MATERIAL SAFETY DATA SHEET

PRODUCT NAME **WHITE LITHIUM GREASE**

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Supplier Name	**CRC INDUSTRIES (AUST) PTY LIMITED**
Address	9 Gladstone Road, Castle Hill, NSW, AUSTRALIA, 2154
Telephone	(02) 9849 6700
Fax	(02) 9680 4914
Emergency	131 126
Email	info@crcind.com.au
Web Site	http://www.crcind.com.au/
Synonym(s)	5037 - MANUFACTURER'S CODE • WHITE LITHIUM GREASE AEROSOL • CRC WHITE LITHIUM GREASE
Use(s)	GREASE • LUBRICANT • LUBRICANT - AEROSOL
MSDS Date	01 January 2006

2. HAZARDS IDENTIFICATION

NOT CLASSIFIED AS HAZARDOUS ACCORDING TO NOHSC CRITERIA

CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE

UN No.	1950	**DG Class**	2.1	**Subsidiary Risk(s)**	None Allocated
Pkg Group	None Allocated	**Hazchem Code**	2Y	**EPG**	2D1

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	Formula	CAS No.	Content
LIQUEFIED PETROLEUM GAS (LPG)	C3H8/C3H6/C4H10	68476-85-7	10-30%
MINERAL OIL - ACID TREATED HEAVY NAPHTHENIC (SEVERE SOLVENT-REFINING AND/OR HYDROTREATMENT)	Not Available	64742-18-3	10-30%
ZINC OXIDE	Zn-O	1314-13-2	<10%
ISOHEXANE	C6-14	107-83-5	30-60%

4. FIRST AID MEASURES

Eye	If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by the Poison Information Centre or 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 the Poisons Information Centre or a doctor.
Ingestion	For advice, contact a Poisons Information Centre or a doctor (at once). If swallowed, do not induce vomiting.
Advice to Doctor	Treat symptomatically

5. FIRE FIGHTING MEASURES

Flammability Highly flammable aerosol. May evolve toxic gases (eg: carbon oxides, hydrocarbons) when heated to decomposition. Vapours may form explosive mixtures in air. Eliminate all ignition sources including cigarettes, open flames, spark producing switches/tools, heaters, naked lights, pilot lights etc. when handling. Aerosol cans may explode when heated above 50℃.

Fire and Explosion Highly flammable - explosive vapour. Evacuate area & contact emergency services. Toxic gases (carbon oxides, hydrocarbons) may be evolved when heated. Remain upwind and notify those downwind of hazard. Wear full protective equipment (see spill above) including Self Contained Breathing Apparatus (SCBA) when combating fire. Use waterfog to cool intact containers and nearby storage areas.

Extinguishing Dry agent, carbon dioxide or foam. Prevent contamination of drains or waterways.

Hazchem Code 2Y

6. ACCIDENTAL RELEASE MEASURES

Spillage If can is punctured, clear area of all unprotected personnel and ventilate area. Wear splash-proof goggles, nitrile/viton gloves, a Type A (Organic vapour) respirator, coveralls and boots. Collect and allow to discharge outdoors. Absorb residues with sand or similar and place in clean containers for disposal.

7. STORAGE AND HANDLING

Storage Store in cool, dry, well ventilated area, removed from direct sunlight, heat & ignition sources, oxidising agents, acids, alkalis & foodstuffs. Ensure aerosol containers are adequately labelled, protected from physical damage and sealed when not in use. Inspect regularly for damaged/ leaking containers. Large storage areas should have appropriate fire protection and ventilation systems.

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 Stds

Ingredient	Reference	TWA		STEL	
		ppm	mg/m3	ppm	mg/m3
Hexane (other isomers)	NOHSC (AUS)	500.0	--	--	--
LIQUEFIED PETROLEUM GAS (LPG)	NOHSC (AUS)	1000.0	1800.0	1000.0	1800.0
Oil mists	NOHSC (AUS)	--	5.0	--	--
Zinc oxide (dust)	NOHSC (AUS)	--	10.0	--	--

Biological Limits No biological limit allocated.

Engineering Controls Do not inhale vapours or spray mists. Use in well ventilated areas. In poorly ventilated areas, mechanical explosion proof extraction ventilation is recommended. Flammable/explosive vapours may accumulate in poorly ventilated areas. Vapours are heavier than air and may travel some distance to an ignition source and flash back. Maintain vapour levels below the recommended exposure standard. Maintain vapour levels below the recommended exposure standard.

