glasses or goggles (EN 166). The use of a full-face shield or other full-face protection is

strongly recommended when handling open containers or if splashes may occur.

Hand protection: Chemical-resistant protective gloves (EN 374)

Verify instructions regarding permeability and breakthrough time, as provided by the gloves

supplier.

Consider specific local use conditions, such as risk of splashes, cuts, contact time and temperature.

Suggested gloves for prolonged contact:

Material: butyl rubber Penetration time: >= 480 min Material thickness: >= 0.7 mm

Suggested gloves for protection against splashes:

Material: nitrile rubber Penetration time: >= 30 min Material thickness: >= 0.4 mm

In consultation with the supplier of protective gloves a different type providing similar protection may

be chosen.

Body protection: Wear chemical-resistant clothing and boots in case direct dermal exposure and/or splashes may

occur.

Respiratory protection: Respiratory protection is not normally required. However, inhalation of vapour, spray, gas or

aerosols should be avoided.

Environmental exposure controls: Should not reach sewage water or drainage ditch undiluted or unneutralised.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Method / remark

Physical State: Liquid
Colour: Clear, Colourless
Odour: Product specific
Odour throubald, Not spelie

Odour threshold: Not applicable

pH: ≈ 12.7 (neat)

Melting point/freezing point (°C): Not determined

Initial boiling point and boiling range (°C): Not determined

Flash point (°C): Not applicable.

Sustained combustion: Not determined

Evaporation rate: Not determined

Flammability (solid, gas): Not determined

Upper/lower flammability limit (%): Not determined

Vapour pressure: Not determined Vapour density: Not determined Relative density: 1.08 g/cm³ (20 °C)

Solubility in / Miscibility with Water: Fully miscible Autoignition temperature: Not determined Decomposition temperature: Not determined

Viscosity: Not determined

Explosive properties: Not explosive. **Oxidising properties:** Not oxidising

9.2 Other information

Surface tension (N/m): Not determined Corrosion to metals: Corrosive

Weight of evidence

SECTION 10: Stability and reactivity

10.1 Reactivity

No reactivity hazards known under normal storage and use conditions.

10.2 Chemical stability

Stable under normal storage and use conditions.

10.3 Possibility of hazardous reactions

No hazardous reactions known under normal storage and use conditions.

10.4 Conditions to avoid

None known under normal storage and use conditions.

10.5 Incompatible materials

Contact with acids liberates toxic gas. Reacts with acids. Keep away from acids.

10.6 Hazardous decomposition products

None known under normal storage and use conditions.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

No data is available on the mixture

Substance data, where relevant and available, are listed below.

Acute toxicity

A	1	4	
Acute			

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)
sodium hypochlorite	LD 50	> 1100	Rat	Method not given	-
Lauryl dimethyl amine oxide		No data available			
sodium hydroxide		No data available			

Acute dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)
sodium hypochlorite	LD 50	> 20000	Rabbit	Method not given	-
Lauryl dimethyl amine oxide		No data available			
sodium hydroxide		No data available			

Acute inhalative toxicity

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
sodium hypochlorite	LC o	> 10.5 (vapour)	Rat	OECD 403 (EU B.2)	1
Lauryl dimethyl amine oxide		No data available			
sodium hydroxide		No data available			

Irritation and corrosivity

Skin irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
sodium hypochlorite	Corrosive	Rabbit	Method not given	
Lauryl dimethyl amine oxide	No data available			
sodium hydroxide	Corrosive	Rabbit	Method not given	

Eye irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
sodium hypochlorite	Severe damage	Rabbit	Method not given	
Lauryl dimethyl amine oxide	No data available			
sodium hydroxide	Corrosive	Rabbit	Method not given	

Respiratory tract irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
sodium hypochlorite	Irritating to			
	respiratory tract			
Lauryl dimethyl amine oxide	No data available			
sodium hydroxide	No data available			

