

SAFETY DATA SHEET

Product Name REFLECTION

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Supplier name LIBERATO BULK CHEMICAL & REPACK SPECIALISTS PTY. LTD.
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Web site <http://www.liberato.com.au>
Synonym(s) LIBERATO REFLECTION
Use(s) CLEANING AGENT • WINDOW CLEANER
SDS date 05 November 2013

2. HAZARDS IDENTIFICATION

NOT CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

RISK PHRASES

None allocated

SAFETY PHRASES

None allocated

NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE

UN number	None Allocated	DG class	None Allocated
Packing group	None Allocated	Subsidiary risk(s)	None Allocated
Hazchem code	None Allocated		

3. COMPOSITION/ INFORMATION ON INGREDIENTS

Ingredient	Identification	Classification	Content
AMMONIUM HYDROXIDE	CAS: 1336-21-6 EC: 231-647-6	C;R34 N;R50	<5%
NON HAZARDOUS INGREDIENTS	Not Available	Not Available	10 to 30%
WATER	CAS: 7732-18-5 EC: 231-791-2	Not Available	Remainder

4. FIRST AID MEASURES

Eye If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes.

Inhalation If inhaled, remove from contaminated area. Apply artificial respiration if not breathing.

Skin If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. Continue flushing with water until advised to stop by a Poisons Information Centre or a doctor.

Ingestion For advice, contact a Poison Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If swallowed, do not induce vomiting.

Advice to doctor Treat symptomatically.

First aid facilities Eye wash facilities should be available.

5. FIRE FIGHTING MEASURES

Flammability	Non flammable. May evolve toxic gases (carbon/ nitrogen oxides, amines, ammonia, hydrocarbons) when heated to decomposition.
Fire and explosion	Evacuate area and contact emergency services. Toxic gases may be evolved in a fire situation. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Use waterfog to cool intact containers and nearby storage areas.
Extinguishing	Use an extinguishing agent suitable for the surrounding fire.
Hazchem code	None Allocated

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Wear Personal Protective Equipment (PPE) as detailed in Section 8 of this SDS. Clear area of all unprotected personnel. Ventilate area where possible. Contact emergency services where appropriate.
Environmental precautions	Prevent product from entering drains and waterways.
Methods of cleaning up	Contain spillage, then cover/absorb spill with non-combustible absorbent material (vermiculite, sand, or similar), collect and place in suitable containers for disposal.
References	See Sections 8 and 13 for exposure controls and disposal.

7. STORAGE AND HANDLING

Storage	Store in a cool, dry, well ventilated area, removed from incompatible substances and foodstuffs. Ensure containers are adequately labelled, protected from physical damage and sealed when not in use.
Handling	Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure standards

Ingredient	Reference	TWA		STEL	
		ppm	mg/m ³	ppm	mg/m ³
Ammonia	SWA (AUS)	25	17	35	24

Biological limits	No biological limit allocated.
Engineering controls	Avoid inhalation. Use in well ventilated areas. Maintain vapour levels below the recommended exposure standard.
PPE	
Eye / Face	Wear splash-proof goggles.
Hands	Wear PVC or rubber gloves.
Body	Not required under normal conditions of use.
Respiratory	Not required under normal conditions of use.



9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	CLEAR BLUE LIQUID
Odour	SLIGHT AMMONIACAL ODOUR
Flammability	NON FLAMMABLE
Flash point	NOT RELEVANT
Boiling point	100°C (Approximately)
Melting point	< 0°C
Evaporation rate	AS FOR WATER
pH	10.8 to 11.2
Vapour density	NOT AVAILABLE
Specific gravity	1 (Approximately)
Solubility (water)	SOLUBLE
Vapour pressure	18 mm Hg @ 20°C
Upper explosion limit	NOT RELEVANT
Lower explosion limit	NOT RELEVANT
Partition coefficient	NOT AVAILABLE
Autoignition temperature	NOT AVAILABLE
Decomposition temperature	NOT AVAILABLE
Viscosity	NOT AVAILABLE
Explosive properties	NOT AVAILABLE
Oxidising properties	NOT AVAILABLE
Odour threshold	NOT AVAILABLE
% Volatiles	> 60 % (Water)

10. STABILITY AND REACTIVITY

Chemical stability	Stable under recommended conditions of storage.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources.
Material to avoid	Incompatible with oxidising agents (eg. hypochlorites), acids (eg. nitric acid) and alkalis (eg. sodium hydroxide).
Hazardous Decomposition Products	May evolve toxic gases (carbon/ nitrogen oxides, amines, ammonia, hydrocarbons) when heated to decomposition.
Hazardous Reactions	Polymerization is not expected to occur.

