

SAFETY DATA SHEET

DYNO[®]
Dyno Nobel

POWERMITE[®] PRO

Infosafe No.: LPWFI
ISSUED Date: 08/04/2016
Issued by: Dyno Nobel Asia Pacific Pty
Limited

1. IDENTIFICATION

GHS Product Identifier

POWERMITE[®] PRO

Product Code

Company Name

Dyno Nobel Asia Pacific Pty Limited

Address

282 Paringa Road
Gibson Island
Murarrie, QLD 4172
Australia

Telephone/Fax Number

Tel: (07) 3026 3900
Fax: (07) 3026 3999

Emergency phone number

1800 098 836

Recommended use of the chemical and restrictions on use

Mining, quarrying and general blasting work.

2. HAZARD IDENTIFICATION

GHS classification of the substance/mixture

Classified as Hazardous according to the Globally Harmonised System of Classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia

Classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)

Explosives: Division 1.1

Eye Damage/Irritation: Category 2A

Signal Word (s)

DANGER

Hazard Statement (s)

H201 Explosive; mass explosion hazard.

H319 Causes serious eye irritation.

Pictogram (s)

Exploding bomb, Exclamation mark

**Precautionary statement – Prevention**

P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
P230 Keep wetted with
P240 Ground/bond container and receiving equipment.
P250 Do not subject to grinding/shock/friction.
P264 Wash contaminated skin thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statement – Response

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+P380 In case of fire: Evacuate area.
P372 Explosion risk in case of fire.
P373 DO NOT fight fire when fire reaches explosives.

Precautionary statement – Storage

P401 Store in accordance with supplier

Precautionary statement – Disposal

P501 Dispose of contents/container to an approved waste disposal plant.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Name	CAS	Proportion
Ammonium Nitrate	6484-52-2	60-100 %
Ingredients determined not to be hazardous		Balance

4. FIRST-AID MEASURES

Inhalation

If inhaled, remove affected person from contaminated area. Keep at rest until recovered. If symptoms develop and/or persist seek medical attention.
Unlikely route of exposure unless detonator is fired.

Ingestion

Not considered a potential route of exposure for intact product, when used as intended.
Unlikely route of exposure unless detonator is fired.

Skin

Not considered a potential route of exposure for intact product, when used as intended.
If the sealed unit is damaged and exposure occurs: Wash affected area thoroughly with soap and water. If symptoms develop seek medical attention.
Unlikely route of exposure unless detonator is fired.

Eye contact

Not considered a potential route of exposure for intact product, when used as intended. If the sealed unit is damaged and exposure occurs: If in eyes, hold eyelids apart and flush the eyes continuously with running water. Remove contact lenses. Continue flushing for several minutes until all contaminants are washed out completely. Seek medical attention.
Unlikely route of exposure unless detonator is fired.

First Aid Facilities

Eyewash, safety shower and normal washroom facilities.

Advice to Doctor

Treat symptomatically.

Other Information

For advice in an emergency, contact a Poisons Information Centre (Phone Australia 131 126) or a doctor at once.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

DO NOT FIGHT FIRES. Immediately isolate area and evacuate personnel to a safe distance

Hazards from Combustion Products

Under fire conditions this product may emit toxic and/or irritating fumes including ammonia, oxides of nitrogen, carbon monoxide and carbon dioxide.

Specific Hazards Arising From The Chemical

Explosive material. In case of a small fire, if actual explosive is not burning, carefully remove as much explosive as possible to a safe distance. However if explosive is burning, evacuate area immediately. DO NOT fight fire. Decomposes on heating emitting irritating white fumes of nitrous oxides and ammonium nitrate mist. Brown fumes indicate the presence of toxic oxides of nitrogen.

Extreme risk of explosion by shock, friction, fire or other sources of ignition. In case of fire: Evacuate area. DO NOT fight fire when fire reaches explosives.

Hazchem Code

E

Decomposition Temperature

Not available

Precautions in connection with Fire

DO NOT FIGHT EXPLOSIVES FIRES. Try to keep fire from reaching explosives. Isolate area and evacuate personnel to a safe place.

