

SAFETY DATA SHEET

DYNO[®]
Dyno Nobel

DYNOSPLIT PRO

Infosafe No.: LQ3XH
ISSUED Date: 07/11/2014
Issued by: Dyno Nobel Asia Pacific Pty
Limited

1. IDENTIFICATION

GHS Product Identifier

DYNOSPLIT 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

Explosive for 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

STOT Repeated Exposure Category 2

Signal Word (s)

DANGER

Hazard Statement (s)

H201 Explosive; mass explosion hazard.

H319 Causes serious eye irritation.

H373 May cause damage to organs through prolonged or repeated exposure

Pictogram (s)

Exploding bomb, Exclamation mark, Health hazard



Precautionary statement – Prevention

- P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
- P230 Keep wetted with water.
- P240 Ground/bond container and receiving equipment.
- P250 Do not subject to grinding/shock/friction.
- P260 Do not breathe dust/mist/vapours/spray.
- P264 Wash hands thoroughly after handling.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statement – Response

- P314 Get medical advice/attention if you feel unwell.
- P370+P380 In case of fire: Evacuate area.
- P372 Explosion risk in case of fire.
- P373 DO NOT fight fire when fire reaches explosives.
- EYES
- 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.

Precautionary statement – Storage

- P401 Store in accordance with AS 2187.1-1998 Explosives - Storage, transport and use - Storage.

Precautionary statement – Disposal

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

Supplemental Information

The information under this heading is not mandatory under WHS Regulations. It is provided as information on other GHS hazard classes and categories and/or environmental hazards that are outside the scope of the WHS Regulations.

GHS classification: Hazardous to the Aquatic Environment - Acute Hazard: Category 2. Hazard statement: H401. Precautionary statement: P273.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Name	CAS	Proportion
Ammonium Nitrate	6484-52-2	>60-100 %
Sodium perchlorate	7601-89-0	0-<10 %
Pentaerythritol tetranitrate (PETN)	78-11-5	0-<10 %
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.

Ingestion

If swallowed, do NOT induce vomiting. Wash out mouth with water. Seek medical attention.

Skin

If on skin, Wash affected area thoroughly with soap and water. If symptoms develop seek medical attention.

Eye contact

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

Eye wash, 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 including oxides of nitrogen, carbon monoxide and carbon dioxide.

Specific Hazards Arising From The Chemical

Explosion risk in case of fire. 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 attempt to fight fires involving explosive materials. In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. Use only remote or fixed extinguishing systems (sprinklers). In case of small fire where the actual explosive is not involved, carefully remove explosive to a safe distance, otherwise evacuate area immediately and allow to burn. An adjacent detonation may also involve the risk of explosion.

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures

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. 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

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. 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, hot surfaces. Take precautions against static electricity discharges. Do not subject to friction. Use proper grounding procedures. Ensure that storage conditions comply with applicable local and national regulations. Avoid any contamination of this material. Reference should be made to AS 2187.2-2006 Explosives - Storage, transport and use - Storage. Reference should also be made to all Local, State and Federal regulations.

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.

Biological Limit Values

No biological limit allocated.

Appropriate Engineering Controls

Use only in a well ventilated area. Where dust/mist/vapour are generated and/or natural ventilation is inadequate, a local exhaust ventilation system is recommended.

Respiratory Protection

If engineering controls are not effective in controlling airborne exposure then suitable respiratory protective equipment should be used. 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. Final choice of appropriate respiratory protection will vary according to individual circumstances. This can include methods of handling, and engineering controls as determined by appropriate risk assessments.

Eye Protection

Safety glasses with side shields or goggles should be worn as described in Australian Standard AS/NZS 1337 - Eye Protectors for Industrial Applications. Final choice of appropriate eye/face protection will vary according to individual circumstances. This can include methods of handling, and engineering controls as determined by appropriate risk assessments.

Hand Protection

Wear gloves of impervious material. Final choice of appropriate gloves will vary according to individual circumstances i.e. methods of handling or according to risk assessments undertaken. Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.

Body Protection

Suitable workwear should be worn to protect personal clothing, e.g. cotton overalls buttoned at neck and wrist. When large quantities are handled the use of plastic aprons and rubber boots is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Properties	Description	Properties	Description
Form	Article/ solid/ gel	Appearance	Whitish emulsion
Colour	Whitish	Odour	Negligible
Decomposition Temperature	Not available	Melting Point	Not applicable
Boiling Point	Not available	Solubility in Water	Insoluble
Specific Gravity	Not available	pH	Not applicable
Vapour Pressure	Not applicable	Vapour Density (Air=1)	Not applicable
Evaporation Rate	Not available	Odour Threshold	Not available
Viscosity	Not available	Partition Coefficient: n-octanol/water	Not available
Flash Point	Not applicable	Flammability	May explode in fires.
Auto-Ignition Temperature	Not applicable	Flammable Limits - Lower	Not applicable
Flammable Limits - Upper	Not applicable		

10. STABILITY AND REACTIVITY

Reactivity

Reacts with incompatible materials

Chemical Stability

Explosive material. Detonation may occur from heavy impact or excessive heating, particularly under confinement. When molten may decompose violently due to shock or pressure.