Sensitisation

Sensitisation by skin contact

Ingredient(s)	Result	Species	Method	Exposure time (h)
sodium hypochlorite	Not sensitising	Guinea pig	Method not given	ı
Lauryl dimethyl amine oxide	No data available			
sodium hydroxide	Not sensitising		Human repeated patch test	

Sensitisation by inhalation

Ingredient(s)	Result	Species	Method	Exposure time
sodium hypochlorite	No data available			-
Lauryl dimethyl amine oxide	No data available			
sodium hydroxide	No data available			

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Mutagenici

Ingredient(s)	Result (in-vitro)	Method (in-vitro)	Result (in-vivo)	Method (in-vivo)
sodium hypochlorite	No evidence for mutagenicity	OECD 471 (EU	No evidence for mutagenicity, negative	Method not
		B.12/13)	test results	given

Ī	Lauryl dimethyl amine oxide	No data available		No data available	
	•	No evidence for mutagenicity, negative test results		test results	OECD 474 (EU B.12) OECD 475 (EU B.11)
			OECD 473		

Carcinogenicity

Ingredient(s)	Effect		
sodium hypochlorite	No evidence for carcinogenicity, negative test results		
Lauryl dimethyl amine oxide	No data available		
sodium hydroxide	No evidence for carcinogenicity, weight-of-evidence		

Toxicity for reproduction

Ingredient(s)	Endpoint	Specific effect	Value (mg/kg bw/d)	Species	Method	Exposure time	Remarks and other effects reported
sodium hypochlorite	NOAEL	Developmental toxicity	5 (CI)	Rat	Not known		No evidence for reproductive toxicity
Lauryl dimethyl amine oxide			No data available				
sodium hydroxide			No data available				No evidence for developmental toxicity No evidence for reproductive toxicity

Repeated dose toxicity
Sub-acute or sub-chronic oral toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
sodium hypochlorite	NOAEL	50	Rat	Method not given	90	
Lauryl dimethyl amine oxide		No data available				
sodium hydroxide		No data available				

Sub-chronic dermal toxicity

Ingredient(s)	Endpoint	Value	Species	Method		Specific effects and organs
		(mg/kg bw/d)			time (days)	affected
sodium hypochlorite		No data			-	
		available				
Lauryl dimethyl amine oxide		No data				
		available				
sodium hydroxide		No data				
	1	available				

Sub-chronic inhalation toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
sodium hypochlorite		No data available			-	
Lauryl dimethyl amine oxide		No data available				
sodium hydroxide		No data available				

Chronic toxicity

Ingredient(s)	Exposure route	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time	Specific effects and organs affected	Remark
sodium hypochlorite			No data available					
Lauryl dimethyl amine oxide			No data available					
sodium hydroxide			No data available					

STOT-single exposure

Ingredient(s)	Affected organ(s)
sodium hypochlorite	No data available
Lauryl dimethyl amine oxide	No data available
sodium hydroxide	No data available

STOT-repeated exposure

Ingredient(s)	Affected organ(s)
sodium hypochlorite	No data available
Lauryl dimethyl amine oxide	No data available
sodium hydroxide	No data available

Aspiration hazard Substances with an aspiration hazard (H304), if any, are listed in section 3. If relevant, see section 9 for dynamic viscosity and relative density of the product.

Potential adverse health effects and symptoms

Effects and symptoms related to the product, if any, are listed in subsection 4.2.

SECTION 12: Ecological information

12.1 Toxicity

No data is available on the mixture.

Substance data, where relevant and available, are listed below

Aquatic short-term toxicity

Aquatic short-term	toxicity	/ - fish
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Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
sodium hypochlorite	LC 50	0.06	Various species	Method not given	96
Lauryl dimethyl amine oxide		No data available			
sodium hydroxide	LC 50	35	Various species	Method not given	96

Aquatic short-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
sodium hypochlorite	EC 50	0.026	Not specified	Method not given	48
Lauryl dimethyl amine oxide		No data available			
sodium hydroxide	EC 50	40.4	Ceriodaphnia sp.	Method not given	48

