



MATERIAL SAFETY DATA SHEET

PRODUCT NAME **AEROSTART**

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Supplier Name CRC INDUSTRIES (AUST) PTY LIMITED
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Synonym(s) AEROSTART AEROSOL • 5050 - PRODUCT CODE • CRC AEROSTART • 5051 - PRODUCT CODE • 5052 - PRODUCT CODE
Use(s) ENGINE STARTER
MSDS Date 05 July 2007

2. HAZARDS IDENTIFICATION

CLASSIFIED AS HAZARDOUS ACCORDING TO NOHSC CRITERIA

RISK PHRASES

R45 May cause cancer.
R65 Harmful: May cause lung damage if swallowed.

SAFETY PHRASES

S45 In case of accident or if you feel unwell seek medical advice immediately (show the label where possible).
S53 Avoid exposure - obtain special instructions before use.

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
GASOLINE	Not Available	8006-61-9	>60%
DIETHYL ETHER	C4-H10-O	60-29-7	10-30%
ETHANOL	C2-H6-O	64-17-5	<10%
CARBON DIOXIDE (PROPELLANT)	Not Available	124-38-9	<10%

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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. To protect rescuer, use a Type A (Organic vapour) respirator or Air-line respirator (in poorly ventilated areas). 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 Poison Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If swallowed, do not induce vomiting. Ingestion is considered unlikely due to product form.
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, pilot lights, mobile phones etc. when handling. Aerosol cans may explode above 50°C.
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, viton/nitrile/neoprene gloves, a Type A-Class P1 (Organic vapour, Particulate) respirator (where an inhalation risk exists) and coveralls. Collect and allow to discharge outdoors. Absorb residues with sand or similar and place in clean containers for disposal.
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7. STORAGE AND HANDLING

Storage	Store in cool (< 50°C), dry, well ventilated area, removed from sunlight, heat & ignition sources, oxidising agents, acids, alkalis and foodstuffs. Ensure aerosol containers/ cans 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 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
	Ethanol	NOHSC (AUS)	1000.0	1880.0	--	--
	Ethyl ether	NOHSC (AUS)	400.0	1210.0	500.0	1520.0
	CARBON DIOXIDE (PROPELLANT)					
	ES-STEL :	30,000 ppm (54,000 mg/m3)				
	ES-TWA:	5,000 ppm (9,000 mg/m3)				
	GASOLINE					
	ES-TWA:	900 mg/kg (Petrol)				
	WES-TWA:	300-ppm (890 mg/m3)				

Biological Limits No biological limit allocated.

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Engineering Controls Do not inhale vapours. Use in well ventilated areas. In poorly ventilated areas, mechanical explosion proof extraction ventilation is recommended. Flammable vapours may accumulate in poorly ventilated or confined 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.

PPE Wear splash-proof goggles and neoprene or nitrile gloves. At high vapour levels, wear a Type A-Class P1 (Organic gases/vapours and Particulate) Respirator.



9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	CLEAR COLOURLESS LIQUID (AEROSOL DISPENSED)	Solubility (water)	SLIGHTLY SOLUBLE
Odour	ETHER-LIKE ODOUR	Specific Gravity	0.75
pH	NOT RELEVANT	% Volatiles	95 %
Vapour Pressure	300 mm Hg @ 20°C	Flammability	HIGHLY FLAMMABLE
Vapour Density	> 1 (Air = 1)	Flash Point	-45°C
Boiling Point	35°C	Upper Explosion Limit	48.0 %
Melting Point	NOT AVAILABLE	Lower Explosion Limit	1.9 %
Evaporation Rate	NOT AVAILABLE	Autoignition Temperature	< 500°C

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 is not expected to occur.

11. TOXICOLOGICAL INFORMATION

Health Hazard Summary Low to moderate toxicity - irritant. This product may only have the potential to cause adverse health effects if intentionally misused (eg. deliberately inhaling contents). Over exposure may result in adverse effects to the central nervous system. Use safe work practices to avoid eye or skin contact and vapour inhalation.

Eye Irritant. Contact may result in irritation, lacrimation, pain and redness.

Inhalation Irritant. Inhalation may cause irritation to the respiratory system, nose and throat irritation, coughing, and headache. Over exposure may result in nausea, dizziness and drowsiness.

Skin Irritant. Contact may result in drying and defatting of the skin, 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
DIETHYL ETHER (60-29-7)
LC50 (Inhalation): 31000 ppm/30 minutes (mouse)
LD50 (Ingestion): 1215 mg/kg (rat)
LD50 (Skin): > 20 mL/kg (rabbit)
ETHANOL (64-17-5)
LC50 (Inhalation): 20000 ppm/10 hours (rat)
LD50 (Ingestion): 3450 mg/kg (mouse)

12. ECOLOGICAL INFORMATION

Environment Aliphatic hydrocarbons behave differently in the environment depending on their size. WATER: Light aliphatics volatilise rapidly from water (half life - few hours). Bioconcentration should not be significant. SOIL: Light aliphatics biodegrade quickly in soil and water, heavy aliphatics biodegrade very slowly. ATMOSPHERE: Vapour-phase aliphatics will degrade by reaction with hydroxyl radicals.

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 Classified as a Schedule 5 (S5) Poison 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 AEROSOL CANS may explode at temperatures approaching 50°C.

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.

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:

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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