

# SAFETY DATA SHEET

## AMMONIUM NITRATE

Infosafe No.: CV4U5  
ISSUED Date : 02/09/2015  
ISSUED by: Dyno Nobel Asia Pacific Pty  
Limited

### 1. IDENTIFICATION

**GHS Product Identifier**

AMMONIUM NITRATE

**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**

Component of blasting explosives.

**Other Names**

Name	Product Code
DETAPRILL	

### 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)

Oxidizing Solids: Category 3

**Signal Word (s)**

WARNING

**Hazard Statement (s)**

H272 May intensify fire; oxidiser.

**Pictogram (s)**

Flame over circle



**Precautionary statement – Prevention**

P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

P220 Keep/Store away from clothing/combustible materials.

P221 Take any precaution to avoid mixing with combustibles

P280 Wear protective gloves/protective clothing/eye protection/face protection.

**Precautionary statement – Response**

P370+P378 In case of fire: Use carbon dioxide, dry chemical, foam, water mist or water spray for extinction.

**Precautionary statement – Disposal**

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

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

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**Ingredients**

Name	CAS	Proportion
Ammonium Nitrate	6484-52-2	100 %

### 4. FIRST-AID MEASURES

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**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 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. If symptoms develop and/or persist seek medical attention.

**First Aid Facilities**

Eyewash and normal washroom facilities.

**Advice to Doctor**

Treat symptomatically.

**Other Information**

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

### 5. FIRE-FIGHTING MEASURES

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**Suitable Extinguishing Media**

Use carbon dioxide, dry chemical, foam, water mist or water spray.

**Hazards from Combustion Products**

Under fire conditions this product may emit toxic and/or irritating fumes including carbon monoxide and carbon dioxide.

**Specific Hazards Arising From The Chemical**

Oxidising. Contact with combustible material may cause fire. Non combustible, but may support the combustion of other materials. Decomposes on heating emitting irritating white fumes of nitrous oxide and ammonium nitrate mist. Brown fumes indicate the presence of toxic oxides of nitrogen. On detection of fire the compartment(s) should be opened up to provide maximum ventilation. Keep containers and adjacent areas cool with water spray. If safe to do so, remove containers from path of fire. A major fire may involve a risk of explosion in the event of contamination or strong confinement. An adjacent detonation may also involve the risk of explosion.

**Hazchem Code**

1Y

**Decomposition Temperature**

Not available

### **Precautions in connection with Fire**

Fire fighters should wear Self-Contained Breathing Apparatus (SCBA) operated in positive pressure mode and full protective clothing to prevent exposure to vapours or fumes. Water spray may be used to cool down heat-exposed containers. Fight fire from safe location. This product should be prevented from entering drains and watercourses.

## **6. ACCIDENTAL RELEASE MEASURES**

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### **Emergency Procedures**

Increase ventilation. Evacuate all unprotected personnel. Wear sufficient respiratory protection and full protective clothing to prevent exposure. Sweep up material avoiding dust generation or dampen spilled material with water to avoid airborne dust, then transfer material to a suitable container. Wash surfaces well with soap and water. Seal all wastes in labelled containers for subsequent recycling or disposal. Dispose of waste according to the 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**

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### **Precautions for Safe Handling**

Avoid inhalation of dust, and skin or eye contact. Use only in a well ventilated area. Keep containers sealed when not in use. Prevent the build up of dust in the work atmosphere. Maintain high standards of personal hygiene i.e. 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, out of direct sunlight and moisture. Store in suitable, labelled containers. Keep containers tightly closed. Store away from incompatible materials. 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 4326 The storage and handling of oxidizing agents.

## **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

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### **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 limits allocated.

### **Appropriate Engineering Controls**

Use with good general ventilation. If dust is produced, local exhaust ventilation should be used.

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 dust/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. 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	White prills, hygroscopic
Colour	White	Odour	Odourless
Decomposition Temperature	Not available	Melting Point	155°C
Freezing Point	Not available	Boiling Point	Decomposes at 210°C
Solubility in Water	366g/100g at 35°C	Solubility in Organic Solvents	Soluble in ethanol
pH	5.4 (0.1M aq soln)	Vapour Pressure	Not available
Vapour Density (Air=1)	Not available	Evaporation Rate	Not available
Odour Threshold	Not available	Viscosity	Not available
Density	Bulk Density: 0.70 – 0.85 g/cc	Flash Point	Not available
Flammability	Not combustible but it is an oxidising agent. May increase intensity of a fire.	Auto-ignition Temperature	Not available
Explosion Limit - Upper	Not available	Explosion Limit - Lower	Not available

## 10. STABILITY AND REACTIVITY

### Chemical Stability

Stable under normal conditions of storage and handling.

