

# MAXAM RIOFLEX MX 10000

MAXAM Australia

Chemwatch Hazard Alert Code: 2

Chemwatch: 36-9176

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Safety Data Sheet according to WHS and ADG requirements

S.GHS.AUS.EN

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

### Product Identifier

Product name	MAXAM RIOFLEX MX 10000
Synonyms	Explosive, Blasting, Type E
Proper shipping name	EXPLOSIVE, BLASTING, TYPE E
Other means of identification	Not Available

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

Relevant identified uses	For general blasting purposes in quarrying and/ or mining operations.
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### Details of the supplier of the safety data sheet

Registered company name	MAXAM Australia
Address	141 Boundary Road Oxley QLD 4075 Australia
Telephone	+61 7 3717 1818
Fax	+61 7 3717 1888
Website	<a href="https://www.maxam-corp.com.au">https://www.maxam-corp.com.au</a>
Email	licensing.au@maxam.net

### Emergency telephone number


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

## SECTION 2 HAZARDS IDENTIFICATION

### Classification of the substance or mixture

Poisons Schedule	Not Applicable
Classification <sup>[1]</sup>	Explosive Division 1.1, Eye Irritation Category 2A, Skin Sensitizer Category 1, Acute Aquatic Hazard Category 3
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HSIS ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI

### Label elements

GHS label elements	 
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SIGNAL WORD **DANGER**

Continued...

**MAXAM RIOFLEX MX 10000**

**Hazard statement(s)**

<b>H201</b>	Explosive; mass explosion hazard.
<b>H319</b>	Causes serious eye irritation.
<b>H317</b>	May cause an allergic skin reaction.
<b>H402</b>	Harmful to aquatic life

**Precautionary statement(s) Prevention**

<b>P210</b>	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
<b>P230</b>	Keep wetted with phlegmatizer.
<b>P250</b>	Do not subject to grinding/shock/sources of friction.
<b>P280</b>	Wear protective gloves/protective clothing/eye protection/face protection.

**Precautionary statement(s) Response**

<b>P363</b>	Wash contaminated clothing before reuse.
<b>P370+P380</b>	In case of fire: Evacuate area.
<b>P372</b>	Explosion risk in case of fire.
<b>P302+P352</b>	IF ON SKIN: Wash with plenty of soap and water.

**Precautionary statement(s) Storage**

<b>P401</b>	Store according to local regulations for explosives.
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**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
6484-52-2	>60	<u>ammonium nitrate</u>
7601-89-0	1-9	<u>sodium perchlorate</u>
18423-20-6	1-9	<u>hexamine nitrate</u>
Not Available	<1	guar gum
Not Available	<1	trace additives (chemical gassing catalyst, gum
Not Available	<1	dispersing agent, crosslinker, pH regulator)
7732-18-5	10-30	<u>water</u>

**SECTION 4 FIRST AID MEASURES**

**Description of first aid measures**

<b>Eye Contact</b>	<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, aerosols or combustion products are inhaled remove from contaminated area.</li> <li>▶ Other measures are usually unnecessary.</li> </ul>

**Ingestion**

- ▶ **If swallowed do NOT induce vomiting.**
- ▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- ▶ Observe the patient carefully.
- ▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.
- ▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.
- ▶ Seek medical advice.

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

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

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

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.

**SECTION 5 FIREFIGHTING MEASURES****Extinguishing media**

DO NOT fight fires involving explosives.

