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## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

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### 1.1 Product identifier

**Product name** 18V BATTERY 6.0AH HEAVY DUTY

**Synonyms** CBBAT18 - ITEM NUMBER • LITHIUM ION RECHARGEABLE BATTERY • LITHIUM ION RECHARGEABLE BATTERY (BATTERY PACKS AND PRODUCTS WITH LITHIUM ION CELLS)

### 1.2 Uses and uses advised against

**Uses** BATTERIES

### 1.3 Details of the supplier of the product

**Supplier name** RAMSETREID (A DIVISION OF ITW AUSTRALIA PTY LTD) (RAMSET)

**Address** 1 Ramset Dve, Chimside Park , VIC, 3116, AUSTRALIA

**Telephone** 1300 780 063

**Fax** 1300 780 122

**Email** [enquiry@ramset.com.au](mailto:enquiry@ramset.com.au)

**Website** [www.ramset.com.au](http://www.ramset.com.au)

### 1.4 Emergency telephone numbers

**Emergency** 1800 039 008

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## 2. HAZARDS IDENTIFICATION

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### 2.1 Classification of the substance or mixture

NOT CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

### 2.2 GHS Label elements

No signal word, pictograms, hazard or precautionary statements have been allocated.

### 2.3 Other hazards

Do not short circuit, recharge, puncture, incinerate, crush, immerse, force discharge or expose to temperatures above the declared operating temperature range of the product. Risk of fire or explosion. The Lithium batteries described in this Safety Data Sheet are sealed units which are not hazardous when used according to the recommendations of the manufacturer.

Under normal conditions of use, the electrode materials and liquid electrolyte they contain are not exposed to the outside, provided the battery integrity is maintained and seals remain intact. Exposure may occur as a result of external environmental conditions or in cases of abuse (mechanical, thermal, electrical) which lead to the activation of safety pressure relief valve(s) and/or cause a rupture of the battery container. Electrolyte leakage, electrode materials reaction with moisture/water or battery vent/explosion/fire may follow, depending upon the circumstances.

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## 3. COMPOSITION/ INFORMATION ON INGREDIENTS

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### 3.1 Substances / Mixtures

Ingredient	CAS Number	EC Number	Content
CARBON	7440-44-0	231-153-3	Not Available
GRAPHITE	7782-42-5	231-955-3	Not Available
LITHIUM OXIDE	12057-24-8	235-019-5	Not Available
LITHIUM PHOSPHATE	10377-52-3	233-823-0	Not Available
ORGANIC SOLVENT(S)	-	-	Not Available
POLYVINYLDIENE FLUORIDE	-	-	Not Available
LITHIUM ION MANGANESE OXIDE	-	-	Not Available

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LITHIUM SALT(S)

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Not Available

**Ingredient Notes** The product does not contain metallic lithium or lithium alloys.

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**4. FIRST AID MEASURES**

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**4.1 Description of first aid measures**

<b>Eye</b>	Exposure is considered unlikely unless casing is damaged. Flush gently with running water. Seek medical attention if irritation develops.
<b>Inhalation</b>	Exposure is considered unlikely. Due to product form / nature of use, an inhalation hazard is not anticipated.
<b>Skin</b>	Exposure is considered unlikely unless casing is damaged. Gently flush affected areas with water. Seek medical attention if irritation develops.
<b>Ingestion</b>	For advice, contact a Poisons 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. Rinse mouth with water.
<b>First aid facilities</b>	Eye wash facilities should be available.

**4.2 Most important symptoms and effects, both acute and delayed**

Adverse effects not expected from this product. Exposure to battery contents may cause irritation and potential burns.

**4.3 Immediate medical attention and special treatment needed**

Treat symptomatically.

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**5. FIRE FIGHTING MEASURES**

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**5.1 Extinguishing media**

Dry agent. Do NOT use water. Prevent contamination of drains and waterways.

**5.2 Special hazards arising from the substance or mixture**

Contents react with water. May explode if exposed to high temperatures due to pressure build up in battery casing. Lithium may burn in a fire situation and may be ejected from the battery. Damaged cells may evolve toxic and flammable vapours. Exposure to fire or temperature above 130 °C may cause explosion.

**5.3 Advice for firefighters**

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.

**5.4 Hazchem code**

4W

4 Dry Agent (water MUST NOT be allowed to come into contact with substance).

W Risk of violent reaction or explosion. Wear liquid-tight chemical protective clothing and breathing apparatus. Contain spill and run-off.