Aquatic short-term toxicity - algae

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
sodium hypochlorite	NOEC	0.0021	Not specified	Method not given	168
Lauryl dimethyl amine oxide		No data available			
sodium hydroxide	EC 50	22	Photobacteriu m phosphoreum	Method not given	0.25

Aquatic short-term toxicity - marine species

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (days)
sodium hypochlorite		No data available			-
Lauryl dimethyl amine oxide		No data available			
sodium hydroxide		No data available			-

Impact on sewage plants - toxicity to bacteria

Ingredient(s)	Endpoint	Value (mg/l)	Inoculum	Method	Exposure time
sodium hypochlorite		0.375	Activated sludge	Method not given	
Lauryl dimethyl amine oxide		No data available			
sodium hydroxide		No data available			

Aquatic long-term toxicity Aquatic long-term toxicity - fish

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
sodium hypochlorite	NOEC	0.04	Menidia pelinsulae	Method not given	96 hour(s)	
Lauryl dimethyl amine oxide		No data available				
sodium hydroxide		No data available				

Aquatic long-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
sodium hypochlorite		No data				
		available				
Lauryl dimethyl amine oxide		No data				
		available				
sodium hydroxide		No data				
		available				

Aquatic toxicity to other aquatic benthic organisms, including sediment-dwelling organisms, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw sediment)	Species	Method	Exposure time (days)	Effects observed
sodium hypochlorite		No data available			-	
Lauryl dimethyl amine oxide		No data available				
sodium hydroxide		No data available			-	

Terrestrial toxicity

Terrestrial toxicity - soil invertebrates, including earthworms, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw	Species	Method	Exposure time (days)	Effects observed
sodium hypochlorite		No data available			-	
sodium hydroxide		No data available			-	

Terrestrial toxicity - plants if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
sodium hypochlorite		No data available			-	
sodium hydroxide		No data available			-	

Terrestrial toxicity - hirds if available:

refrestrial toxicity - birds, if available.						
Ingredient(s)	Endpoint	Value	Species	Method	Exposure time (days)	Effects observed
sodium hypochlorite		No data available			=	
sodium hydroxide		No data available			-	

Terrestrial toxicity - beneficial insects, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
sodium hypochlorite		No data available			-	
sodium hydroxide		No data available			-	

Terrestrial toxicity - soil bacteria, if available:

refrestrar toxicity - soil bacteria, il avallable.						
Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
sodium hypochlorite		No data available			-	
sodium hydroxide		No data			-	

12.2 Persistence and degradability

Abiotic degradation
Abiotic degradation - photodegradation in air, if available:

Ingredient(s)	Half-life time	Method	Evaluation	Remark
sodium hypochlorite	115 day(s)	Indirect photo-oxidation		
sodium hydroxide	13 second(s)	Method not given	Rapidly photodegradable	

Abiotic degradation - hydrolysis, if available:

Abiotic degradation - other processes, if available:

BiodegradationReady biodegradability - aerobic conditions

Ingredient(s)	Inoculum	Analytical method	DT 50	Method	Evaluation
sodium hypochlorite					Not applicable (inorganic substance)
Lauryl dimethyl amine oxide					No data available
sodium hydroxide					Not applicable (inorganic substance)

Ready biodegradability - anaerobic and marine conditions, if available:

Degradation in relevant environmental compartments, if available:

12.3 Bioaccumulative potential

Partition coefficient n-octanol/water (log Kow)

Ingredient(s)	Value	Method	Evaluation	Remark
sodium hypochlorite	-3.42	Method not given	No bioaccumulation expected	
Lauryl dimethyl amine oxide	No data available			
sodium hydroxide	No data available		Not relevant, does not bioaccumulate	

Bioconcentration factor (BCF)

Ingredient(s)	Value	Species	Method	Evaluation	Remark
sodium hypochlorite	No data available				
Lauryl dimethyl amine oxide	No data available				
sodium hydroxide	No data available				

12.4 Mobility in soil

Adsorption/Desorption to soil or sediment

Ingredient(s)	Adsorption coefficient Log Koc	Desorption coefficient Log Koc(des)	Method	Soil/sediment type	Evaluation
sodium hypochlorite	1.12				High potential for mobility in soil
Lauryl dimethyl amine oxide	No data available				
sodium hydroxide	No data available				Mobile in soil

12.5 Other adverse effects

No other adverse effects known.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste from residues / unused

products:

The concentrated contents or contaminated packaging should be disposed of by a certified handler or according to the site permit. Release of waste to sewers is discouraged. The cleaned packaging

material is suitable for energy recovery or recycling in line with local legislation.

