

# MAXAM RIOBOOSTER

MAXAM Australia

Chemwatch Hazard Alert Code: 4

Chemwatch: 4875-33

Issue Date: 21/09/2015

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Safety Data Sheet according to WHS and ADG requirements

Initial Date: **Not Available**

S.GHS.AUS.EN

## SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

### Product Identifier

<b>Product name</b>	MAXAM RIOBOOSTER
<b>Synonyms</b>	RIOBOOSTER 150, RIOBOOSTER 400, RIOBOOSTER 60
<b>Proper shipping name</b>	BOOSTERS without detonator†
<b>Other means of identification</b>	Not Available

### Relevant identified uses of the substance or mixture and uses advised against

<b>Relevant identified uses</b>	Blasting operations.
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### Details of the supplier of the safety data sheet

<b>Registered company name</b>	MAXAM Australia
<b>Address</b>	141 Boundary Road Oxley 4074 QLD Australia
<b>Telephone</b>	+61 7 3717 1818
<b>Fax</b>	+61 7 3717 1888
<b>Website</b>	http://www.maxam-corp.com.au
<b>Email</b>	licensing.au@maxam.net

### Emergency telephone number

<b>Association / Organisation</b>	Not Available
<b>Emergency telephone numbers</b>	1800 833 111 (24hrs)
<b>Other emergency telephone numbers</b>	Not Available

## SECTION 2 HAZARDS IDENTIFICATION

### Classification of the substance or mixture

**HAZARDOUS CHEMICAL. DANGEROUS GOODS.** According to the Model WHS Regulations and the ADG Code.

#### CHEMWATCH HAZARD RATINGS


	Min	Max
Flammability	1	1
Toxicity	3	3
Body Contact	3	3
Reactivity	4	4
Chronic	2	2

0 = Minimum  
1 = Low  
2 = Moderate  
3 = High  
4 = Extreme

<b>Poisons Schedule</b>	Not Applicable
<b>GHS Classification</b> [1]	Explosive Division 1.1, Acute Toxicity (Oral) Category 3, Acute Toxicity (Dermal) Category 3, Acute Toxicity (Inhalation) Category 3, STOT - RE Category 2, Acute Aquatic Hazard Category 2, Chronic Aquatic Hazard Category 2
<b>Legend:</b>	1. Classified by Chemwatch; 2. Classification drawn from HSIS ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI

MAXAM RIOBOOSTER

**Label elements**

<b>GHS label elements</b>	
<b>SIGNAL WORD</b>	<b>DANGER</b>

**Hazard statement(s)**

<b>H201</b>	Explosive; mass explosion hazard
<b>H301</b>	Toxic if swallowed
<b>H311</b>	Toxic in contact with skin
<b>H331</b>	Toxic if inhaled
<b>H373</b>	May cause damage to organs through prolonged or repeated exposure
<b>H401</b>	Toxic to aquatic life
<b>H411</b>	Toxic to aquatic life with long lasting effects

**Precautionary statement(s) Prevention**

<b>P210</b>	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
<b>P230</b>	Keep wetted with phlegmatizer
<b>P250</b>	Do not subject to grinding/shock/sources of friction.
<b>P260</b>	Do not breathe dust/fume/gas/mist/vapours/spray.

**Precautionary statement(s) Response**

<b>P301+P310</b>	IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician/first aider
<b>P330</b>	Rinse mouth.
<b>P363</b>	Wash contaminated clothing before reuse.
<b>P370+P380</b>	In case of fire: Evacuate area.

**Precautionary statement(s) Storage**

<b>P403+P233</b>	Store in a well-ventilated place. Keep container tightly closed.
<b>P405</b>	Store locked up.
<b>P401</b>	Store according to local regulations for explosives

**Precautionary statement(s) Disposal**

<b>P501</b>	Dispose of contents/container in accordance with local regulations.
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**SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS**

**Substances**

See section below for composition of Mixtures

**Mixtures**

CAS No	%[weight]	Name
78-11-5	>60	<u>pentaerythritol tetranitrate (densensitised)</u>
118-96-7	10-40	<u>trinitrotoluene (TNT)</u>
Not Available	<30	Ingredients determined not to be hazardous

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

**SECTION 4 FIRST AID MEASURES**

**Description of first aid measures**

<b>Eye Contact</b>	If this product comes in contact with the eyes:
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Continued...