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**6. ACCIDENTAL RELEASE MEASURES**

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**6.1 Personal precautions, protective equipment and emergency procedures**

Wear Personal Protective Equipment (PPE) as detailed in section 8 of the SDS.

**6.2 Environmental precautions**

Prevent product from entering drains and waterways.

**6.3 Methods of cleaning up**

If spilt, collect and reuse where possible. If battery is broken or damaged, absorb liquid with sand or similar. Contain spillage, then collect and place in suitable containers for disposal. CAUTION: Avoid exposure to contents.

**6.4 Reference to other sections**

See Sections 8 and 13 for exposure controls and disposal.

## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Before use carefully read the product label. Take measures to prevent exposure to electrostatic discharge. Keep away from naked flames.

### 7.2 Conditions for safe storage, including any incompatibilities

Store tightly sealed in a cool, dry, well ventilated area, removed from water, incompatible substances, heat or ignition sources and foodstuffs. Ensure containers are adequately labelled, protected from physical damage and sealed when not in use. Check regularly for leaks or spills. Store below 50°C.

### 7.3 Specific end uses

No information provided.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1 Control parameters

#### Exposure standards

Ingredient	Reference	TWA		STEL	
		ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Fluorides, as F	SWA [AUS]	--	2.5	--	--
Graphite (all forms except fibres)	SWA [AUS]	--	3	--	--
Manganese, dust & compounds (as Mn)	SWA [AUS]	--	1	--	--
Manganese, fume (as Mn)	SWA [AUS]	--	1	--	3

### Biological limits

No biological limit values have been entered for this product.

### 8.2 Exposure controls

**Engineering controls** No special precautions are normally required when handling this product. Maintain vapour levels below the recommended exposure standard.

### PPE

<b>Eye / Face</b>	Not required under normal conditions of use.
<b>Hands</b>	Wear PVC or rubber gloves.
<b>Body</b>	Not required under normal conditions of use.
<b>Respiratory</b>	Not required under normal conditions of use.



## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

<b>Appearance</b>	ENCLOSED BATTERY
<b>Odour</b>	SLIGHT ODOUR
<b>Flammability</b>	NON FLAMMABLE
<b>Flash point</b>	NOT RELEVANT
<b>Boiling point</b>	NOT AVAILABLE
<b>Melting point</b>	NOT AVAILABLE
<b>Evaporation rate</b>	NOT AVAILABLE
<b>pH</b>	NOT AVAILABLE
<b>Vapour density</b>	NOT AVAILABLE
<b>Specific gravity</b>	NOT AVAILABLE
<b>Solubility (water)</b>	INSOLUBLE
<b>Vapour pressure</b>	NOT AVAILABLE
<b>Upper explosion limit</b>	NOT AVAILABLE
<b>Lower explosion limit</b>	NOT AVAILABLE

**9.1 Information on basic physical and chemical properties**

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

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**10. STABILITY AND REACTIVITY**

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**10.1 Reactivity**

Carefully review all information provided in sections 10.2 to 10.6.

**10.2 Chemical stability**

Stable under recommended conditions of storage.

**10.3 Possibility of hazardous reactions**

Polymerization will not occur.

**10.4 Conditions to avoid**

Heat above 70°C or incinerate. Deform. Mutilate. Crush. Pierce. Disassemble. Recharge. Short circuit. Expose over a long period to humid conditions. If an upper temperature limit of (e.g. 130°C) is exceeded, the batteries are in danger of bursting.

**10.5 Incompatible materials**

Battery contents are incompatible with water (evolving flammable gas), oxidising agents (e.g. hypochlorites), acids (e.g. nitric acid), alkalis (e.g. sodium hydroxide), heat and ignition sources.

**10.6 Hazardous decomposition products**

May evolve hydrogen and lithium oxides when heated to decomposition.