### Reactivity and Stability

Reacts with incompatible materials. (See list below)

### Conditions to Avoid

May explode under confinement and temperatures, but not readily detonated. When mixed with strong acids, and occasionally during blasting, produces irritating and toxic brown gas, mostly of nitrogen dioxide. When molten may decompose violently due to shock or pressure. Under certain conditions may react violently with nitrites, chlorates, chlorides or permanganates.

### Incompatible materials

Will react with acids, ammonia, ammonium sulphate, chloride salts, metal powders, organic fuels, reducing agents and sulphides.

### Hazardous Decomposition Products

When heated to decomposition (unconfined) produces nitrous oxide, white ammonium nitrate fumes and water.

### Possibility of hazardous reactions

Not available

### Hazardous Polymerization

Not available

## 11. TOXICOLOGICAL INFORMATION

### Toxicology Information

The available acute toxicity data as published by RTECS (Registry of Toxic Effects of Chemical Substances), is given below.

### Acute Toxicity - Oral

LD50 (Rat): 2217 mg/kg

### Ingestion

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

### Inhalation

Inhalation of dusts may irritate the respiratory system.

**Skin**

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

**Eye**

May be irritating to eyes. The symptoms may include redness, itching and tearing.

**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. Prolonged inhalation may cause central nervous system depression with symptoms including dizziness, drowsiness, nausea and headaches.

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**12. ECOLOGICAL INFORMATION**

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**Ecotoxicity**

No ecological data available for this material. The available ecological data for the ingredients is given below:

**Persistence and degradability**

When released into water, this material is expected to readily biodegrade. When released into the soil, this material is not expected to evaporate significantly.

**Mobility**

When released into soil, this material is expected to leach into groundwater.

**Bioaccumulative Potential**

Not available

**Other Adverse Effects**

Not available

**Environmental Protection**

Prevent this material entering waterways, drains and sewers.

**Acute Toxicity - Daphnia**

Ammonium Nitrate was evaluated at 5, 10, 25 and 50 mg (NH<sub>4</sub>)/L. The fertility of *Daphnia magna* was decreased at 50 mg/L.

**Acute Toxicity - Other Organisms**

Ammonium Nitrate impaired the post embryonic growth of crustacea at 10, 25 and 50 mg/L.

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**13. DISPOSAL CONSIDERATIONS**

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**Disposal considerations**

The disposal of the spilled or waste material must be done in accordance with applicable local and national regulations.

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**14. TRANSPORT INFORMATION**

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## Transport Information

### Road and Rail:

This material is classified as Dangerous Goods Division 5.1 (Oxidising Substances)

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

- Class 1: Explosives
- Division 2.1: Flammable 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
- Some Division 5.1 Oxidising substances (Refer Table 9.2)
- Division 5.2: Organic peroxides
- Class 6: Toxic or Infectious Substances. If the Class 6 substance is a fire risk substance
- Class 7: Radioactive materials unless specifically exempted
- Class 8: Corrosive substances
- Class 9: Miscellaneous substances. (when the class 9 substance is a fire risk substance)
- Fire risk substances
- Combustible liquids

### 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: 5.1

UN No: 1942

Proper Shipping Name: AMMONIUM NITRATE

Packing Group: III

EMS : F-H, S-Q

Special Provisions: 900,952,967

### 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: 5.1

UN No: 1942

Proper Shipping Name: Ammonium nitrate

Packing Group: III

Packaging Instructions (passenger & cargo): 559

Packaging Instructions (cargo only): 563

Hazard Label: Oxidizer

Special Provisions: A64,A803

### U.N. Number

1942

### UN proper shipping name

AMMONIUM NITRATE

### Transport hazard class(es)

5.1

### Packing Group

III

### Hazchem Code

1Y

### IERG Number

50

### IMDG Marine pollutant

No

### Transport in Bulk

Not available

### Special Precautions for User

Not available

## 15. REGULATORY INFORMATION

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### 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

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### Date of preparation or last revision of SDS

SDS Reviewed: September 2015

Supersedes: March 2015

SDS Amended: March 2016, Section 14: 'Hazchem Code', 'Transport Information'

SDS Amended: February 2019, Section 1: Identification and Section 10: Stability and reactivity.

### 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

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**

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