## MAXAM RIOBOOSTER

	<ul style="list-style-type: none"> <li>▶ Immediately hold eyelids apart and flush the eye continuously with running water.</li> <li>▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.</li> <li>▶ Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.</li> <li>▶ Transport to hospital or doctor without delay.</li> <li>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul> <p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> <li>▶ Wash out immediately with fresh running water.</li> <li>▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.</li> <li>▶ Seek medical attention without delay; if pain persists or recurs seek medical attention.</li> <li>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>
<b>Skin Contact</b>	<p>If skin contact occurs:</p> <ul style="list-style-type: none"> <li>▶ Immediately remove all contaminated clothing, including footwear.</li> <li>▶ Flush skin and hair with running water (and soap if available).</li> <li>▶ Seek medical attention in event of irritation.</li> </ul>
<b>Inhalation</b>	<ul style="list-style-type: none"> <li>▶ If fumes or combustion products are inhaled remove from contaminated area.</li> <li>▶ Lay patient down. Keep warm and rested.</li> <li>▶ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li> <li>▶ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.</li> <li>▶ Transport to hospital, or doctor, without delay.</li> </ul>
<b>Ingestion</b>	<ul style="list-style-type: none"> <li>▶ <b>IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY.</b></li> <li>▶ For advice, contact a Poisons Information Centre or a doctor.</li> <li>▶ Urgent hospital treatment is likely to be needed.</li> <li>▶ In the mean time, qualified first-aid personnel should treat the patient following observation and employing supportive measures as indicated by the patient's condition.</li> <li>▶ If the services of a medical officer or medical doctor are readily available, the patient should be placed in his/her care and a copy of the MSDS should be provided. Further action will be the responsibility of the medical specialist.</li> <li>▶ If medical attention is not available on the worksite or surroundings send the patient to a hospital together with a copy of the MSDS.</li> </ul> <p><b>Where medical attention is not immediately available or where the patient is more than 15 minutes from a hospital or unless instructed otherwise:</b></p> <ul style="list-style-type: none"> <li>▶ <b>INDUCE</b> vomiting with fingers down the back of the throat, <b>ONLY IF CONSCIOUS</b>. Lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.</li> </ul> <p><b>NOTE:</b> Wear a protective glove when inducing vomiting by mechanical means.</p> <p>Not considered a normal route of entry.</p>

**Indication of any immediate medical attention and special treatment needed**

Symptoms of vasodilation and reflex tachycardia may present following organic nitrate overdose; most organic nitrates are extensively metabolised by hydrolysis to inorganic nitrites. Organic nitrates and nitrites are readily absorbed through the skin, lungs, mucosa and gastro-intestinal tract.

The toxicity of nitrates and nitrites result from their vasodilating properties and their propensity to form methaemoglobin.

- ▶ Most produce a peak effect within 30 minutes.
- ▶ Clinical signs of cyanosis appear before other symptoms because of the dark pigmentation of methaemoglobin.
- ▶ Initial attention should be directed towards improving oxygen delivery, with assisted ventilation, if necessary. Hyperbaric oxygen has not demonstrated conclusive benefits.
- ▶ Institute cardiac monitoring, especially in patients with coronary artery or pulmonary disease.
- ▶ Hypotension should respond to Trendelenburg's position and intravenous fluids; otherwise dopamine may be needed.
- ▶ Naloxone, glucose and thiamine should be given if a multiple ingestion is suspected.
- ▶ Decontaminate using Ipecac Syrup for alert patients or lavage for obtunded patients who present within 2-4 hours of ingestion.
- ▶ Symptomatic patients with methaemoglobin levels over 30% should receive methylene blue. (Cyanosis alone, is not an indication for treatment). The usual dose is 1-2 mg/kg of a 1% solution (10 mg/ml) IV over 5 minutes; repeat, using the same dose if symptoms of hypoxia fail to subside within 1 hour.

[Ellenhorn and Barceloux: Medical Toxicology]

**BIOLOGICAL EXPOSURE INDEX - BEI**

These represent the determinants observed in specimens collected from a healthy worker who has been exposed at the Exposure Standard (ES or TLV):

Determinant	Index	Sampling Time	Comments
1. Methaemoglobin in blood	1.5% of haemoglobin	During or end of shift	B,NS,SQ

B: Background levels occur in specimens collected from subjects **NOT** exposed

NS: Non-specific determinant;also observed after exposure to other materials

Continued...

