

SAFETY DATA SHEET

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier

Product name POWERMITE® PRO
Synonyms POWER MITE PRO

1.2 Uses and uses advised against

Uses BLASTING AGENT • EXPLOSIVES • MINING INDUSTRY

1.3 Details of the supplier of the product

Supplier name DYNO NOBEL ASIA PACIFIC LIMITED
Address 282 Paringa Rd, Gibson Island, Murarrie, QLD, 4172, AUSTRALIA
Telephone (07) 3026 3900
Fax (07) 3026 3999
Website <http://www.dynonobel.com>

1.4 Emergency telephone numbers

Emergency 1800 098 836

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

Physical Hazards

Explosives: Division 1.1

Health Hazards

Serious Eye Damage / Eye Irritation: Category 2A

Environmental Hazards

Not classified as an Environmental Hazard

2.2 GHS Label elements

Signal word DANGER

Pictograms



Hazard statements

H201 Explosive; mass explosion hazard.
H319 Causes serious eye irritation.

Prevention statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P230 Keep wetted.
P234 Keep only in original packaging.
P240 Ground and bond container and receiving equipment.
P250 Do not subject to grinding/shock/friction/rough handling.
P264 Wash thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

PRODUCT NAME POWERMITE® PRO**Response statements**

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P337 + P313 If eye irritation persists: Get medical advice/attention.
 P370 + P372 + P380 + P373 In case of fire: Explosion risk. Evacuate area. DO NOT fight fire when fire reaches explosives.

Storage statements

P401 Store in accordance with relevant site and storage provisions.

Disposal statements

P503 Refer to manufacturer/supplier for information on disposal/recovery/recycling.

2.3 Other hazards

No information provided.

3. COMPOSITION/ INFORMATION ON INGREDIENTS**3.1 Substances / Mixtures**

Ingredient	CAS Number	EC Number	Content
AMMONIUM NITRATE	6484-52-2	229-347-8	>60%
ALUMINIUM	7429-90-5	231-072-3	<10%
SODIUM NITRATE	7631-99-4	231-554-3	<10%
SODIUM PERCHLORATE	7601-89-0	231-511-9	<5%
NON HAZARDOUS INGREDIENTS	Not Available	Not Available	Remainder
WATER	7732-18-5	231-791-2	<10%

4. FIRST AID MEASURES**4.1 Description of first aid measures**

Eye Exposure is considered unlikely unless casing is damaged. Flush gently with running water. Seek medical attention if irritation develops.

Inhalation Due to product form / nature of use, an inhalation hazard is not anticipated.

Skin Exposure is considered unlikely unless casing is damaged. Gently flush affected areas with water. Seek medical attention if irritation develops.

Ingestion For advice, contact a Poisons Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). Due to product form and application, ingestion is considered unlikely.

First aid facilities Eye wash facilities and safety shower should be available.

4.2 Most important symptoms and effects, both acute and delayed

Serious damage may result from explosive fragments.

4.3 Immediate medical attention and special treatment needed

Treat symptomatically. Explosive material. Shrapnel from detonation may cause burns, wounds and bruises - treat symptomatically.

Treatment for nitrates:

1. Give 100% oxygen.
2. In cases of (a) ingestion: use gastric lavage, (b) contamination of skin (unburnt or burnt): continue washing to remove salts.
3. Observe blood pressure and treat hypotension if necessary.
4. When methaemoglobin concentrations exceed 40% or when symptoms are present, give methylene blue 1 to 2 mg/kg body weight in a 1% solution by slow intravenous injection. If cyanosis has not resolved within one hour a second dose of 2 mg/kg body weight may be given. The total dose should not exceed 7 mg/kg body weight as unwanted effects such as dyspnoea, chest pain, vomiting, diarrhoea, mental confusion and cyanosis may occur. Without treatment methaemoglobin levels of 20-30% revert to normal within 3 days.
5. Bed rest is required for methaemoglobin levels in excess of 40%.
6. Continue to monitor and give oxygen for at least two hours after treatment with methylene blue.
7. Consider transfer to centre where haemoperfusion can be performed to remove the nitrates from the blood if the condition of the patient is unstable.
8. Following inhalation of oxides of nitrogen the patient should be observed in hospital for 24 hours for delayed onset of pulmonary oedema.

Further observation for 2-3 weeks may be required to detect the onset of the inflammatory changes of bronchiolitis fibrosa obliterans.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

DO NOT attempt to extinguish burning explosives. Evacuate area immediately. Notify trained emergency response personnel.

