SAFETY DATA SHEET

POWERMITE MAX

Infosafe No.: LQ1D4
ISSUED Date: 18/07/2017
Issued by: Dyno Nobel Asia Pacific Pty Limited

1. IDENTIFICATION

GHS Product Identifier
POWERMITE MAX

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
Explosive cartridge intented for use in hard blasting conditions.

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 suitable material.
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 according to manufacturer's instructions and section 7 of this SDS.

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 %
Water	7732-18-5	10-30 %
Stabilisers		0-10 %
Sodium nitrate	7631-99-4	0-10 %

4. FIRST-AID MEASURES

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

Ingestion
Unlikely route of exposure unless detonator is fired. Do not induce vomiting. Wash out mouth thoroughly with water. Seek immediate medical attention.

Skin
Unlikely route of exposure unless detonator is fired. Wash affected area thoroughly with soap and water. If symptoms develop seek medical attention.

Eye contact
Unlikely route of exposure unless detonator is fired. 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.

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
Use only remote or fixed extinguishing systems (sprinklers).

Hazards from Combustion Products
Under fire conditions this product may emit toxic and/or irritating fumes.

Specific Hazards Arising From The Chemical
Explosion risk in case of fire. Do not fight fire when fire reaches explosives. Evacuate area. If the product ignites then mass cooling by heavy dousing with water should effectively extinguish small fires.

DO NOT FIGHT LARGE FIRES. If a fire becomes established immediately isolate area and evacuate personnel to a safe distance. Toxic fumes may be generated as the product decomposes.

Hazchem Code
E

Decomposition Temperature
Not available

Precautions in connection with Fire
DO NOT fight fire when fire reaches explosives. In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. Use only remote or fixed extinguishing systems (sprinklers).

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures
Shut off all possible ignition sources.

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
Do not drill into the explosive. Have appropriate fire extinguishers available in and near the storage area. Have emergency equipment (for fires, spills, leaks, etc.)

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. Use in designated areas with adequate ventilation. Avoid sources of shock, friction, heat and ignition. Avoid contact with oxidising materials. Detonation in confined or unventilated areas may result in exposure to hazardous fumes or oxygen deficiency. Have emergency equipment (for 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. Maintain high standards of personal hygiene ie. washing hands prior to eating, drinking, smoking or using toilet facilities.

Conditions for safe storage, including any incompatibilities
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.

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.
For dust created after detonations: the TWA exposure standards for dust not otherwise specified is 10 mg/m³. As with all chemicals, exposure should be kept to the lowest possible levels. 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. Source: Safe Work Australia.

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.

Appropriate Engineering Controls
This substance is hazardous and should be used with a local exhaust ventilation system, drawing vapours/particulates away from workers' breathing zone. A flame-proof exhaust ventilation system is required. If the engineering controls are not sufficient to maintain concentrations of vapours/mists below the exposure standards, suitable respiratory protection must be worn. Refer to relevant regulations 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 vapour/particulate 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 neoprene. 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. It is advisable that a local supplier of personal protective clothing is consulted regarding the choice of material.

9. PHYSICAL AND CHEMICAL PROPERTIES

Properties	Description	Properties	Description
Form	Article - Containing Chemical	**Appearance**	Viscous emulsion enclosed in a plastic film in the form of a cartridge.
Colour	Not available	**Odour**	Not available
Decomposition Temperature	Not available	**Melting Point**	Not applicable
Boiling Point	Not applicable	**Solubility in Water**	Insoluble but dispersible with water jets.
Specific Gravity	1.10 +/- 0.05 g/cm³	**pH**	Not applicable
Vapour Pressure	Not applicable	**Vapour Density (Air=1)**	Not applicable
Evaporation Rate	Not available	**Odour Threshold**	Not available
Viscosity	Not available	**Volatile Component**	Not available
Partition Coefficient: n-octanol/water	Not available	**Flash Point**	Not applicable
Auto-Ignition Temperature	Not available	**Flammable Limits - Lower**	Not applicable
Flammable Limits - Upper	Not applicable		

10. STABILITY AND REACTIVITY

Chemical Stability
Explosion risk in case of fire.

Reactivity and Stability
Reacts with incompatible materials.

Conditions to Avoid
Heat, open flames and other sources of ignition. Shock, friction.

Incompatible materials
Oxidising agents.

Hazardous Decomposition Products
Thermal decomposition may result in the release of toxic and/or irritating fumes.

Possibility of hazardous reactions
Highly reactive explosive. When detonated or heated to decomposition, this product will evolve highly toxic gases.

Hazardous Polymerization
Not available

11. TOXICOLOGICAL INFORMATION

Toxicology Information
No toxicity data are available for this specific product. Product form (encased) reduces potential for exposure.

Ingestion
Not a likely source of exposure. However, ingestion of this product may irritate the gastric tract causing nausea and vomiting. Ingestion of large quantities may depress the central nervous system.

Inhalation
Unlikely due to form of product. However, inhalation may cause irritation of the nose, throat and respiratory system.
Due to product encapsulation no inhalation hazard is anticipated until product is detonated or heated to decomposition, evolving nitrogen oxides.

Skin
Product encapsulation minimises skin contact potential, however, contact with contents may cause irritation and skin redness.

Eye
Unlikely due to form of product. However, causes serious eye irritation. On eye contact this product will cause tearing, stinging, blurred vision, and redness. Serious eye damage may result from explosive fragments.

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.

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 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

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
SDS Reviewed: July 2017
Supersedes: June 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.
Adopted biological exposure determinants, American Conference of Industrial Hygienists (ACGIH).
Globally Harmonised System of classification and labelling of chemicals.

Contact Person/Point
Dyno Nobel Asia Pacific Limited
Telephone: (07) 3026 3900
Fax: (07) 3026 3999
Emergency: 1800 098 836

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