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SQ: Semi-quantitative determinant - Interpretation may be ambiguous; should be used as a screening test or confirmatory test. Treat symptomatically.

## SECTION 5 FIREFIGHTING MEASURES

## Extinguishing media

- ▶ There is no restriction on the type of extinguisher which may be used.
  - ▶ Use extinguishing media suitable for surrounding area.
- |DO NOT fight fires involving explosives.

## Special hazards arising from the substrate or mixture

**Fire Incompatibility** | Avoid all ignition sources, explosives are at risk from shock, friction, fire or other sources of ignition.

## Advice for firefighters

**Fire Fighting** | DO NOT fight fires involving explosives. | Hazchem or Emergency Action Code: E

**Fire/Explosion Hazard** | In cases where the explosive/s are NOT involved in small fire events, if possible, safely remove explosives to a safe distance stipulated by the MAXAM Emergency Procedure Guide, otherwise evacuate area immediately and allow to burn. DO NOT fight fire as fire increases the risk of explosion. An adjacent detonation may also involve the risk of explosion. Mass explosion hazard. | Burning explosives may emit toxic fumes, including Carbon, oxides of Nitrogen, Lead Sulfur.

## SECTION 6 ACCIDENTAL RELEASE MEASURES

## Personal precautions, protective equipment and emergency procedures

**Minor Spills** | **WARNING!: EXPLOSIVE.**  
BLAST and/or PROJECTION and/or FIRE HAZARD

- ▶ Clean up all spills immediately.
- ▶ Avoid inhalation of the material and avoid contact with eyes and skin.
- ▶ Wear impervious gloves and safety glasses.

**Major Spills** | **WARNING!: EXPLOSIVE.**

- ▶ Clear area of personnel and move upwind.
- ▶ Alert Fire Brigade and tell them location and nature of hazard.
- ▶ May be violently or explosively reactive.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

## SECTION 7 HANDLING AND STORAGE

## Precautions for safe handling

**Safe handling**

- ▶ Handle gently. Use good occupational work practice.
- ▶ Observe manufacturer's storage and handling recommendations contained within this SDS.
- ▶ Avoid all personal contact, including inhalation.

**Other information**

- ▶ Store cases in a well ventilated magazine licenced for the appropriate Class, Division and Compatibility Group.
- ▶ Rotate stock to prevent ageing. Use on FIFO (first in-first out) basis.
- ▶ Observe manufacturer's storage and handling recommendations contained within this SDS.

## Conditions for safe storage, including any incompatibilities

**Suitable container**

- ▶ All packaging for Class 1 Goods shall be in accordance with the requirements of the relevant Code for the transport of Dangerous Goods.
- ▶ Class 1 is unique in that the type of packaging used frequently has a very decisive effect on the hazard and therefore on the assignment to a particular division

**Storage incompatibility**

- ▶ Avoid contact with other explosives, pyrotechnics, solvents, adhesives, paints, cleaners and unauthorized metals, plastics, packing equipment and materials.
- ▶ Avoid contamination with acids, alkalis, reducing agents, amines and phosphorus.
- ▶ Avoid strong acids, bases.
- ▶ Avoid reaction with oxidising agents, bases and strong reducing agents.

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

## Control parameters

| OCCUPATIONAL EXPOSURE LIMITS (OEL)

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## MAXAM RIOBOOSTER

## INGREDIENT DATA


Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia Exposure Standards	trinitrotoluene (TNT)	2,4,6-Trinitrotoluene (TNT)	0.5 mg/m3	Not Available	Not Available	Sk

## EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
pentaerythritol tetranitrate (densensitised)	Pentaerythritol tetranitrate	0.44 mg/m3	4.8 mg/m3	330 mg/m3
trinitrotoluene (TNT)	Trinitrotoluene, 2,4,6-	0.3 mg/m3	6.2 mg/m3	1000 mg/m3

Ingredient	Original IDLH	Revised IDLH
pentaerythritol tetranitrate (densensitised)	Not Available	Not Available
trinitrotoluene (TNT)	1,000 mg/m3	500 mg/m3
Ingredients determined not to be hazardous	Not Available	Not Available