5.2 Special hazards arising from the substance or mixture

EXPLOSIVE. Will explode under specific conditions. May evolve toxic gases (carbon/ nitrogen oxides, ammonia, hydrocarbons) when heated to decomposition. Eliminate all ignition sources including cigarettes, open flames, spark producing switches/tools, heaters, naked lights, pilot lights, etc when handling. CAUTION: Will explode if exposed to heat or with heavy impact.

5.3 Advice for firefighters

Evacuate area and contact emergency services. Exposure to heat may result in detonation, however effects are expected to be limited to the package. 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. Do not attempt to fight fire if other explosives are present. Use waterfog to cool unexploded cartridges.

5.4 Hazchem code

E Evacuation of people in and around the immediate vicinity of the incident should be considered.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear Personal Protective Equipment (PPE) as detailed in section 8 of the SDS. Clear area of all unprotected personnel.

6.2 Environmental precautions

Prevent product from entering drains and waterways.

6.3 Methods of cleaning up

Contain spillage, then collect and place in suitable containers for disposal. Eliminate all sources of ignition. Use spark-proof tools and explosion-proof equipment.

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. 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.

7.2 Conditions for safe storage, including any incompatibilities

Store in clean, well ventilated and dry magazine licensed for Class 1 Explosives. Segregate from all incompatible substances and foodstuffs. Ensure magazines are adequately labelled and protected from physical damage/shock or friction. The process of deterioration is a gradual breaking down of the emulsion phase together with crystallisation and caking of ammonium nitrate. If there are signs of deterioration the product should be test fired before use.

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 ³	ppm	mg/m ³
Aluminium & compounds	SWA [Proposed]	--	1	--	--
Aluminium (metal dust)	SWA [AUS]	--	10	--	--

Biological limits

Ingredient	Reference	Determinant	Sampling Time	BEI
AMMONIUM NITRATE	ACGIH BEI	Methemoglobin in blood	During or end of shift	1.5% of hemoglobin

8.2 Exposure controls

Engineering controls Avoid inhalation. Use in well ventilated areas.

PPE

- Eye / Face** Wear safety glasses.
- Hands** Wear PVC or rubber gloves.
- Body** Wear coveralls.
- Respiratory** Not required under normal conditions of use.



9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	GREY TO CREAM SOLID (CARTRIDGE ENCLOSED)
Odour	FAINT ODOUR
Flammability	EXPLOSIVE
Flash point	NOT RELEVANT
Boiling point	NOT AVAILABLE
Melting point	NOT AVAILABLE
Evaporation rate	NOT AVAILABLE
pH	NOT AVAILABLE
Vapour density	NOT AVAILABLE
Relative density	NOT AVAILABLE
Solubility (water)	SOLUBLE
Vapour pressure	NOT AVAILABLE
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	EXPLOSIVE
Oxidising properties	NOT AVAILABLE
Odour threshold	NOT AVAILABLE

10. STABILITY AND REACTIVITY

10.1 Reactivity

Explosive material. Detonation may occur from heavy impact or excessive heating, particularly under confinement.

10.2 Chemical stability

Stable under recommended conditions of storage.

10.3 Possibility of hazardous reactions

Polymerization is not expected to occur.

10.4 Conditions to avoid

Avoid shock, friction, heavy impact, heat, sparks, open flames and other ignition sources.

10.5 Incompatible materials

May detonate if heated strongly or exposed to severe shock. Due to enclosed form, reaction with other materials is unlikely, however avoid contact with acids (e.g. nitric acid), metal powders, combustibles and oxidisers. Also incompatible with tetranitromethane, bromates, chlorates, chlorites, chloroisocyanurate and any inorganic nitrite.

10.6 Hazardous decomposition products

May evolve toxic gases (carbon/ nitrogen oxides, ammonia, hydrocarbons) when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity Based on available data, the classification criteria are not met. **WARNING:** May explode with shock, heat, friction or static charge. Serious damage may result from explosive fragments.

Information available for the ingredients:

Ingredient	Oral LD50	Dermal LD50	Inhalation LC50
AMMONIUM NITRATE	2217 mg/kg (rat)	> 5000 mg/kg (rat)	--
SODIUM NITRATE	3430 mg/kg (rat)	> 5000 mg/kg (rat)	--
SODIUM PERCHLORATE	2100 mg/kg (rat)	--	--

Skin Contact with contents/fumes may result in irritation, redness, pain, rash and dermatitis. Due to product form (enclosed), the potential for exposure to contents is not anticipated. Serious damage may result from explosive fragments.