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures

Wear appropriate personal protective equipment and clothing to minimise exposure. Clear area of all unprotected personnel. Shut off all ignition sources. Use spark free shovels.

Avoid breathing fumes or gases from detonation of explosives. Notify authorities in accordance with emergency response procedures. Only personnel trained in emergency response should respond. If no fire danger is present, and product is undamaged and/or uncontaminated, repackage product in original packaging or other clean approved container. Ensure that a complete account of product has been made and is verified. If loose explosive powder is spilled, such as from a broken detonator, only properly qualified and authorised personnel should be involved with handling and clean-up activities. Spilled explosive powder is extremely sensitive to initiation and may detonate. Dispose of waste according to applicable local and national regulations. If contamination of sewers or waterways occurs inform the local water and waste management authorities in accordance with local regulations.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Use smallest possible amounts in designated areas with adequate ventilation. Avoid sources of shock, friction, heat and ignition. Avoid contact with oxidising materials. Have emergency equipment (spills, leaks, etc.) readily available. Label containers. Keep containers closed when not in use. Wear appropriate protective equipment to prevent inhalation, skin and eye contact. It is essential that all who come into contact with this material maintain high standards of personal hygiene ie. Washing hands prior to eating, drinking, smoking or using toilet facilities.

Only properly qualified and authorised personnel should handle and use explosives. Handle with great care. Unintended detonation of explosives or explosive devices can cause serious injury or death. Detonation in confined or unventilated areas may result in exposure to hazardous fumes or oxygen deficiency.

Conditions for safe storage, including any incompatibilities

Keep storage area free of sources of shock, friction, heat, ignition and combustible materials.

Store in a cool, dry, well-ventilated area away from sources of ignition, oxidising agents, strong acids, foodstuffs, and clothing. Only properly qualified and authorised personnel should handle and use explosives. Keep containers closed when not in use, securely sealed and protected against physical damage. Inspect regularly for deficiencies such as damage or leaks. Have appropriate fire extinguishers available in and near the storage area. Keep away from heat, sparks, open flames, ignition sources, hot surfaces. Take precautions against static electricity discharges. Use proper grounding procedures. Do not subject materials to impact, friction and strong shock. Avoid any contamination of this material as it is very reactive and any contamination is potentially hazardous. Ensure that storage conditions comply with applicable local and national regulations.

For information on the design of the storeroom, reference should be made to Australian Standard AS 2187 Explosives - Storage, transport and use.

Additional information on precautions for use

Product deterioration: 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.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limit values

No exposure standards have been established for the mixture. However, over-exposure to some chemicals may result in enhancement of pre-existing adverse medical conditions and/or allergic reactions and should be kept to the least possible levels.

The TWA Safe Work, Australia exposure standards for dust not otherwise specified is 10 mg/m³. TWA (Time Weighted Average): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day week.

Biological Limit Values

No biological limits allocated.

Other Exposure Information

As a result of detonation of this product, oxides of nitrogen fumes may be liberated. Nitrogen oxides are skin, eye and respiratory system irritants. Systematic toxicity resulting from oxidation of lung tissue and bronchopneumonia. Acute exposure can lead to death from asphyxia or pulmonary oedema. In animals, nitrogen oxide caused methemoglobinemia, was not carcinogenic, but caused embryotoxicity and reproductive effects.

Carbon dioxide is a colourless, odourless gas. It is a simple asphyxiant, attacking the lungs, skin and cardiovascular system. Concentrations of 5% may produce shortness of breath and headache and concentrations of 10% can produce unconsciousness and death from oxygen deficiency. Adequate ventilation will provide sufficient protection from any carbon dioxide accumulations.

Carbon monoxide is a colourless, odourless, tasteless gas which, when inhaled, combines with haemoglobin to form carboxyhaemoglobin which interferes with the oxygen-carrying capacity of blood. Resulting symptoms include headache, dizziness, drowsiness, nausea, vomiting, collapse, coma and death. Carbon monoxide attacks the central nervous system, lungs, blood and cardiovascular system.

This product contains an asphyxiant and the minimum oxygen content in air should be 19.5% by volume under normal atmospheric pressure.