**Special hazards arising from the substrate or mixture**

<b>Fire Incompatibility</b>	None known.
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**Advice for firefighters**

<b>Fire Fighting</b>	<p>Fire-fighting fires involving explosives generally considered inappropriate. Evacuation procedures should be followed.</p> <p>Public Safety, outside the immediate are of the incident, is of paramount concern and the following actions should be considered:</p> <ul style="list-style-type: none"> <li>▶ People should be warned to stay indoors with all doors and windows closed, preferably in rooms upstairs and facing away from the incident. Ignition sources should be eliminated and any ventilation stopped.</li> </ul> <p>For Division 1.1 Explosives Evacuation is required in case of Emergency. For quantities of up to:</p> <ul style="list-style-type: none"> <li>▶ 1000 kg, the evacuation distance is 400 metres</li> <li>▶ 5000 kg, the evacuation distance is 600 metres</li> <li>▶ 20000 kg, the evacuation distance is 800 metres</li> <li>▶ 40000 kg, the evacuation distance is 1000 meters</li> </ul> <p>[Hazchem or Emergency Action Code: E</p>
<b>Fire/Explosion Hazard</b>	<ul style="list-style-type: none"> <li>▶ Will not burn but increases intensity of fire.</li> <li>▶ Heating may cause expansion or decomposition leading to violent rupture of containers.</li> <li>▶ Heat affected containers remain hazardous.</li> <li>▶ Contact with combustibles such as wood, paper, oil or finely divided metal may produce spontaneous combustion or violent decomposition.</li> </ul>

	<p>Division 1.1 Substances, mixtures and articles which have a mass explosion hazard (a mass explosion is one which affects almost the entire quantity present virtually instantaneously).</p> <p>Explosives are defined as substances which are capable by chemical reaction of producing gas at such a temperature and pressure and at such speed as to cause damage to the surroundings. Pyrotechnic substances are included even when they do not evolve gases.</p> <p>Compatibility Group D explosives are secondary detonating explosive substances or black powder or articles containing a secondary detonating explosive substance, in each case without means of initiation and without a propelling charge, or articles containing a primary explosive substance and containing two or more effective protective features</p> <p>Decomposition may produce toxic fumes of:</p> <ul style="list-style-type: none"> <li>, nitrogen oxides (NOx)</li> <li>, chlorides</li> </ul> <p> On burning under confined or semi-confined conditions, some oxides of nitrogen and/or carbon will be present. Brown fumes indicate the presence of toxic oxides of nitrogen.</p>
HAZCHEM	E

## SECTION 6 ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

See section 8

### Environmental precautions

See section 12

### Methods and material for containment and cleaning up

Minor Spills	<p><b>WARNING!: EXPLOSIVE.</b></p> <p>BLAST and/or PROJECTION and/or FIRE HAZARD</p> <ul style="list-style-type: none"> <li>▶ Clean up all spills immediately.</li> <li>▶ Avoid inhalation of the material and avoid contact with eyes and skin.</li> <li>▶ Wear impervious gloves and safety glasses.</li> </ul>
Major Spills	<p><b>WARNING!: EXPLOSIVE.</b></p> <ul style="list-style-type: none"> <li>▶ Clear area of personnel and move upwind.</li> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ May be violently or explosively reactive.</li> </ul>

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

## SECTION 7 HANDLING AND STORAGE

### Precautions for safe handling

Safe handling	<ul style="list-style-type: none"> <li>▶ <b>DO NOT allow clothing wet with material to stay in contact with skin</b></li> <li>▶ Handle gently. Use good occupational work practice.</li> <li>▶ Observe manufacturer's storage and handling recommendations contained within this SDS.</li> <li>▶ Avoid all personal contact, including inhalation.</li> </ul>
Other information	<ul style="list-style-type: none"> <li>▶ Store cases in a well ventilated magazine licensed for the appropriate Class, Division and Compatibility Group.</li> <li>▶ Rotate stock to prevent ageing. Use on FIFO (first in-first out) basis.</li> <li>▶ Observe manufacturer's storage and handling recommendations contained within this SDS.</li> </ul>