11. TOXICOLOGICAL INFORMATION

Health Hazard Summary	May be harmful - irritant. When used in small quantities, the potential for over exposure is reduced. Use safe work practices to avoid eye or skin contact and inhalation. Dilution may reduce the potential for adverse health effects.
Eye	Irritant. Contact may result in irritation, lacrimation, pain and redness. May result in burns with prolonged contact.
Inhalation	Irritant. Over exposure may result in irritation of the nose and throat, with coughing. High level exposure may result in respiratory irritation, nausea, dizziness, headache and possible breathing difficulties.
Skin	Irritant. Contact may result in drying and defatting of the skin, rash and dermatitis.
Ingestion	May be harmful. Ingestion may result in gastrointestinal irritation, nausea, vomiting, abdominal pain and diarrhoea. Aspiration may result in chemical pneumonitis and pulmonary oedema.
Toxicity data	AMMONIUM HYDROXIDE (1336-21-6)
	LCLo (inhalation) 5000 ppm (human)
	LD50 (ingestion) 350 mg/kg (rat)
	LD50 (intravenous) 91 mg/kg (mouse)
	LDLo (ingestion) 43 mg/kg (human)
	LDLo (intravenous) 10 mg/kg (rabbit)
	LDLo (subcutaneous) 160 mg/kg (mouse)
	TCLo (inhalation) 408 ppm (human)

12. ECOLOGICAL INFORMATION

Toxicity	No information provided.
Persistence and degradability	No information provided.
Bioaccumulative potential	No information provided.
Mobility in soil	No information provided.
Other adverse effects	No information provided.

13. DISPOSAL CONSIDERATIONS

Waste disposal	For small amounts, absorb with sand, vermiculite or similar and dispose of to an approved landfill site. For larger amounts, contact the manufacturer for additional information. Prevent contamination of drains or waterways as aquatic life may be threatened and environmental damage may result.
Legislation	Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION**NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE**

	LAND TRANSPORT (ADG)	SEA TRANSPORT (IMDG / IMO)	AIR TRANSPORT (IATA / ICAO)
UN number	None Allocated	None Allocated	None Allocated
Proper shipping name	None Allocated	None Allocated	None Allocated
DG class/ Division	None Allocated	None Allocated	None Allocated
Subsidiary risk(s)	None Allocated	None Allocated	None Allocated
Packing group	None Allocated	None Allocated	None Allocated
Hazchem code	None Allocated		

15. REGULATORY INFORMATION

Poison schedule	A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).
Inventory Listing(s)	AUSTRALIA: AICS (Australian Inventory of Chemical Substances) All components are listed on AICS, or are exempt.

16. OTHER INFORMATION

Additional information	<p>EXPOSURE STANDARDS - TIME WEIGHTED AVERAGES: 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).</p> <p>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.</p> <p>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 ChemAlert report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.</p>
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Product Name REFLECTION

Abbreviations	ACGIH	American Conference of Governmental Industrial Hygienists
	CAS #	Chemical Abstract Service number - used to uniquely identify chemical compounds
	CNS	Central Nervous System
	EC No.	EC No - European Community Number
	GHS	Globally Harmonized System
	IARC	International Agency for Research on Cancer
	LD50	Lethal Dose, 50% / Median Lethal Dose
	mg/m ³	Milligrams per Cubic Metre
	OEL	Occupational Exposure Limit
	PEL	Permissible Exposure Limit
	pH	relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
	ppm	Parts Per Million
	REACH	Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals
	STEL	Short-Term Exposure Limit
	STOT-RE	Specific target organ toxicity (repeated exposure)
	STOT-SE	Specific target organ toxicity (single exposure)
	SUSMP	Standard for the Uniform Scheduling of Medicines and Poisons
	SWA	Safe Work Australia
	TLV	Threshold Limit Value
	TWA	Time Weighted Average

Revision history

Revision	Description
1.0	Initial SDS Creation

Report status

This document has been compiled by RMT on behalf of the manufacturer, importer or supplier of the product and serves as their Safety Data Sheet ('SDS').

It is based on information concerning the product which has been provided to RMT by the manufacturer, importer or supplier or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer, importer or supplier.

While RMT has taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, RMT accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS.

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End of SDS