Do not enter any area where accumulations of these gases are suspected without appropriate breathing apparatus.

Appropriate Engineering Controls

Ensure sufficient ventilation to keep airborne concentrations below exposure limits. Mechanical exhaust ventilation may be required.

Refer to AS 1940 - The storage and handling of flammable and combustible liquids and AS/NZS 60079.10.1:2009 Explosive atmospheres - Classification of areas - Explosive gas atmospheres, for further information concerning ventilation requirements.

Respiratory Protection

If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable filter should be used. Refer to relevant regulations for further information concerning respiratory protective requirements.

Reference should be made to Australian Standards AS/NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

Eye Protection

Safety glasses with side shields, chemical goggles or full-face shield as appropriate should be used. Final choice of appropriate eye/face protection will vary according to individual circumstances. Eye protection devices should conform to relevant regulations.

Eye protection should conform with Australian/New Zealand Standard AS/NZS 1337 - Eye Protectors for Industrial Applications.

Hand Protection

Wear gloves of impervious material such as PE, PVC or neoprene gloves. Final choice of appropriate gloves will vary according to individual circumstances. i.e. methods of handling or according to risk assessments undertaken. Occupational protective gloves should conform to relevant regulations.

Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.

Body Protection

Suitable protective workwear, e.g. cotton overalls buttoned at neck and wrist is recommended. Chemical resistant apron is recommended where large quantities are handled.

9. PHYSICAL AND CHEMICAL PROPERTIES

Properties	Description	Properties	Description
Form	Article	Appearance	Grey to cream mixture, with a faint odour, cartridged into plastic 'sausages' with metal clips at both ends.
Colour	Not available	Odour	faint odour
Decomposition Temperature	Not available	Melting Point	Not available
Boiling Point	Not available	Solubility in Water	Soluble
Specific Gravity	Not available	pH	Not available
Vapour Pressure	Not available	Vapour Density (Air=1)	Not available
Evaporation Rate	Not available	Odour Threshold	Not available
Viscosity	Not available	Partition Coefficient: n-octanol/water	Not available
Flash Point	Not available	Flammability	Explosive. Eliminate all ignition sources.
Auto-Ignition Temperature	Not available	Explosion Limit - Upper	Not available
Explosion Limit - Lower	Not available		

10. STABILITY AND REACTIVITY

Chemical Stability

Explosive material.

Reactivity and Stability

Reacts with incompatible materials

Conditions to Avoid

Avoid sources of heat and incompatible materials.

Incompatible materials

Detonation may occur from heavy impact or excessive heating, particularly under confinement. Avoid contact with any other chemical. Ammonium Nitrate is incompatible with, and must be stored away from, tetranitromethane, dichloroisocyanuric acid, trichloroisocyanuric acid, any bromate, chlorate, chlorite, hypochlorite or chloroisocyanurate or any inorganic nitrite.

Hazardous Decomposition Products

Thermal decomposition may result in the release of toxic and/or irritating fumes including carbon monoxide, carbon dioxide, ammonia and oxides of nitrogen.

Possibility of hazardous reactions

Reacts with incompatible materials

Hazardous Polymerization

Not available

11. TOXICOLOGICAL INFORMATION

Toxicology Information

No toxicity data available for this product.

Ingestion

Ingestion unlikely due to form of product. If the sealed unit is damaged and exposure occurs: Ingestion of this product may irritate the gastric tract causing nausea and vomiting.

Inhalation

Unlikely due to form of product. If the sealed unit is damaged and exposure occurs: Inhalation of dusts may irritate the respiratory system.

Skin

Unlikely due to form of product. If the sealed unit is damaged and exposure occurs: May be irritating to skin. The symptoms may include redness, itching and swelling.

Eye

Unlikely due to form of product. If the sealed unit is damaged and exposure occurs: Causes serious eye irritation. On eye contact this product will cause tearing, stinging, blurred vision, and redness.

Respiratory sensitisation

Not expected to be a respiratory sensitiser.

Skin Sensitisation

Not expected to be a skin sensitiser.

Germ cell mutagenicity

Not considered to be a mutagenic hazard.

Carcinogenicity

Not considered to be a carcinogenic hazard.