## Exposure controls

<b>Appropriate engineering controls</b>	Engineering controls for explosive articles are designed to reduce or eliminate fragmentation and/or blast effects either by suppression of the source of detonation or by protection at the exposed location, or both. Barricades, shields, contained detonation chambers, and "zero quantity-distance (Q-D)" magazines are examples of engineering controls. Engineering controls are designed and tested in a rigorous fashion. The construction of the engineering control must be carefully duplicated in field applications to assure it will function properly.
<b>Personal protection</b>	
<b>Eye and face protection</b>	<ul style="list-style-type: none"> <li>▶ Safety glasses with side shields.</li> <li>▶ Chemical goggles.</li> <li>▶ Full face shield may be required for supplementary but never for primary protection of eyes</li> <li>▶ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task.</li> </ul>
<b>Skin protection</b>	See Hand protection below
<b>Hands/feet protection</b>	<ul style="list-style-type: none"> <li>▶ Wear chemical protective gloves, e.g. PVC.</li> <li>▶ Wear safety footwear or safety gumboots, e.g. Rubber Non-sparking or conductive footwear essential. Conductive footwear describes a boot or shoe with a sole made from a conductive compound chemically bound to the bottom components, for permanent control to electrically ground the foot an shall dissipate static electricity from the body to reduce the possibility of ignition of volatile compounds. Electrical resistance must range between 0 to 500,000 ohms.</li> </ul>
<b>Body protection</b>	See Other protection below
<b>Other protection</b>	<p>For handling explosives or explosive compositions:</p> <ul style="list-style-type: none"> <li>▶ Wear close-fitting flame-protection treated clothing closed at the neck and sleeves.</li> <li>▶ Cotton underwear, socks and conductive shoes are recommended to avoid human static discharge.</li> </ul> <p>Manufacture may require:</p> <ul style="list-style-type: none"> <li>▶ Non-static flame retardant treated clothing</li> <li>▶ Access to deluge Safety shower</li> <li>▶ Barrier cream.</li> </ul> <p>No special equipment required due to the physical form of the product.</p>
<b>Thermal hazards</b>	Not Available

## Recommended material(s)

## GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:

**"Forsberg Clothing Performance Index".**

The effect(s) of the following substance(s) are taken into account in the

**computer-generated** selection:

MAXAM RIOBOOSTER Not Available

Material	CPI

## Respiratory protection

Not Available

Not Applicable

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\* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

C: Poor to Dangerous Choice for other than short term immersion

**NOTE:** As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

\* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

## Information on basic physical and chemical properties

<b>Appearance</b>	Cast solid booster encased in a cardboard cylinder.		
<b>Physical state</b>	Manufactured	<b>Relative density (Water = 1)</b>	1.6 g/cc bulk density
<b>Odour</b>	Not Available	<b>Partition coefficient n-octanol / water</b>	Not Available
<b>Odour threshold</b>	Not Available	<b>Auto-ignition temperature (°C)</b>	Not Available
<b>pH (as supplied)</b>	Not Applicable	<b>Decomposition temperature</b>	Not Available
<b>Melting point / freezing point (°C)</b>	Not Available	<b>Viscosity (cSt)</b>	Not Applicable
<b>Initial boiling point and boiling range (°C)</b>	Not Applicable	<b>Molecular weight (g/mol)</b>	Not Applicable
<b>Flash point (°C)</b>	Not Applicable	<b>Taste</b>	Not Available
<b>Evaporation rate</b>	Not Applicable	<b>Explosive properties</b>	Not Available
<b>Flammability</b>	Not Applicable	<b>Oxidising properties</b>	Not Available
<b>Upper Explosive Limit (%)</b>	Not Applicable	<b>Surface Tension (dyn/cm or mN/m)</b>	Not Applicable
<b>Lower Explosive Limit (%)</b>	Not Applicable	<b>Volatile Component (%vol)</b>	Not Available
<b>Vapour pressure (kPa)</b>	Not Available	<b>Gas group</b>	Not Available
<b>Solubility in water (g/L)</b>	Not Applicable	<b>pH as a solution (1%)</b>	Not Applicable
<b>Vapour density (Air = 1)</b>	Not Applicable	<b>VOC g/L</b>	Not Available

## SECTION 10 STABILITY AND REACTIVITY

<b>Reactivity</b>	See section 7
<b>Chemical stability</b>	<ul style="list-style-type: none"> <li>▶ Presence of shock and friction</li> <li>▶ Presence of heat source and ignition source</li> </ul>
<b>Possibility of hazardous reactions</b>	See section 7
<b>Conditions to avoid</b>	See section 7
<b>Incompatible materials</b>	See section 7
<b>Hazardous decomposition products</b>	See section 5