Empty packaging

Dispose of observing national or local regulations. Recommendation:

Suitable cleaning agents: Water, if necessary with cleaning agent.

SECTION 14: Transport information



ADG, IMO/IMDG, ICAO/IATA

14.1 UN number: 1791

14.2 UN proper shipping name:

Hypochlorite solution

14.3 Transport hazard class(es):

Class: 8 Label(s): 8 14.4 Packing group: III 14.5 Environmental hazards:

Environmentally hazardous: Yes

Marine pollutant: No

14.6 Special precautions for user: None known.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: The product is not transported in bulk tankers.

Other relevant information:

Hazchem code: 2X

The product has been classified, labelled and packaged in accordance with the requirements of ADG and the provisions of the IMDG Code. Transport regulations include special provisions for certain classes of dangerous goods packed in limited quantities.

SECTION 15: Regulatory information

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

Poison schedule Classified as a Schedule 5 (S5) Poison using the criteria in the Standard for the Uniform Scheduling

of Medicines and Poisons (SUSMP).

Classification Safework Australia criteria is based on the Globally Harmonised System (GHS) of Classification and

Labelling of Chemicals.

Inventory listing(s) AICS (Australian Inventory of Chemical Substances): All components are listed on AICS, or are

exempt

SECTION 16: Other information

The information in this document is based on our best present knowledge. However, it does not constitute a guarantee for any specific product features and does not establish a legally binding contract

SDS code: MS31000411 Version: 01.0 Revision: 2015-04-24

Full text of the H phrases mentioned in section 3:

- · H290 May be corrosive to metals
- H302 Harmful if swallowed.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- · H335 May cause respiratory irritation.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.
 H411 Toxic to aquatic life with long lasting effects.
- AUH031 Contact with acids liberates toxic gas.

Additional information:

Respirators: In general the use of respirators should be limited and engineering controls employed to avoid exposure. If respiratory equipment must be worn ensure correct respirator selection and training is undertaken. Remember that some respirators may be extremely uncomfortable when used for long periods. The use of air powered or air supplied respirators should be considered where prolonged or repeated use is necessary.

Work practices - solvents: Organic solvents may present both a health and flammability hazard. It is recommended that engineering controls should be adopted to reduce exposure where practicable (for example, if using indoors, ensure explosion proof extraction ventilation is available). Flammable or combustible liquids with explosive limits have the potential for ignition from static discharge. Refer to AS 1020 (The control of undesirable static electricity) and AS 1940 (The storage and handling of flammable and combustible liquids) for control procedures.

Exposure standards - Time Weighted Average (TWA) or Workplace Exposure Standard (WES) (NZ): Exposure standards are established on the premise of an 8 hour work period of normal intensity, under normal climatic conditions and where a 16 hour break between shifts exists to enable the body to eliminate absorbed contaminants. In the following circumstances, exposure standards must be reduced: strenuous work conditions; hot, humid climates; high altitude conditions; extended shifts (which increase the exposure period and shorten the period of recuperation).

Personal protective equipment guidelines: The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

Health effects from exposure: It should be noted that the effects from exposure to this product will depend on several factors including: frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a Safety Data Sheet which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

Abbreviations and acronyms:

- ATE Acute Toxicity Estimate
- LC50 Lethal Concentration, 50% / Median Lethal Concentration
- LD50 Lethal Dose, 50% / Median Lethal dose

 STOT-RE Specific target organ toxicity (repeated exposure)
- STOT-SE Specific target organ toxicity (single exposure)
- EC No. European Community Number

End of Safety Data Sheet