PPE Wear splash-proof goggles. When using large quantities or where heavy contamination is likely, wear nitrile or viton (R) gloves and coveralls. Where an inhalation risk exists, wear a Type A-Class P1 (Organic gases/vapours and Particulate) Respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	VISCOUS OFF-WHITE LIQUID (AEROSOL DISPENSED)	**Solubility (water)**	INSOLUBLE
Odour	SOLVENT ODOUR	**Specific Gravity**	0.663

pH	NOT AVAILABLE	**% Volatiles**	70 %
Vapour Pressure	NOT AVAILABLE	**Flammability**	HIGHLY FLAMMABLE
Vapour Density	> 1 (Air = 1)	**Flash Point**	< -5℃
Boiling Point	59℃ (Initial)	**Upper Explosion Limit**	NOT AVAILABLE
Melting Point	NOT AVAILABLE	**Lower Explosion Limit**	NOT AVAILABLE
Evaporation Rate	NOT AVAILABLE	**Autoignition Temperature**	NOT AVAILABLE

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, peroxides), acids (eg. sulphuric acid), strong alkalis (eg. hydroxides), heat and ignition sources.

Decomposition May evolve toxic gases (eg: carbon oxides, hydrocarbons) when heated to decomposition.

Hazardous Reactions Polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

Health Hazard Summary Low to moderate toxicity. Avoid eye contact, prolonged and repeated skin contact and vapour or mist generation - inhalation. The mineral oil contained within this product is highly refined and therefore is not classifiable as to its carcinogenicity in humans (IARC Group 3). Do not deliberately inhale contents or misuse aerosols as they can be fatal.

Eye Low to moderate irritant. Contact may result in irritation, lacrimation, pain and redness.

Inhalation Low irritant - slightly narcotic. Over exposure to vapours/ mists at high levels may result in upper respiratory tract irritation, cough, nausea and headache. At very high levels (poorly ventilated areas) dizziness, drowsiness and breathing difficulties may occur.

Skin Low irritant. Prolonged or repeated contact may result in mild irritation, rash and dermatitis.

Ingestion Low to moderate toxicity. Ingestion may result in nausea, vomiting, abdominal pain and drowsiness with large quantities. Aspiration may result in chemical pneumonitis and pulmonary oedema. Ingestion is considered unlikely due to product form.

Toxicity Data ZINC OXIDE (1314-13-2)
LC50 (Inhalation): 2500 mg/m3 (mouse)
LD50 (Ingestion): 7950 mg/kg (mouse)

12. ECOLOGICAL INFORMATION

Environment Mineral oils biodegrade slowly and should not be released to waterways or soil. They can float on water, restricting oxygen exchange with possible asphyxiation of aquatic life.

13. DISPOSAL CONSIDERATIONS

Waste Disposal For small amounts absorb contents with sand or similar and dispose of to an approved landfill site. Do not puncture or incinerate aerosol cans. Contact the manufacturer for additional information.

Legislation Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION

CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE

Shipping Name	AEROSOLS				
UN No.	1950	**DG Class**	2.1	**Subsidiary Risk(s)**	None Allocated
Pkg Group	None Allocated	**Hazchem Code**	2Y	**EPG**	2D1

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 Drugs and Poisons (SUSDP).

AICS All chemicals listed on the Australian Inventory of Chemical Substances (AICS).

16. OTHER INFORMATION

Additional Information

MINERAL OILS - SOLVENT REFINED: Animal experiments and human experience have not shown cancer risks when handling solvent refined mineral oils, unlike non refined mineral oils. CLEANING MINERAL OIL CONTAMINATED CLOTHING: Cleaners are advised that when cleaning oil contaminated clothing it is essential that freshly distilled solvent is used for each batch, including final rinse, as even filtered solvent will leave oil residues.

MINERAL OILS - INJECTION: Where high pressure applications are used the risk of accidental injection under the skin exists and may result in an extremely painful and serious injury requiring immediate medical attention. Depending on the pressure used, mineral oils may be injected a considerable distance below the skin and may cause permanent tissue damage. SEEK IMMEDIATE MEDICAL ATTENTION. EXERCISE EXTREME CARE WHEN USING HIGH PRESSURE EQUIPMENT.

AEROSOL CANS may explode at temperatures approaching 50℃.

ABBREVIATIONS:
ADB - Air-Dry Basis.
BEI - Biological Exposure Indice(s)
CAS# - Chemical Abstract Service number - used to uniquely identify chemical compounds.
CNS - Central Nervous System.
EINECS - European INventory of Existing Commercial chemical Substances.
IARC - International Agency for Research on Cancer.
M - moles per litre, a unit of concentration.
mg/m3 - Milligrams per cubic metre.
NOS - Not Otherwise Specified.
NTP - National Toxicology Program.
OSHA - Occupational Safety and Health Administration.
pH - relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
ppm - Parts Per Million.
RTECS - Registry of Toxic Effects of Chemical Substances.
TWA/ES - Time Weighted Average or Exposure Standard.

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 Chem Alert report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:
The recommendation for protective equipment contained within this Chem Alert 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.

Report Status This document has been compiled by RMT on behalf of the manufacturer of the product and serves as the manufacturer's Material Safety Data Sheet ('MSDS').

It is based on information concerning the product which has been provided to RMT by the manufacturer 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.

While RMT has taken all due care to include accurate and up-to-date information in this MSDS, 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 MSDS.

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End of Report