MAXAM RIONEL LLE

MAXAM Australia

Chemwatch Hazard Alert Code: **4**

Chemwatch: **4869-67**
Version No: **6.1.1.1**
Safety Data Sheet according to WHS and ADG requirements

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Initial Date: **Not Available**
S.GHS.AUS.EN

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

Product Identifier

Product name	MAXAM RIONEL LLE
Synonyms	Lead in Line
Proper shipping name	DETONATOR ASSEMBLIES, NON-ELECTRIC for blasting†
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, mainly to initiate other explosives or for special applications. Use of this product by persons lacking adequate training, experience and supervision may result in injury or death. Obey all Commonwealth, State and Local Laws and Regulations. DANGER - If misused or disposed of improperly material may explode and cause death or injury. DO NOT HANDLE WHEN IN DOUBT.

Details of the supplier of the safety data sheet

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

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

CHEMWATCH HAZARD RATINGS

		Min	Max
Flammability	1		
Toxicity	0		
Body Contact	0		
Reactivity	4		
Chronic	0		

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

Poisons Schedule	Not Applicable
GHS Classification [1]	Explosive Division 1.4

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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	
SIGNAL WORD	**WARNING**

Hazard statement(s)

H204	Fire or projection hazard

Precautionary statement(s) Prevention

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P250	Do not subject to grinding/shock/sources of friction.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P240	Ground/bond container and receiving equipment.

Precautionary statement(s) Response

P370+P380	In case of fire: Evacuate area.
P372	Explosion risk in case of fire.
P374	Fight fire with normal precautions from a reasonable distance.
P373	DO NOT fight fire when fire reaches explosives.

Precautionary statement(s) Storage

P401	Store according to local regulations for explosives

Precautionary statement(s) Disposal

P501	Dispose of contents/container in accordance with local regulations.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
13424-46-9	>60	lead azide

SECTION 4 FIRST AID MEASURES

Description of first aid measures

Eye Contact	If this product comes in contact with the eyes: ▸ Wash out immediately with fresh running water. ▸ 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. ▸ Seek medical attention without delay; if pain persists or recurs seek medical attention. ▸ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin contact occurs: ▸ Immediately remove all contaminated clothing, including footwear. ▸ Flush skin and hair with running water (and soap if available). ▸ Seek medical attention in event of irritation. In case of burns: ▸ Quickly immerse affected area in cold running water for 10 to 15 minutes. ▸ Bandage lightly with a sterile dressing. Treat for shock if required.

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	▸ Lay patient down. Keep warm and rested. ▸ Transport to hospital, or doctor.
Inhalation	▸ If fumes, aerosols or combustion products are inhaled remove from contaminated area. ▸ Other measures are usually unnecessary.
Ingestion	Not considered a normal route of entry. The form and packaging of explosive detonators prevents any significant contamination by the charge.

Indication of any immediate medical attention and special treatment needed

Delayed pulmonary oedema may result following exposure to nitrous oxides formed during an explosion or on thermal decomposition of the explosive. Long term exposure to low airborne concentrations of lead from test firing of detonators of this type may result in altered haemoglobin breakdown, kidney damage, anaemia and central and peripheral nervous system damage.

SECTION 5 FIREFIGHTING MEASURES

Extinguishing media

	DO NOT fight fires involving explosives.

Special hazards arising from the substrate or mixture

Fire 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.

Advice for firefighters

Fire Fighting	DO NOT fight fires involving explosives.|Hazchem or Emergency Action Code: 1YE
Fire/Explosion Hazard	Div 1.4, Compatibility Group A and B DANGER: SEVERE EXPLOSION HAZARD!|Combustible.|Detonation may occur from heavy impact or excessive heating.|Dry material is sensitive to shock, friction and sparks.|Heating may cause expansion or decomposition leading to violent rupture of containers.|Heat affected containers remain hazardous.|May detonate in a mass explosion if confined or mixed with incompatible materials.|Explosives can supply own oxygen for combustion and smothering action of foam or dry chemical may be ineffective.|May emit irritating, poisonous or corrosive fumes.|Combustion or decomposition produces oxides of nitrogen (NOx), carbon monoxide (CO) and carbon dioxide (CO2|On burning under confined or semi-confined conditions toxic fumes of|lead will be present.

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. |Explosives should not be abandoned at any location for any reason.|Do not handle during electrical storms.|Always stay away from area of explosion or disposal sites, behind suitable barriers.
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. |Protect against lightning.

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

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	▸ 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. ▸ Dangerous goods of other classes. Remove all ignition sources.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia Exposure Standards	lead azide	Lead, inorganic dusts & fumes (as Pb)	0.15 mg/m3	Not Available	Not Available	Not Available

EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
MAXAM RIONEL LLE	Not Available	Not Available	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
lead azide	700 mg/m3	100 mg/m3

Exposure controls

Appropriate engineering controls	Product needs to be used by experienced and skilled personnel under the supervision of a qualified Shotfirer.
Personal protection	
Eye and face protection	▸ Generally not applicable.
Skin protection	See Hand protection below
Hands/feet protection	▸ Cotton gloves ▸ Safety footwear
Body protection	See Other protection below
Other protection	▸ Generally not applicable.
Thermal hazards	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 RIONEL LLE Not Available

Material	CPI

* 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.