### Conditions for safe storage, including any incompatibilities

Suitable container	<ul style="list-style-type: none"> <li>▶ All packaging for Class 1 Goods shall be in accordance with the requirements of the relevant Code for the transport of Dangerous Goods.</li> <li>▶ 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</li> </ul> <p>Packaging for explosive substances shall meet the test requirements for Packaging Group II.</p>
Storage incompatibility	<p>Ammonium nitrate:</p> <ul style="list-style-type: none"> <li>▶ is a strong oxidiser</li> <li>▶ reacts violently and/ or forms explosive mixtures with hot water, reducing agents, combustible materials, flammable liquids, organic materials, ammonium dichromate, barium chloride, barium nitrate, charcoal, cyanoguanidine, oils, phosphorus, potassium chromate, potassium dichromate, potassium nitrate, potassium permanganate, sodium chloride, finely divided metals</li> <li>▶ forms explosive and/ or heat- and shock- sensitive compounds with acetic acid, alkali metals (potassium, sodium etc.), ammonia, nitric acid, sodium hypochlorite, sulfur, urea</li> <li>▶ may explode violently when heated and contained or confined</li> </ul>

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NOTE:- Explosive detonations can occur when material is mixed with organic material, oils or charcoals and when heated or subjected to shock.

- ▶ 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 any contamination of this material as it is very reactive and any contamination is potentially hazardous
- ▶ Explosion hazard may follow contact with incompatible materials
- ▶ Avoid storage with reducing agents.

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

## Control parameters

## OCCUPATIONAL EXPOSURE LIMITS (OEL)

## INGREDIENT DATA


Not Available

## EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
ammonium nitrate	Ammonium nitrate	6.7 mg/m <sup>3</sup>	73 mg/m <sup>3</sup>	440 mg/m <sup>3</sup>
sodium perchlorate	Sodium perchlorate	6.3 mg/m <sup>3</sup>	69 mg/m <sup>3</sup>	420 mg/m <sup>3</sup>
sodium perchlorate	Sodium perchlorate monohydrate	3.8 mg/m <sup>3</sup>	41 mg/m <sup>3</sup>	250 mg/m <sup>3</sup>

Ingredient	Original IDLH	Revised IDLH
ammonium nitrate	Not Available	Not Available
sodium perchlorate	Not Available	Not Available
hexamine nitrate	Not Available	Not Available
guar gum	Not Available	Not Available
trace additives (chemical gassing catalyst, gum)	Not Available	Not Available
dispersing agent, crosslinker, pH regulator)	Not Available	Not Available
water	Not Available	Not Available

## Exposure controls

<b>Appropriate engineering controls</b>	<p>Use in a well-ventilated area</p> <p>Engineering controls for explosive substances 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.</p> <p>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.</p>
<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>▶ 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               <ul style="list-style-type: none"> <li>• 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 and 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. Conductive shoes should be stored in lockers close to the room in which they are worn.</li> </ul> </li> </ul>
<b>Body protection</b>	See Other protection below

Continued...

<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>
<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:

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Material	CPI
BUTYL	C
NATURAL RUBBER	C
NEOPRENE	C
PVA	C
VITON	C

\* 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>	A non-cap sensitive watergel slurry. Highly resistant to shock, friction and fire. Oxidiser. [Rioflex is oxygen balanced, consequently, produces minimal quantities of toxic fumes and it can be used over a wide range of temperatures. Sensitised in situ while loading.		
<b>Physical state</b>	Gel	<b>Relative density (Water = 1)</b>	0.85-1.32
<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 Available	<b>Decomposition temperature</b>	Not Available
<b>Melting point / freezing point (°C)</b>	Not Available	<b>Viscosity (cSt)</b>	Not Available
<b>Initial boiling point and boiling range (°C)</b>	Not Available	<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 Available	<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 Available
<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>	Miscible	<b>pH as a solution (1%)</b>	Not Available

Vapour density (Air = 1)	Not Available	VOC g/L	Not Available
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## SECTION 10 STABILITY AND REACTIVITY