## SECTION 11 TOXICOLOGICAL INFORMATION

## Information on toxicological effects

<b>Inhaled</b>	Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may produce toxic effects. Not normally a hazard due to physical form of product.
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	The decomposition vapours are harmful if inhaled in large volume.
<b>Ingestion</b>	<b>Toxic effects</b> may result from the accidental ingestion of the material; animal experiments indicate that ingestion of less than 40 gram may be fatal or may produce serious damage to the health of the individual. The substance and/or its metabolites may bind to haemoglobin inhibiting normal uptake of oxygen. This condition, known as "methaemoglobinemia", is a form of oxygen starvation (anoxia). Symptoms include cyanosis (a bluish discolouration skin and mucous membranes) and breathing difficulties.
<b>Skin Contact</b>	Skin contact with the material may produce toxic effects; systemic effects may result following absorption. Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected. Not normally a hazard due to physical form of product.
<b>Eye</b>	Although the material is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn). Not normally a hazard due to physical form of product.
<b>Chronic</b>	Substance accumulation, in the human body, is likely and may cause some concern following repeated or long-term occupational exposure. There has been some concern that this material can cause cancer or mutations but there is not enough data to make an assessment. There is some evidence that inhaling this product is more likely to cause a sensitisation reaction in some persons compared to the general population. There is limited evidence that, skin contact with this product is more likely to cause a sensitisation reaction in some persons compared to the general population.

<b>MAXAM RIOBOOSTER</b>	<b>TOXICITY</b>	<b>IRRITATION</b>
	Not Available	Not Available
<b>pentaerythritol tetranitrate (densensitised)</b>	<b>TOXICITY</b>	<b>IRRITATION</b>
	Oral (rat) LD50: 1660 mg/kg <sup>[2]</sup>	Not Available
<b>trinitrotoluene (TNT)</b>	<b>TOXICITY</b>	<b>IRRITATION</b>
	Oral (rat) LD50: 607 mg/kg <sup>[2]</sup>	Skin (rabbit): 500 mg/24h - mild
<b>Legend:</b>	1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2.* Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances	

<b>TRINITROTOLUENE (TNT)</b>	The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin. The substance is classified by IARC as Group 3: <b>NOT</b> classifiable as to its carcinogenicity to humans. Evidence of carcinogenicity may be inadequate or limited in animal testing.
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<b>Acute Toxicity</b>	✓	<b>Carcinogenicity</b>	⊘
<b>Skin Irritation/Corrosion</b>	⊘	<b>Reproductivity</b>	⊘
<b>Serious Eye Damage/Irritation</b>	⊘	<b>STOT - Single Exposure</b>	⊘
<b>Respiratory or Skin sensitisation</b>	⊘	<b>STOT - Repeated Exposure</b>	✓
<b>Mutagenicity</b>	⊘	<b>Aspiration Hazard</b>	⊘

**Legend:** ✓ – Data required to make classification available  
 ✗ – Data available but does not fill the criteria for classification  
 ⊘ – Data Not Available to make classification

## SECTION 12 ECOLOGICAL INFORMATION

## Toxicity

Toxic to aquatic organisms.  
 May cause long-term adverse effects in the aquatic environment.

**DO NOT discharge into sewer or waterways.**

## Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
trinitrotoluene (TNT)	HIGH	HIGH

Continued...

**MAXAM RIOBOOSTER**

**Bioaccumulative potential**

Ingredient	Bioaccumulation
trinitrotoluene (TNT)	LOW (LogKOW = 1.6)

**Mobility in soil**

Ingredient	Mobility
trinitrotoluene (TNT)	LOW (KOC = 1834)



**SECTION 13 DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

<b>Product / Packaging disposal</b>	<ul style="list-style-type: none"> <li>▶ <b>DO NOT allow wash water from cleaning or process equipment to enter drains.</b></li> <li>▶ It may be necessary to collect all wash water for treatment before disposal.</li> <li>▶ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.</li> <li>▶ Where in doubt contact the responsible authority.</li> </ul> <p> Large quantities of deteriorated or damaged explosives shall be reported to MAXAM Australia Pty Ltd. Small quantities shall be consumed in a blast hole ONLY when the disposed product will not affect blast performance. Dispose of contents/container in accordance with local/regional/national/international regulations.</p>
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**SECTION 14 TRANSPORT INFORMATION**

