

# SAFETY DATA SHEET

**DYNO**<sup>®</sup>  
Dyno Nobel

**SANFOLD**

Infosafe No.: CV4UT  
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Issued by: Dyno Nobel Asia Pacific Pty  
Limited

## 1. IDENTIFICATION

### GHS Product Identifier

SANFOLD

### 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

### Other Names

Name	Product Code
SANFOLD 30/70	
SANFOLD 50/50	
SANFOLD 70/30	

## 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

Skin Corrosion/Irritation: Category 2

STOT Single Exposure: Category 3 (respiratory tract irritation)

### Signal Word (s)

DANGER

### Hazard Statement (s)

H201 Explosive; mass explosion hazard.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H335 May cause respiratory 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.  
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P264 Wash contaminated skin thoroughly after handling.  
P271 Use only outdoors or in a well-ventilated area.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.

**Precautionary statement – Response**

P302+P352 IF ON SKIN: Wash with plenty of soap and water.  
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P312 Call a POISON CENTER or doctor/physician if you feel unwell.  
P332+P313 If skin irritation occurs: Get medical advice/attention.  
P337+P313 If eye irritation persists: Get medical advice/attention.  
P362 Take off contaminated clothing and wash before reuse.  
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.  
P403+P233 Store in a well-ventilated place. Keep container tightly closed.  
P405 Store locked up.

**Precautionary statement – Disposal**

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

**Other Information**

Severe overexposure may interfere with the ability of the blood to carry oxygen (methemoglobinemia). This can cause headache, weakness, to have dizziness and a blue colour to the skin and lips. Higher levels may cause trouble in breathing, collapse and even death.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Ingredients**

Name	CAS	Proportion
Ammonium Nitrate	6484-52-2	>70 %
Water	7732-18-5	<10 %
Oils and other oxygen negative materials		<10 %
Polystyrene		<10 %
Dye		<1 %

## 4. FIRST-AID MEASURES

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### **Inhalation**

If inhaled, remove affected person from contaminated area. Apply artificial respiration if not breathing. Seek medical attention.

### **Ingestion**

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

### **Skin**

Remove all contaminated clothing immediately. Wash affected area thoroughly with soap and water. Wash contaminated clothing before reuse or discard. 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 fountain, 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

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### **Suitable Extinguishing Media**

DO NOT FIGHT FIRES. Immediately isolate area and evacuate personnel to a safe distance. 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, ammonia, carbon monoxide and carbon dioxide.

### **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

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### **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. 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

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### 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. 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

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### Occupational exposure limit values

No exposure standards have been established for this material, however, the TWA exposure standards for refined mineral oil mist is 5 mg/m<sup>3</sup>. 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.

### Appropriate Engineering Controls

This substance is hazardous and should be used with a local exhaust ventilation system, drawing vapours/dusts/fumes away from workers' breathing zone. If the engineering controls are not sufficient to maintain concentrations of vapours/mists 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, goggles or full-face shield as appropriate should be used. Final choice of appropriate eye/face protection will vary according to individual circumstances i.e. methods of handling or engineering controls and according to risk assessments undertaken. 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	Small spheres, oily to touch.
Colour	White or blue	Odour	Not available
Decomposition Temperature	Not available	Melting Point	Not available
Boiling Point	Not available	Solubility in Water	Moderately soluble.
Solubility in Organic Solvents	Not available	Specific Gravity	0.31 - 0.69
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 material	Auto-Ignition Temperature	Not available
Explosion Limit - Upper	Not available	Explosion Limit - Lower	Not available

## 10. STABILITY AND REACTIVITY

### Reactivity

Reacts with incompatible materials.

### Conditions to Avoid

Heat, open flames 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 oxides of nitrogen, ammonia, carbon monoxide and carbon dioxide.

### Possibility of hazardous reactions

Reacts with incompatible materials. Explosive material.

### Hazardous Polymerization

Not available

## 11. TOXICOLOGICAL INFORMATION

### Toxicology Information

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

### Acute Toxicity - Oral

For Mineral oil mist:

LD50 (rat): 3782 mg/kg

### Ingestion

Not a likely source of exposure. However, ingestion of this product may irritate the gastric tract causing nausea and vomiting.

### Inhalation

May cause respiratory irritation. Inhalation of product dust/vapours/fumes can cause irritation of the nose, throat and respiratory system.

**Skin**

Causes skin irritation. Skin contact will cause redness, itching and swelling. Repeated exposure may cause skin dryness and cracking and may lead to dermatitis.

**Eye**

Causes serious eye irritation. On eye contact this product will cause tearing, stinging, blurred vision, and redness.

**Respiratory sensitisation**

Not considered to be toxic to reproduction.

**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**

May cause respiratory irritation.

**STOT-repeated exposure**

Not expected to cause toxicity to a specific target organ.

**Aspiration Hazard**

Not expected to be an aspiration hazard.

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**12. ECOLOGICAL INFORMATION**

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**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.

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**13. DISPOSAL CONSIDERATIONS**

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**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 regulations prior to initiation of the charge. NOTE: Detonations in loose or stony ground may be expected to cause fly rock.

Small quantities of explosive may be disposed/destroyed by dilution in water jet and/or detergent solution. Deteriorated or waste explosive may be disposed of by detonation by inclusion in a blast hole when loaded with good explosives.

Disposal of large quantities of explosive may require services from a Licensed Waste Contractor; contact Dyno Nobel for further information.

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**14. TRANSPORT INFORMATION**

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## **Transport Information**

Australia 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.

UN No.: 0082

Proper Shipping Name: EXPLOSIVE, BLASTING, TYPE B

Class: 1.1D

Packaging Group: see "Other information" (\*)

EMS No.: F-B, S-Y

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.: 0082

Proper Shipping Name: Explosive, blasting, type B

Class: 1.1D

Packaging Group: see "Other information" (\*)

Label: None

Packaging Instructions (passenger & cargo): Forbidden

Packaging Instructions (cargo only): Forbidden

### **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

### **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

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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: May 2016

MSDS Superseded: May 2007, 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.

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

Mt Thorley Technical Centre

Telephone: +61 2 6574 2500

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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