Eye Contact with contents/fumes may cause discomfort, lacrimation and redness. Due to product form (enclosed), the potential for exposure to contents is not anticipated. Serious damage may result from explosive fragments.

Sensitisation Not classified as causing skin or respiratory sensitisation.

Mutagenicity Not classified as a mutagen.

Carcinogenicity Not classified as a carcinogen.

Reproductive Not classified as a reproductive toxin.

STOT - single exposure Not classified as causing organ damage from single exposure. However, serious damage may result from explosive fragments. Over exposure to nitrates may result in methaemoglobinemia (inability of the blood to transport oxygen) with symptoms including cyanosis (bluish discolouration of the skin) headache, dizziness and fatigue.

STOT - repeated exposure Not classified as causing organ damage from repeated exposure. Adverse effects are generally associated with single exposure.

Aspiration Not classified as causing aspiration.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

12.2 Persistence and degradability

No information provided.

12.3 Bioaccumulative potential

No information provided.

12.4 Mobility in soil

No information provided.

12.5 Other adverse effects

Ammonium nitrate is a nutrient in water. Spills can cause massive algal blooms in static waters and affect local species population balance in the aquatic environment. If water is used to disperse ammonium nitrate spilled on soil, the solution produced can end up in the groundwater. Ammonium nitrate will be taken up by bacteria. Nitrate is more persistent in water than the ammonium ion.

13. DISPOSAL CONSIDERATIONS

PRODUCT NAME POWERMITE® PRO

13.1 Waste treatment methods

Waste disposal Waste must be disposed of in accordance with AS2187.2 as well as state regulatory and environmental legislation. Small quantities of damaged or deteriorated material may be destroyed by inclusion in a blast hole containing good explosives (by licensed personnel). Detonators should not be inserted into defective explosives. For large quantities, contact the manufacturer/supplier 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



	LAND TRANSPORT (ADG)	SEA TRANSPORT (IMDG / IMO)	AIR TRANSPORT (IATA / ICAO)
14.1 UN Number	0241	0241	PROH
14.2 Proper Shipping Name	EXPLOSIVE, BLASTING, TYPE E	EXPLOSIVE, BLASTING, TYPE E	Air transport PROHIBITED under the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air in passenger and cargo aircraft.
14.3 Transport hazard class	1.1D	1.1D	None allocated.
14.4 Packing Group	None allocated.	None allocated.	None allocated.

14.5 Environmental hazards

Not a Marine Pollutant.

14.6 Special precautions for user

Hazchem code E
GTEPG EXP1
EmS F-B, S-X

15. REGULATORY INFORMATION

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 Safe Work Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals (GHS Revision 7).

Inventory listings **AUSTRALIA: AIIC (Australian Inventory of Industrial Chemicals)**
All components are listed on AIIC, or are exempt.

16. OTHER INFORMATION

Additional information

DISCLAIMER: The information provided herein concern explosive products which should only be handled by persons having the appropriate technical expertise, training, and licence(s). The result is largely dependent upon the conditions of storage, transportation and use.

Whilst Dyno Nobel Asia Pacific make every effort to ensure the information contained within this SDS is as accurate and up-to-date as possible, the conditions under which its products are used are not within Dyno Nobel Asia Pacific's control. Each user has the responsibility to ensure awareness of the details contained within this SDS, the product applications, and the specific context of the intended usage. Buyers and users assume all risk, responsibility and liability arising from the use of this product and the information within this SDS. Dyno Nobel Asia Pacific is not responsible for damages of any nature resulting from the use of its products or reliance upon the information. Dyno Nobel Asia Pacific makes no express or implied warranties other than those implied mandatory by the Commonwealth, State or Territory Legislation.

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EXPLOSIVES & BLASTING AGENTS: Refer to Local State and Federal legislation that specifically relates to the use of Explosives. Users of products described in this ChemAlert Report are advised to ensure familiarity and compliance with the appropriate legal requirements (e.g. Regulations) prior to the use of this product. Where any further information is required, users may contact their local authority in Explosives and Dangerous Goods.

EXPLOSIONS: Fires involving explosives or explosive mixtures may undergo further explosions and rapid propagation. Police and emergency personnel should be notified immediately. Evacuate individuals to a safe sheltered area and if possible remove vehicles and further heat and ignition sources from the area. Consult with emergency services to determine evacuation distance and suitable re-entry time.

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 ³	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

PRODUCT NAME POWERMITE® PRO

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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