<b>Reactivity</b>	See section 7
<b>Chemical stability</b>	<ul style="list-style-type: none"> <li>▶ Presence of heat source and ignition source</li> <li>▶ Product is considered stable under normal handling conditions.</li> <li>▶ Stable under normal storage conditions.</li> <li>▶ Hazardous polymerization will not occur.</li> <li>▶ Avoid contact with other explosives, pyrotechnics, solvents, adhesives, paints, cleaners and unauthorized metals, plastics, packing equipment and materials.</li> <li>▶ Avoid contamination with acids, alkalis, reducing agents, amines and phosphorus.</li> </ul> <p>[Not expected to be sensitive to static discharge or mechanical impact.</p>
<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>	There is some evidence to suggest that the material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.
<b>Ingestion</b>	<p>Accidental ingestion of the material may be damaging to the health of the individual. Swallowing large doses of ammonium nitrate may cause dilation of blood vessels by direct smooth muscle relaxation and methaemoglobinaemia. Symptoms include dizziness, abdominal pain, vomiting, bloody diarrhoea, weakness, convulsions and collapse. Other effects of exposure include headache, warm flushed skin, nausea, vomiting, diuresis and fatigue. Both tachycardia and bradycardia, atrial fibrillation, cardiac ischaemia, frequent ventricular premature beats and bigeminy have been reported.</p> <p>Symptoms of exposure to perchlorates include shortness of breath, difficulty breathing and a bluish discolouration of the skin. The effects may be delayed for several hours following exposure.</p>
<b>Skin Contact</b>	<p>There is some evidence to suggest that this material can cause inflammation of the skin on contact in some persons. Open cuts, abraded or irritated skin should not be exposed to this material</p> <p>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.</p>
<b>Eye</b>	This material can cause eye irritation and damage in some persons.
<b>Chronic</b>	Chronic exposure to ammonium nitrate may produce low blood pressure and fatigue. Swallowing 6-12 grams per day in the long term has produced inflammation of the stomach, acidity of the blood, excessive urine output and nitrite toxicity, manifested by methaemoglobin the blood or dilation of blood vessels.

	TOXICITY	IRRITATION
<b>MAXAM RIOFLEX MX 10000</b>	Not Available	Not Available
<b>ammonium nitrate</b>	dermal (rat) LD50: >5000 mg/kg <sup>[1]</sup> Oral (rat) LD50: 2217 mg/kg <sup>[2]</sup>	Not Available
<b>sodium perchlorate</b>	Oral (rat) LD50: 2100 mg/kg <sup>[2]</sup>	Not Available
<b>hexamine nitrate</b>	Not Available	Not Available
<b>water</b>	Oral (rat) LD50: >90000 mg/kg <sup>[2]</sup>	Not Available

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**Legend:** 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>HEXAMINE NITRATE</b>	The following information refers to contact allergens as a group and may not be specific to this product. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions.
<b>HEXAMINE NITRATE &amp; WATER</b>	No significant acute toxicological data identified in literature search.

<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 available but does not fill the criteria for classification  
 ✓ – Data available to make classification  
 ☐ – Data Not Available to make classification

**SECTION 12 ECOLOGICAL INFORMATION**

**Toxicity**

Ingredient	Endpoint	Test Duration (hr)	Species	Value	Source
ammonium nitrate	EC50	48	Crustacea	=111840mg/L	1
ammonium nitrate	EC03	168	Algae or other aquatic plants	=83mg/L	4
ammonium nitrate	NOEC	20	Fish	0.003mg/L	4
sodium perchlorate	LC50	96	Fish	>1000mg/L	2
sodium perchlorate	BCF	240	Fish	1100.0mg/L	4
sodium perchlorate	NOEC	240	Fish	0.75mg/L	4

**Legend:**

Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

Harmful to aquatic organisms.