Reproductive Toxicity

Not considered to be toxic to reproduction.

STOT-single exposure

Not expected to cause toxicity to a specific target organ.

STOT-repeated exposure

Not expected to cause toxicity to a specific target organ.

Aspiration Hazard

Not expected to be an aspiration hazard.

Other Information

Prolonged or repeated skin contact may cause defatting leading to dermatitis.

12. ECOLOGICAL INFORMATION

Ecotoxicity

No ecological data available for this material.

Persistence and degradability

Not available

Mobility

Not available

Bioaccumulative Potential

Not available

Other Adverse Effects

Not available

Environmental Protection

Do not discharge this material into waterways, drains and sewers.

13. DISPOSAL CONSIDERATIONS

Disposal considerations

Destruction of explosives must be carried out by suitably qualified personnel. If necessary, the relevant statutory authorities must be notified. In all circumstances, detonation is the preferred method of disposal. The explosives to be destroyed must be placed in direct contact with fresh priming charge in a hole and then adequately stemmed. No detonators are to be inserted into defective explosives. Personnel must be evacuated to a safe distance in accordance with relevant local regulations prior to initiation of the charge. NOTE: Detonations in loose or stony ground may be expected to cause fly rock.

14. TRANSPORT INFORMATION

Transport Information

Road and Rail:

This material is classified as Dangerous Goods Class 1 Explosives.

Class 1 Dangerous Goods are incompatible in a placard load with any of the following:

- Division 2.1: Flammable gases
- Division 2.2: Non-flammable Non-toxic Gases
- Division 2.3: Toxic Gases
- Class 3: Flammable Liquids
- Division 4.1: Flammable Solids
- Division 4.2: Spontaneously Combustible Substances
- Division 4.3: Dangerous when wet Substances
- Division 5.1: Oxidising substances
- Division 5.2: Organic Peroxides
- Class 6: Toxic or Infectious Substances
- Class 7: Radioactive materials unless specifically exempted
- Class 8: Corrosive Substances
- Class 9: Miscellaneous substances
- Fire risk substances

Marine Transport (IMO/IMDG):

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

Class/Division: 1.1D

UN No: 0241

Proper Shipping Name: EXPLOSIVE, BLASTING, TYPE E

EMS : F-B,S-X

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

Class/Division: 1.1D

UN No: 0241

Proper Shipping Name: Explosive, blasting, type E

Packaging Instructions (passenger & cargo): Forbidden

Packaging Instructions (cargo only): Forbidden

U.N. Number

0241

UN proper shipping name

EXPLOSIVE, BLASTING, TYPE E

Transport hazard class(es)

1.1D

Packing Group

see "Other information" (*)

Hazchem Code

E

Special Precautions for User

Not available

IERG Number

02

IMDG Marine pollutant

No

Transport in Bulk

Not available

Other Information

(*) Unless specific provision to the contrary is made, the packagings used for explosives shall comply with at least the requirements for solids or liquids (as appropriate) of Packing Group II (medium danger).

Further information related to packaging, IBCS and Unit loads for explosives can be obtained from Australian Explosives Code.

15. REGULATORY INFORMATION

Regulatory information

Classified as Hazardous according to the Globally Harmonised System of Classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia

Not classified as a Scheduled Poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)

Poisons Schedule

Not Scheduled

16. OTHER INFORMATION

Date of preparation or last revision of SDS

MSDS reviewed: April 2016

Supersedes: May 2012

References

Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice

Standard for the Uniform Scheduling of Medicines and Poisons.

Australian Code for the Transport of Dangerous Goods by Road & Rail.

Model Work Health and Safety Regulations, Schedule 10: Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.

Workplace exposure standards for airborne contaminants, Safe work Australia.

American Conference of Industrial Hygienists (ACGIH)

Globally Harmonised System of classification and labelling of chemicals.

Contact Person/Point

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Mt Thorley Technical Centre

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DISCLAIMER: The information and suggestions above concern explosive products which should only be dealt with by persons having appropriate technical skills, training and licences. The results depend to a large degree on the conditions under which the products are stored, transported and used.

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END OF SDS

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