Conditions to Avoid

Avoid exposure to heat, open flame, ignition sources, static electricity discharge and friction. Avoid contact with other chemicals.

Incompatible materials

Strong acids, strong alkalis, combustible materials. Ammonium nitrate is a powerful oxidising agent; it is incompatible with tetranitromethane, dichloroisocyanuric acid, trichloroisocyanuric acid, bromates, chlorates, chlorites, hypochlorites, perchlorates, permanganates, chloroisocyanurate, nitrites, powdered metals.

Hazardous Decomposition Products

Thermal decomposition may result in the release of toxic and/or irritating fumes including carbon monoxide, carbon dioxide and oxides of nitrogen. When heated to decomposition (unconfined) ammonium nitrate produces nitrous oxide, white ammonium nitrate fumes and water. When mixed with strong acids, and occasionally during blasting, it produces an irritating toxic brown gas, mostly of nitrogen dioxide.

Hazardous Polymerization

Will not occur.

11. TOXICOLOGICAL INFORMATION

Toxicology Information

No toxicity data available for this material. The available acute toxicity data for the ingredients is given below.

Acute Toxicity - Oral

AMMONIUM NITRATE:
LD50 (rat): 2217 mg/kg.

Ingestion

Swallowing can result in nausea, vomiting, diarrhoea, and abdominal pain. Swallowing large amounts may result in headaches, dizziness and a reduction in blood pressure (hypotension).

Inhalation

Inhalation of product vapours may cause irritation of the nose, throat and respiratory system. Blasting may produce a toxic brown gas of nitrogen dioxide. Inhalation of the gas may result in chest discomfort, shortness of breath and possible pulmonary oedema, the onset of which may be delayed.

Skin

May be irritating to skin. The symptoms may include redness, itching and swelling. Repeated or prolonged skin contact may lead to irritant contact dermatitis. Can be absorbed through the skin with resultant adverse effects.

Eye

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

May cause damage to organs through prolonged or repeated exposure.

Aspiration Hazard

Not expected to be an aspiration hazard.

Other Information

Absorption of ammonium nitrate by inhalation, ingestion or through burnt or broken skin may cause dilation of blood vessels by direct smooth muscle relaxation and may also cause methaemoglobinaemia. Available evidence from animal studies indicate that repeated or prolonged exposure to a component of this material could result in effects on the thyroid. In humans and animals methaemoglobinaemia has occurred under untreated circumstances following the ingestion of nitrates.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic life. Ammonium nitrate was evaluated at 5, 10, 25 and 50 mg(NH₄⁺)/L. The fertility of *Daphnia magna* was decreased at 50 mg/L. Post embryonic growth of crustacea was impaired at 10, 25 and 50 mg/L.

Persistence and degradability

Not available

Mobility

Not available

Bioaccumulative Potential

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. Contact Dyno Nobel for further information.

14. TRANSPORT INFORMATION

Transport Information

Road and Rail:

Classified as a Class 1 (Explosives) Dangerous Goods according to The Australian Code for the Transport of Dangerous Goods by Road and Rail (7th edition) and Australian Code for the Transport of Explosives (3rd edition).

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 Agents
- Division 5.2, Organic Peroxides
- Class 6, Toxic and Infectious Substances
- Class 7, Radioactive Substances
- Class 8, Corrosive Substances
- Class 9 - Miscellaneous Dangerous Goods
- 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.

Division: 1.1D

Packaging Group: see 'Other information' (*)

EmS: F-B,S-X

UN-No: 0241

Proper Shipping Name: EXPLOSIVE, BLASTING, TYPE E

Special Provision: None

Air Transport (ICAO/IATA):

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

UN-No: 0241

Division: 1.1D

Packaging Group: see 'Other information' (*)

Proper Shipping Name: EXPLOSIVE, BLASTING, TYPE E

Packaging Instructions (cargo): Forbidden

Packaging Instructions (passenger): Forbidden

Special Provision: None

Label: None

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

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 created: November 2014

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

Dyno Nobel Asia Pacific Limited

Mt Thorley Technical Centre

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Fax: +61 2 65 74 6849

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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