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

**Persistence and degradability**

Ingredient	Persistence: Water/Soil	Persistence: Air
water	LOW	LOW

**Bioaccumulative potential**

Ingredient	Bioaccumulation
water	LOW (LogKOW = -1.38)

**Mobility in soil**

Ingredient	Mobility
water	LOW (KOC = 14.3)

**SECTION 13 DISPOSAL CONSIDERATIONS**

**Waste treatment methods**



<b>Product / Packaging disposal</b>	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.
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## SECTION 14 TRANSPORT INFORMATION

### Labels Required

	
<b>Marine Pollutant</b>	NO
<b>HAZCHEM</b>	E

### Land transport (ADG)

<b>UN number</b>	0241
<b>UN proper shipping name</b>	EXPLOSIVE, BLASTING, TYPE E
<b>Transport hazard class(es)</b>	Class : 1.1D Subrisk : Not Applicable
<b>Packing group</b>	Not Applicable
<b>Environmental hazard</b>	Not Applicable
<b>Special precautions for user</b>	Special provisions : Not Applicable Limited quantity : 0

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

<b>UN number</b>	0241
<b>UN proper shipping name</b>	Explosive, blasting, type E
<b>Transport hazard class(es)</b>	ICAO/IATA Class : 1.1D ICAO / IATA Subrisk : Not Applicable ERG Code : 1L
<b>Packing group</b>	Not Applicable
<b>Environmental hazard</b>	Not Applicable
<b>Special precautions for user</b>	Special provisions : Not Applicable Cargo Only Packing Instructions : Forbidden 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)

<b>UN number</b>	0241
<b>UN proper shipping name</b>	EXPLOSIVE, BLASTING, TYPE E
<b>Transport hazard class(es)</b>	IMDG Class : 1.1D IMDG Subrisk : Not Applicable
<b>Packing group</b>	Not Applicable
<b>Environmental hazard</b>	Not Applicable

<b>Special precautions for user</b>	EMS Number	F-B, S-X
	Special provisions	Not Applicable
	Limited Quantities	0

**Transport in bulk according to Annex II of MARPOL and the IBC code**

Not Applicable

**SECTION 15 REGULATORY INFORMATION****Safety, health and environmental regulations / legislation specific for the substance or mixture****AMMONIUM NITRATE(6484-52-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

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

**SODIUM PERCHLORATE(7601-89-0) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

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

**HEXAMINE NITRATE(18423-20-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS**International Air Transport Association (IATA) Dangerous Goods Regulations  
- Prohibited List Passenger and Cargo Aircraft**WATER(7732-18-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

Australia Inventory of Chemical Substances (AICS)

National Inventory	Status
Australia - AICS	N (hexamine nitrate)
Canada - DSL	N (hexamine nitrate)
Canada - NDSL	N (water; hexamine nitrate; ammonium nitrate; sodium perchlorate)
China - IECSC	N (hexamine nitrate)
Europe - EINEC / ELINCS / NLP	N (hexamine nitrate)
Japan - ENCS	N (water; hexamine nitrate)
Korea - KECI	N (hexamine nitrate)
New Zealand - NZIoC	N (hexamine nitrate)
Philippines - PICCS	N (hexamine nitrate)
USA - TSCA	N (hexamine nitrate)
<b>Legend:</b>	<i>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)</i>

**SECTION 16 OTHER INFORMATION****Other information****Ingredients with multiple cas numbers**

Name	CAS No
sodium perchlorate	7601-89-0, 7791-07-3

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.

The 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 or available engineering controls must be considered.

**Definitions and abbreviations**

PC—TWA: Permissible Concentration-Time Weighted Average

PC—STEL: Permissible Concentration-Short Term Exposure Limit

IARC: International Agency for Research on Cancer

ACGIH: American Conference of Governmental Industrial Hygienists

STEL: Short Term Exposure Limit  
TEEL: Temporary Emergency Exposure Limit.  
IDLH: Immediately Dangerous to Life or Health Concentrations  
OSF: Odour Safety Factor  
NOAEL :No Observed Adverse Effect Level  
LOAEL: Lowest Observed Adverse Effect Level  
TLV: Threshold Limit Value  
LOD: Limit Of Detection  
OTV: Odour Threshold Value  
BCF: BioConcentration Factors  
BEI: Biological Exposure Index

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