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**11. TOXICOLOGICAL INFORMATION**

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**11.1 Information on toxicological effects**

<b>Acute toxicity</b>	No specific acute toxicity data exists for this product. Batteries consist of a hermetically sealed metallic container containing a number of chemicals and materials of construction that may be hazardous upon release. Over exposure considered unlikely unless battery ruptures and contact with contents occurs. Contents may be harmful.
<b>Skin</b>	Not classified as a skin irritant unless the battery ruptures. Contact with contents may cause irritation, redness, dermatitis and possible burns with prolonged contact.
<b>Eye</b>	Not classified as an eye irritant unless the battery ruptures. Contact with contents may cause irritation, redness and possible burns with prolonged contact.
<b>Sensitisation</b>	Not classified as causing skin or respiratory sensitisation.
<b>Mutagenicity</b>	No evidence of mutagenic effects.
<b>Carcinogenicity</b>	No evidence of carcinogenic effects.
<b>Reproductive</b>	No relevant or reliable studies were identified.
<b>STOT - single exposure</b>	Not classified as causing organ damage from single exposure. Due to the product form and nature of use, exposure to internal contents is not anticipated unless the battery ruptures. Exposure to contents may cause respiratory irritation.
<b>STOT - repeated exposure</b>	Not expected to cause organ effects from repeated exposure. Due to the product form and nature of use, exposure to internal contents is not anticipated unless the battery ruptures.
<b>Aspiration</b>	Not relevant.

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**12. ECOLOGICAL INFORMATION**

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**12.1 Toxicity**

This product may be hazardous to the environment if not properly used or disposed of. Do not let internal components enter the marine environment. Avoid release to waterways, wastewater or ground water.

**12.2 Persistence and degradability**

This product is not readily biodegradable.

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**12.3 Bioaccumulative potential**

Limited information was available at the time of this review.

**12.4 Mobility in soil**

This product has low mobility in soil.

**12.5 Other adverse effects**

No information provided.

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**13. DISPOSAL CONSIDERATIONS**

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**13.1 Waste treatment methods**

**Waste disposal** Reuse or recycle where possible. Return to manufacturer/supplier. Contact your state EPA or the manufacturer for additional information.

**Legislation** Dispose of in accordance with relevant local legislation.

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**14. TRANSPORT INFORMATION**

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



	LAND TRANSPORT (ADG)	SEA TRANSPORT (IMDG / IMO)	AIR TRANSPORT (IATA / ICAO)
<b>14.1 UN Number</b>	3480	3480	3480
<b>14.2 Proper Shipping Name</b>	LITHIUM ION BATTERIES (including lithium ion polymer batteries)	LITHIUM ION BATTERIES (including lithium ion polymer batteries)	LITHIUM ION BATTERIES (including lithium ion polymer batteries)
<b>14.3 Transport hazard class</b>	9	9	9
<b>14.4 Packing Group</b>	None allocated.	None allocated.	None allocated.

**14.5 Environmental hazards**

Not a Marine Pollutant

**14.6 Special precautions for user**

**Hazchem code** 4W

**Other information** Transportations of cells or batteries packed with equipment or contained in equipment have to follow the appropriate regulations for UN3091.

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**15. REGULATORY INFORMATION**

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

**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).

**Classifications** Safework Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals.

**Inventory listings** **AUSTRALIA: AICS (Australian Inventory of Chemical Substances)**  
All components are listed on AICS, or are exempt.  
**EUROPE: EINECS (European Inventory of Existing Chemical Substances)**  
All components are listed on EINECS, or are exempt.  
**UNITED STATES: TSCA (US Toxic Substances Control Act)**  
All components are listed on the TSCA inventory, or are exempt.

## 16. OTHER INFORMATION

### Additional information

**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).

**WORKPLACE CONTROLS AND PRACTICES:** Unless a less toxic chemical can be substituted for a hazardous substance, **ENGINEERING CONTROLS** are the most effective way of reducing exposure. The best protection is to enclose operations and/or provide local exhaust ventilation at the site of chemical release. Isolating operations can also reduce exposure. Using respirators or protective equipment is less effective than the controls mentioned above, but is sometimes necessary.

### PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:

The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as form of product, 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: form of product; 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 report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

### 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
EMS	Emergency Schedules (Emergency Procedures for Ships Carrying Dangerous Goods)
GHS	Globally Harmonized System
GTEPG	Group Text Emergency Procedure Guide
IARC	International Agency for Research on Cancer
LC50	Lethal Concentration, 50% / Median Lethal Concentration
LD50	Lethal Dose, 50% / Median Lethal Dose
mg/m <sup>3</sup>	Milligrams per Cubic Metre
OEL	Occupational Exposure Limit
pH	relates to hydrogen ion concentration using a scale of 0 (highly acidic) to 14 (highly alkaline).
ppm	Parts Per Million
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

### 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.

**PRODUCT NAME 18V BATTERY 6.0AH HEAVY DUTY**

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