

# SAFETY DATA SHEET

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

### 1.1 Product identifier

**Product name** TITAN® XERO SERIES  
**Synonyms** TITAN® 2000XERO • TITAN® 3000XERO • TITAN® 5000XERO • TITAN® 9000XERO • TITAN® XERO • Titan@9000xero®

### 1.2 Uses and uses advised against

**Uses** EXPLOSIVES

### 1.3 Details of the supplier of the product

**Supplier name** DYNO NOBEL ASIA PACIFIC LIMITED  
**Address** 282 Paringa Rd, Gibson Island, Murarrie, QLD, 4172, AUSTRALIA  
**Telephone** (07) 3026 3900  
**Fax** (07) 3026 3999  
**Website** <http://www.dynonobel.com>

### 1.4 Emergency telephone numbers

**Emergency** 1800 098 836

## 2. HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

#### Physical Hazards

Explosives: Division 1.1

#### Health Hazards

Serious Eye Damage / Eye Irritation: Category 2A  
Carcinogenicity: Category 2

#### Environmental Hazards

Not classified as an Environmental Hazard

### 2.2 GHS Label elements

**Signal word** DANGER

**Pictograms**



#### Hazard statements

H201 Explosive; mass explosion hazard.  
H319 Causes serious eye irritation.  
H351 Suspected of causing cancer.

## PRODUCT NAME TITAN® XERO SERIES

### Prevention statements

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P234	Keep only in original packaging.
P240	Ground and bond container and receiving equipment.
P250	Do not subject to grinding/shock/friction/rough handling.
P264	Wash thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

### Response statements

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.
P370 + P372 + P380 +	In case of fire: Explosion risk. Evacuate area. DO NOT fight fire when fire reaches explosives.

### Storage statements

P401	Store in accordance with relevant site and storage provisions.
P405	Store locked up.

### Disposal statements

P501	Dispose of contents/container in accordance with relevant regulations.
P503	Refer to manufacturer/supplier for information on disposal/recovery/recycling.

### 2.3 Other hazards

No information provided.

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## 3. COMPOSITION/ INFORMATION ON INGREDIENTS

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### 3.1 Substances / Mixtures

Ingredient	CAS Number	EC Number	Content
AMMONIUM NITRATE	6484-52-2	229-347-8	30 to 80%
DIESEL FUEL NO. 2	68476-34-6	270-676-1	<4%
NON HAZARDOUS INGREDIENTS	Not Available	Not Available	Remainder

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## 4. FIRST AID MEASURES

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### 4.1 Description of first aid measures

<b>Eye</b>	If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes.
<b>Inhalation</b>	If inhaled, remove from contaminated area. To protect rescuer, use an Air-line respirator where an inhalation risk exists. Apply artificial respiration if not breathing.
<b>Skin</b>	If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with soap and water. Continue flushing with water until advised to stop by a Poisons Information Centre or a doctor.
<b>Ingestion</b>	For advice, contact a Poisons Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If swallowed, do not induce vomiting. Rinse mouth with water.
<b>First aid facilities</b>	Eye wash facilities and normal washroom facilities should be available.

### 4.2 Most important symptoms and effects, both acute and delayed

Serious damage may result from explosive fragments.

### 4.3 Immediate medical attention and special treatment needed

Treat symptomatically.

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## 5. FIRE FIGHTING MEASURES

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### 5.1 Extinguishing media

DO NOT attempt to extinguish burning explosives. Evacuate area immediately. Notify trained emergency response personnel.

**5.2 Special hazards arising from the substance or mixture**

EXPLOSIVE. Will explode under specific conditions. May evolve toxic gases (carbon/ nitrogen oxides, hydrocarbons) when heated to decomposition. Eliminate all ignition sources including cigarettes, open flames, spark producing switches/tools, heaters, naked lights, pilot lights, etc when handling. CAUTION: Will explode if exposed to heat or with heavy impact.

**5.3 Advice for firefighters**

Evacuate area and contact emergency services. Toxic gases may be evolved in a fire situation. Remain upwind and notify those downwind of hazard. Do not attempt to fight fire. Use waterfog to cool intact containers and nearby storage areas. May explode from heat, pressure, friction or shock.

**5.4 Hazchem code**

E Evacuation of people in and around the immediate vicinity of the incident should be considered.

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**6. ACCIDENTAL RELEASE MEASURES**

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**6.1 Personal precautions, protective equipment and emergency procedures**

Wear Personal Protective Equipment (PPE) as detailed in section 8 of the SDS. Clear area of all unprotected personnel. CAUTION: Heating, impact or static charge may cause explosion.

**6.2 Environmental precautions**

Prevent product from entering drains and waterways.

**6.3 Methods of cleaning up**

Explosive Material. Do not clean-up or dispose except under supervision of a specialist. Contain spillage, then cover / absorb spill with NON-combustible absorbent material (vermiculite, sand, or similar), collect and place in suitable containers for disposal in accordance with AS2187.2. Eliminate all sources of ignition.

