

SAFETY DATA SHEET

DYNO[®]
Dyno Nobel

ANFO

Infosafe No.: CV4SY
ISSUED Date: 17/05/2016
Issued by: Dyno Nobel Asia Pacific Pty
Limited

1. IDENTIFICATION

GHS Product Identifier

ANFO

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

Bulk or packaged ANFO.

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)

Carcinogenicity: Category 2

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.

H351 Suspected of causing cancer.

Pictogram (s)

Exploding bomb, Exclamation mark, Health hazard



Precautionary statement – Prevention

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- 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.
- P308+P313 IF exposed or concerned: Get medical advice/attention.
- 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 section 7 of this SDS.
- P405 Store locked up.

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	>90 %
Fuels, diesel, no.2	68476-34-6	<10 %
Ingredient determined not to be hazardous	Not required	<1 %

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

Do not induce vomiting. Wash out mouth thoroughly with water. Seek immediate medical attention.

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

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

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

Specific Hazards Arising From The Chemical

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 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

Remove all sources of heat, sparks, flame, friction or electricity.

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

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.

Avoid exposure. Do not handle until all safety precautions have been read and understood.

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 this material, however, 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 limit available.

Appropriate Engineering Controls

This substance is hazardous and should be used with a local exhaust ventilation system, drawing solid/dust away from workers' breathing zone. If the engineering controls are not sufficient to maintain concentrations of particulates below the exposure standards, suitable respiratory protection must be worn.

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 PVC or 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Properties	Description	Properties	Description
Form	Solid	Appearance	Oil-covered prills
Colour	Pale	Odour	Fuel oil
Decomposition Temperature	Not available	Melting Point	Not available
Boiling Point	Not available	Solubility in Water	Soluble
Solubility in Organic Solvents	Not available	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	>61°C (Fuels, diesel, no.2)
Flammability	Explosive	Auto-Ignition Temperature	Not available
Explosion Limit - Upper	0.5% (Fuels, diesel, no.2)	Explosion Limit - Lower	7.0% (Fuels, diesel, no.2)

10. STABILITY AND REACTIVITY

Reactivity

Reacts with incompatible materials.

Chemical Stability

Stable under normal conditions of storage and handling.

Conditions to Avoid

Dust accumulation, heat and other sources of ignition.

Incompatible materials

Avoid contact with other explosives, pyrotechnics, solvents, acids, alkalis, reducing agents, amines, phosphorous, organic materials/compounds, finely divided combustible materials, finely divided metals and metal oxides.

Hazardous Decomposition Products

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

Possibility of hazardous reactions

Reacts with incompatible materials.

11. TOXICOLOGICAL INFORMATION

Toxicology Information

No toxicity data available for this material.

Ingestion

Ingestion of this product may irritate the gastric tract causing nausea and vomiting.

Inhalation

Inhalation of dusts or vapours may irritate the respiratory system.

Skin

May be irritating to skin. The symptoms may include redness, itching and swelling.

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

Suspected of causing cancer. Classified as a suspected human carcinogen.

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

Prevent this material entering 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

Refer to the Australian code for the Transport of Dangerous Goods by Road and Rail (7th Edition) including tables 9.2 and 9.3 for further information regarding the transportation of ammonium nitrate.

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: 0082

Proper Shipping Name: EXPLOSIVE, BLASTING, TYPE B

Packing Group: N/A

EMS: F-B, S-Y

Special Provisions: N/A

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.

Class/Division: 1.1D
UN No: 0082
Proper Shipping Name: EXPLOSIVE, BLASTING, TYPE B
Packing Group: N/A
Packaging Instructions (passenger & cargo): Forbidden
Packaging Instructions (cargo only): Forbidden
Hazard Label: N/A
Special Provisions: N/A

U.N. Number

0082

UN proper shipping name

EXPLOSIVE, BLASTING, TYPE B

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

SDS Reviewed: May 2016

Supersedes: August 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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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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