Respiratory protection

Not Available

Not Applicable

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SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	A precision heavy duty initiator composed of a flexible shock tube, a millisecond delay detonator (aluminium tube) and a detonating cord connector.

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

SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	Hazardous polymerisation will not occur. |Detonation may occur from impact or heat. Avoid all contact with other chemicals.|Conditions contributing to instability - heat (confinement), stacking (burning)|Explodes at 160 degC or on impact, produces shrapnel.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

Inhaled	‣ Generally not applicable. |Test firing in poorly ventilated areas can cause lead fume exposure.
Ingestion	‣ Generally not applicable. |Explosive ingredients are contained wholly within a small tube.
Skin Contact	‣ Generally not applicable. |Accidental detonation of explosive devices can cause lacerations,|punctures and/or traumatic injury. Severity of the injuries is dependent|on the number and proximity of the detonators.
Eye	‣ Generally not applicable. |Explosive ingredients are contained wholly within a small tube.

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Chronic	Short term exposure by all routes is considered to be practically|non-harmful apart from explosive nature of product.|Over-exposure to lead fumes from test firing in poorly ventilated areas may|result in anaemia, kidney and nervous system damage.

MAXAM RIONEL LLE	**TOXICITY**	**IRRITATION**
	Not Available	Not Available
lead azide	**TOXICITY**	**IRRITATION**
	Not Available	Not Available
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*	

LEAD AZIDE	**WARNING:** This substance has been classified by the IARC as Group 2B: Possibly Carcinogenic to Humans. Intraperitoneal (rat) LD? >150 mg/kg Nil reported

Acute Toxicity	⊘	**Carcinogenicity**	⊘
Skin Irritation/Corrosion	⊘	**Reproductivity**	⊘
Serious Eye Damage/Irritation	⊘	**STOT - Single Exposure**	⊘
Respiratory or Skin sensitisation	⊘	**STOT - Repeated Exposure**	⊘
Mutagenicity	⊘	**Aspiration Hazard**	⊘

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

DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
	No Data available for all ingredients	No Data available for all ingredients

Bioaccumulative potential

Ingredient	Bioaccumulation
	No Data available for all ingredients

Mobility in soil

Ingredient	Mobility
	No Data available for all ingredients

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Product / Packaging disposal	Large quantities shall be returned to MAXAM Australia Pty Ltd or be disposed of in conjunction with the relevant State Dangerous Goods Branch. Small quantities shall be consumed in a blast hole and exploded during blasting. Dispose of contents/container in accordance with local/regional/national/international regulations

SECTION 14 TRANSPORT INFORMATION

Labels Required

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Marine Pollutant	NO
HAZCHEM	Not Applicable

Land transport (ADG)

UN number	0500
Packing group	Not Applicable
UN proper shipping name	DETONATOR ASSEMBLIES, NON-ELECTRIC for blasting†
Environmental hazard	No relevant data
Transport hazard class(es)	Class: 1.4S Subrisk: Not Applicable
Special precautions for user	Special provisions: 347 Limited quantity: 0

Air transport (ICAO-IATA / DGR)

UN number	0500
Packing group	Not Applicable
UN proper shipping name	Detonator assemblies, non-electric for blasting
Environmental hazard	No relevant data
Transport hazard class(es)	ICAO/IATA Class: 1.4S ICAO / IATA Subrisk: Not Applicable ERG Code: 3L
Special precautions for user	Special provisions: A165 Cargo Only Packing Instructions: 131 Cargo Only Maximum Qty / Pack: 100 kg Passenger and Cargo Packing Instructions: 131 Passenger and Cargo Maximum Qty / Pack: 25 kg Passenger and Cargo Limited Quantity Packing Instructions: Forbidden Passenger and Cargo Limited Maximum Qty / Pack: Forbidden

Sea transport (IMDG-Code / GGVSee)

UN number	0500
Packing group	Not Applicable
UN proper shipping name	DETONATOR ASSEMBLIES, NON-ELECTRIC for blasting
Environmental hazard	Not Applicable
Transport hazard class(es)	IMDG Class: 1.4S IMDG Subrisk: Not Applicable
Special precautions for user	EMS Number: F-B , S-X Special provisions: 347 Limited Quantities: 0

SECTION 15 REGULATORY INFORMATION

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

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LEAD AZIDE(13424-46-9) 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 (lead azide)
China - IECSC	N (lead azide)
Europe - EINEC / ELINCS / NLP	Y
Japan - ENCS	Y
Korea - KECI	Y
New Zealand - NZIoC	Y
Philippines - PICCS	N (lead azide)
USA - TSCA	Y
Legend:	*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

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 or available engineering controls must be considered.