**6.4 Reference to other sections**

See Sections 8 and 13 for exposure controls and disposal.

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**7. HANDLING AND STORAGE**

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**7.1 Precautions for safe handling**

Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

**7.2 Conditions for safe storage, including any incompatibilities**

Store in clean, well ventilated and dry magazine licensed for Class 1 Explosives. Segregate from all incompatible substances and foodstuffs. Ensure magazines are adequately labelled and protected from physical damage/shock or friction.

**7.3 Specific end uses**

No information provided.

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**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

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**8.1 Control parameters**

**Exposure standards**

No exposure standards have been entered for this product.

**Biological limits**

Ingredient	Determinant	Sampling Time	BEI
AMMONIUM NITRATE	Methemoglobin in blood	During or end of shift	1.5% of hemoglobin

Reference: ACGIH Biological Exposure Indices

**8.2 Exposure controls**

**Engineering controls** Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical explosion proof extraction ventilation is recommended.

PPE

Eye / Face	Wear safety glasses.
Hands	Wear neoprene or PVA gloves.
Body	Wear coveralls.
Respiratory	Not required under normal conditions of use.



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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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### 9.1 Information on basic physical and chemical properties

Appearance	TRANSLUCENT EMULSION WITH BULKING AGENT
Odour	SLIGHT FUEL OIL ODOUR
Flammability	EXPLOSIVE
Flash point	NOT RELEVANT
Boiling point	NOT AVAILABLE
Melting point	NOT AVAILABLE
Evaporation rate	NOT AVAILABLE
pH	NOT AVAILABLE
Vapour density	NOT AVAILABLE
Relative density	0.8 to 1.15
Solubility (water)	INSOLUBLE
Vapour pressure	NOT AVAILABLE
Upper explosion limit	NOT RELEVANT
Lower explosion limit	NOT RELEVANT
Partition coefficient	NOT AVAILABLE
Autoignition temperature	NOT AVAILABLE
Decomposition temperature	NOT AVAILABLE
Viscosity	NOT AVAILABLE
Explosive properties	EXPLOSIVE
Oxidising properties	NOT AVAILABLE
Odour threshold	NOT AVAILABLE

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## 10. STABILITY AND REACTIVITY

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### 10.1 Reactivity

Carefully review all information provided in sections 10.2 to 10.6.

### 10.2 Chemical stability

Potential for exothermic hazard.

### 10.3 Possibility of hazardous reactions

Polymerization will not occur.

### 10.4 Conditions to avoid

Avoid shock, friction, heavy impact, heat, sparks, open flames and other ignition sources.

### 10.5 Incompatible materials

May detonate if heated strongly or exposed to severe shock. Incompatible (explosively) with acids (e.g. nitric acid), metal powders, combustible materials, alkalis (e.g. sodium hydroxide), oxidising agents (e.g. hypochlorites), chloride salts, sulphur, urea, nitrites and reducing agents.

### 10.6 Hazardous decomposition products

May evolve toxic gases (carbon/ nitrogen oxides, hydrocarbons) when heated to decomposition.

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## 11. TOXICOLOGICAL INFORMATION

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**11.1 Information on toxicological effects**

**Acute toxicity** Based on available data, the classification criteria are not met. WARNING: May explode with shock, heat, friction or static charge. Serious damage may result from explosive fragments.

**Information available for the ingredients:**

Ingredient	Oral LD50	Dermal LD50	Inhalation LC50
AMMONIUM NITRATE	2217 mg/kg (rat)	> 5000 mg/kg (rat)	--
DIESEL FUEL NO. 2	5-15 g/kg diesel oil	--	--

**Skin** Contact may result in irritation, redness, rash and dermatitis.  
**Eye** Contact may result in irritation, lacrimation, pain, blurred vision and redness.  
**Sensitisation** Not classified as causing skin or respiratory sensitisation.  
**Mutagenicity** Not classified as a mutagen.  
**Carcinogenicity** Suspected of causing cancer.  
**Reproductive** Not classified as a reproductive toxin.  
**STOT - single exposure** Over exposure to mists/vapours may result in irritation of the nose and throat, coughing, nausea and headache. High level exposure may result in drowsiness, breathing difficulties and methaemoglobinemia (blood's oxygen-carrying capacity is reduced).  
**STOT - repeated exposure** Not classified as causing organ damage from repeated exposure. Adverse effects are generally associated with single exposure.  
**Aspiration** Not classified as causing aspiration.

**12. ECOLOGICAL INFORMATION**

**12.1 Toxicity**

No information provided.

**12.2 Persistence and degradability**

No information provided.

**12.3 Bioaccumulative potential**

No information provided.

**12.4 Mobility in soil**

No information provided.

**12.5 Other adverse effects**

Ammonium nitrate is a nutrient in water. Spills can cause massive algal blooms in static waters and affect local species population balance in the aquatic environment. If water is used to disperse ammonium nitrate spilled on soil, the solution produced can end up in the groundwater. Ammonium nitrate will be taken up by bacteria. Nitrate is more persistent in water than the ammonium ion.