**Labels Required**

	
<b>Marine Pollutant</b>	
<b>HAZCHEM</b>	Not Applicable

**Land transport (ADG)**

<b>UN number</b>	0042				
<b>Packing group</b>	Not Applicable				
<b>UN proper shipping name</b>	BOOSTERS without detonator†				
<b>Environmental hazard</b>	No relevant data				
<b>Transport hazard class(es)</b>	<table border="0"> <tr> <td>Class</td> <td>1.1D</td> </tr> <tr> <td>Subrisk</td> <td>Not Applicable</td> </tr> </table>	Class	1.1D	Subrisk	Not Applicable
Class	1.1D				
Subrisk	Not Applicable				
<b>Special precautions for user</b>	<table border="0"> <tr> <td>Special provisions</td> <td>Not Applicable</td> </tr> <tr> <td>Limited quantity</td> <td>0</td> </tr> </table>	Special provisions	Not Applicable	Limited quantity	0
Special provisions	Not Applicable				
Limited quantity	0				

**Air transport (ICAO-IATA / DGR)**

<b>UN number</b>	0042						
<b>Packing group</b>	Not Applicable						
<b>UN proper shipping name</b>	Boosters without detonator						
<b>Environmental hazard</b>	No relevant data						
<b>Transport hazard class(es)</b>	<table border="0"> <tr> <td>ICAO/IATA Class</td> <td>1.1D</td> </tr> <tr> <td>ICAO / IATA Subrisk</td> <td>Not Applicable</td> </tr> <tr> <td>ERG Code</td> <td>1L</td> </tr> </table>	ICAO/IATA Class	1.1D	ICAO / IATA Subrisk	Not Applicable	ERG Code	1L
ICAO/IATA Class	1.1D						
ICAO / IATA Subrisk	Not Applicable						
ERG Code	1L						
<b>Special precautions for user</b>	<table border="0"> <tr> <td>Special provisions</td> <td>Not Applicable</td> </tr> <tr> <td>Cargo Only Packing Instructions</td> <td>Forbidden</td> </tr> </table>	Special provisions	Not Applicable	Cargo Only Packing Instructions	Forbidden		
Special provisions	Not Applicable						
Cargo Only Packing Instructions	Forbidden						



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Cargo Only Maximum Qty / Pack	Forbidden
Passenger and Cargo Packing Instructions	Forbidden
Passenger and Cargo Maximum Qty / Pack	Forbidden
Passenger and Cargo Limited Quantity Packing Instructions	Forbidden
Passenger and Cargo Limited Maximum Qty / Pack	Forbidden

## Sea transport (IMDG-Code / GGVSee)

UN number	0042	
Packing group	Not Applicable	
UN proper shipping name	BOOSTERS without detonator	
Environmental hazard	Not Applicable	
Transport hazard class(es)	IMDG Class	1.1D
	IMDG Subrisk	Not Applicable
Special precautions for user	EMS Number	F-B , S-X
	Special provisions	Not Applicable
	Limited Quantities	0

## SECTION 15 REGULATORY INFORMATION

## Safety, health and environmental regulations / legislation specific for the substance or mixture

## PENTAERYTHRITOL TETRANITRATE (DENSENSITISED)(78-11-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Substances Information System - Consolidated Lists  
Australia Inventory of Chemical Substances (AICS)

International Air Transport Association (IATA) Dangerous Goods Regulations  
- Prohibited List Passenger and Cargo Aircraft

## TRINITROTOLUENE (TNT)(118-96-7) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards  
Australia Hazardous Substances Information System - Consolidated Lists  
Australia Inventory of Chemical Substances (AICS)

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs  
International Air Transport Association (IATA) Dangerous Goods Regulations  
- Prohibited List Passenger and Cargo Aircraft

National Inventory	Status
Australia - AICS	Y
Canada - DSL	Y
Canada - NDSL	N (pentaerythritol tetranitrate (densensitised); trinitrotoluene (TNT))
China - IECSC	N (pentaerythritol tetranitrate (densensitised))
Europe - EINEC / ELINCS / NLP	Y
Japan - ENCS	Y
Korea - KECI	Y
New Zealand - NZIoC	Y
Philippines - PICCS	N (pentaerythritol tetranitrate (densensitised))
USA - TSCA	Y
<b>Legend:</b>	Y = All ingredients are on the inventory N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)

## SECTION 16 OTHER INFORMATION

## Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:

[www.chemwatch.net](http://www.chemwatch.net)

The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current

Continued...

or available engineering controls must be considered.

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