**13. DISPOSAL CONSIDERATIONS**

**13.1 Waste treatment methods**

**Waste disposal** Waste must be disposed of in accordance with AS2187.2 as well as state regulatory and environmental legislation. Small quantities of damaged or deteriorated material may be destroyed by inclusion in a blast hole containing good explosives (by licensed personnel). Detonators should not be inserted into defective explosives. For large quantities, contact the manufacturer/supplier for additional information.

**Legislation** Dispose of in accordance with relevant local legislation.

**14. TRANSPORT INFORMATION**

CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE



**PRODUCT NAME TITAN® XERO SERIES**

	LAND TRANSPORT (ADG)	SEA TRANSPORT (IMDG / IMO)	AIR TRANSPORT (IATA / ICAO)
<b>14.1 UN Number</b>	0241	0241	PROH
<b>14.2 Proper Shipping Name</b>	EXPLOSIVE, BLASTING, TYPE E	EXPLOSIVE, BLASTING, TYPE E	Air transport PROHIBITED under the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air in passenger and cargo aircraft.
<b>14.3 Transport hazard class</b>	1.1D	1.1D	None allocated.
<b>14.4 Packing Group</b>	None allocated.	None allocated.	None allocated.

**14.5 Environmental hazards**

Not a Marine Pollutant.

**14.6 Special precautions for user**

<b>Hazchem code</b>	E
<b>GTEPG</b>	EXP1
<b>EmS</b>	F-B, S-X

**15. REGULATORY INFORMATION****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

**Poison schedule** A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

**Classifications** Safe Work Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals (GHS Revision 7).

**Inventory listings** **AUSTRALIA: AIIC (Australian Inventory of Industrial Chemicals)**  
All components are listed on AIIC, or are exempt.

**16. OTHER INFORMATION****Additional information**

**DISCLAIMER:** The information provided herein concern explosive products which should only be handled by persons having the appropriate technical expertise, training, and licence(s). The result is largely dependent upon the conditions of storage, transportation and use.

Whilst Dyno Nobel Asia Pacific make every effort to ensure the information contained within this SDS is as accurate and up-to-date as possible, the conditions under which its products are used are not within Dyno Nobel Asia Pacific's control. Each user has the responsibility to ensure awareness of the details contained within this SDS, the product applications, and the specific context of the intended usage. Buyers and users assume all risk, responsibility and liability arising from the use of this product and the information within this SDS. Dyno Nobel Asia Pacific is not responsible for damages of any nature resulting from the use of its products or reliance upon the information. Dyno Nobel Asia Pacific makes no express or implied warranties other than those implied mandatory by the Commonwealth, State or Territory Legislation.

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**EXPLOSIVES & BLASTING AGENTS:** Refer to Local State and Federal legislation that specifically relates to the use of Explosives. Users of products described in this ChemAlert Report are advised to ensure familiarity and compliance with the appropriate legal requirements (e.g. Regulations) prior to the use of this product. Where any further information is required, users may contact their local authority in Explosives and Dangerous Goods.

**EXPLOSIONS:** Fires involving explosives or explosive mixtures may undergo further explosions and rapid propagation. Police and emergency personnel should be notified immediately. Evacuate individuals to a safe sheltered area and if possible remove vehicles and further heat and ignition sources from the area. Consult with emergency services to determine evacuation distance and suitable re-entry time.

**PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:**

The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as form of product, method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

**HEALTH EFFECTS FROM EXPOSURE:**

It should be noted that the effects from exposure to this product will depend on several factors including: form of product; frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

**Abbreviations**

ACGIH	American Conference of Governmental Industrial Hygienists
CAS #	Chemical Abstract Service number - used to uniquely identify chemical compounds
CNS	Central Nervous System
EC No.	EC No - European Community Number
EMS	Emergency Schedules (Emergency Procedures for Ships Carrying Dangerous Goods)
GHS	Globally Harmonized System
GTEPG	Group Text Emergency Procedure Guide
IARC	International Agency for Research on Cancer
LC50	Lethal Concentration, 50% / Median Lethal Concentration
LD50	Lethal Dose, 50% / Median Lethal Dose
mg/m <sup>3</sup>	Milligrams per Cubic Metre
OEL	Occupational Exposure Limit
pH	relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
ppm	Parts Per Million
STEL	Short-Term Exposure Limit
STOT-RE	Specific target organ toxicity (repeated exposure)
STOT-SE	Specific target organ toxicity (single exposure)
SUSMP	Standard for the Uniform Scheduling of Medicines and Poisons
SWA	Safe Work Australia
TLV	Threshold Limit Value
TWA	Time Weighted Average

**Report status**

This document has been compiled by RMT on behalf of the manufacturer, importer or supplier of the product and serves as their Safety Data Sheet ('SDS').

It is based on information concerning the product which has been provided to RMT by the manufacturer, importer or supplier or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer, importer or supplier.

While RMT has taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, RMT accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS.

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