

### 1. Identification of Substance & Company

#### Product

<b>Product name</b>	Captive Bolt Activator
<b>Product codes</b>	201073, 201074, 201072, 210217
<b>HSNO approval</b>	HSR100249
<b>Approval description</b>	CARTRIDGES, POWER DEVICE
<b>UN number</b>	0323
<b>DG Class</b>	1.4S
<b>Proper Shipping Name</b>	CARTRIDGES, POWER DEVICE
<b>Packaging group</b>	NA
<b>Hazchem code</b>	NA
<b>Uses</b>	Livestock stun blanks

#### Company Details

<b>Company</b>	<b>Shoof International Ltd</b>	
<b>Address</b>	224 Laurent Road, Cambridge 3493 New Zealand	1 International Square Tullamarine VIC 3043 Australia
<b>Telephone</b>	+64 7 827 3902	+61 3 9907 3000
<b>Fax</b>	+64 7 823 0651	+61 3 9310 4760
<b>Website</b>	www.shoof.co.nz	www.shoof.com.au

**NZ Emergency Telephone Number: 0800 POISON (0800 764 766)**  
**Poisons Information Centre – Australia: 13 11 26**

### 2. Hazard Identification

#### Approval

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO, Approval HSR100249, CARTRIDGES, POWER DEVICES). The substance has been classified as hazardous according to the criteria in the Hazardous substances (Minimum Degrees of Hazard) Notice 2017.

<b>Classes</b>	<b>Hazard Statements</b>
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1.4S	H204 - Fire or projection hazard.
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#### SYMBOLS

## WARNING



#### GHS classification- Australia

<b>Classes</b>	<b>Hazard Statements</b>
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Expl. 1.4	H204 - Fire or projection hazard.
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#### Other Classifications/Hazards - HSNO

This article can be ignited by heat, sparks, flames or other sources of ignition (e.g. static electricity, pilot lights, or mechanical/electrical equipment).

Particles from Firing may be harmful if inhaled. Do not take internally.

The Cartridge is made of a shell which contains hazardous substances. During normal handling of the cartridge, no exposure to these substances should take place. However when the cartridge is fired, a small amount of particles may be released which have the following hazards:

6.1D (oral)  
6.1E (dermal)  
6.9B  
6.8B  
9.1C  
9.3C

H302 - Harmful if swallowed.  
H313 - May be harmful in contact with skin.  
H373 - May cause damage to organs through prolonged or repeated exposure.  
H361 - Suspected of damaging fertility or the unborn child.  
H412 - Harmful to aquatic life with long lasting effects.  
H433 - Harmful to terrestrial vertebrates.



### Precautionary Statements

P102 - Keep out of reach of children.  
P103 Read label before use.  
P210 Keep away from heat/sparks/open flames/hot surfaces and other ignition sources. No smoking.  
P250 Do not subject to grinding/shock/friction.  
P264 - Wash hands thoroughly after handling.  
P270 - Do not eat, drink or smoke when using this product.  
P273 - Avoid release to the environment.  
P280 Wear face protection.  
P370+P380 - In case of fire: Evacuate area.  
P372 - Explosion risk in case of fire.  
P373 - DO NOT fight fire when fire reaches explosives.  
P401 Store in accordance with the regulations.  
P501 - Dispose of contents/container in accordance with local/regional/national/international regulation.

### 3. Composition / Information on Ingredients

Component	CAS/ Identification	Conc (%)
Glycerol trinitrate	55-63-0	3-10%
Diphenylamine	122-39-4	0.1-1%
lead 2,4,6-trinitroresorcinoxide	15245-44-0	0.1-1%

This is a commercial product whose exact ratio of components may vary. Trace quantities of impurities are also likely.

### 4. First Aid

#### General Information

If medical advice is needed, have product container or label at hand. You should call the National Poisons Centre if you feel that you may have been harmed or irritated by this product. The number is 0800 764 766 (0800 POISON) (24 hr emergency service).

**Recommended first aid facilities** Ready access to running water is required. Accessible eyewash is required.

#### Exposure

**Swallowed** IF SWALLOWED: Call a POISON CENTRE or doctor/physician immediately. Rinse mouth. Do NOT induce vomiting. Give a glass of water to drink.  
**Eye contact** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.  
**Skin contact** IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: get medical advice/attention. Take off contaminated clothing and wash before re-use.  
**Inhaled** IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Call a doctor if you feel unwell.

#### Advice to Doctor

Treat symptomatically

### 5. Firefighting Measures

**Fire and explosion hazards:** Explosive material. Dangerous hazard when exposed to heat or flames. If the fire reaches the material, do not fight. Evacuate all people, including emergency responders from the area. Do not approach containers suspected to be hot. If safe to do so, remove containers from path of fire.  
**Suitable extinguishing substances:** Flooding quantities of water only. Fight fire from a safe distance, with adequate cover. Cool fire exposed containers with water spray. If the fire reaches the material, withdraw and let fire burn.

<b>Unsuitable extinguishing substances:</b>	unknown
<b>Products of combustion:</b>	Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Water. May form toxic mixtures in air and may accumulate in sumps, pits and other low-lying spaces, forming potentially explosive mixtures.
<b>Protective equipment:</b>	Self-contained breathing apparatus. Safety boots, non-flammable overalls, gloves, hat and eye protection.
<b>Hazchem code:</b>	NA

### 6. Accidental Release Measures

<b>Containment</b>	If greater than 200kg is stored, secondary containment and emergency plans to manage any potential spills must be in place. In all cases design storage to prevent discharge to storm water.
<b>Emergency procedures</b>	In the event of a large spill alert the fire brigade to location and give brief description of hazard. The material may react violently or explode. Shut off all possible sources of ignition and increase ventilation. Clear area of any unprotected personnel and move upwind. Consider evacuation of larger area. Wear protective equipment to prevent skin, eye and respiratory exposure. Contain material. Avoid dust creation. Do not subject material to mechanical shock. Prevent by whatever means possible any spillage from entering drains, sewers, or water courses. (If this occurs contact your regional council immediately).
<b>Clean-up method</b>	Collect material carefully (avoid mechanical shock and dust creation). and seal in properly labelled containers or drums for disposal. If contamination of crops, sewers or waterways has occurred advise local emergency services.
<b>Disposal</b>	Collect recoverable material into labelled containers for recycling or salvage. This material may be suitable for approved landfill. Dispose of only in accord with all regulations.
<b>Precautions</b>	Restrict access to site where spill has occurred until clean up is complete. Wear protective equipment to prevent skin and eye contamination and the inhalation of dusts, see section 8. Work up wind or increase ventilation.

### 7. Storage & Handling

<b>Storage</b>	Store locked up. Avoid storage of harmful substances with food. Store out of reach of children. Store in original container only. Containers should be kept closed and locked in order to minimise contamination. Keep from extreme heat and open flames. Avoid shock or friction. Avoid contact with incompatible substances as listed in Section 10. Containers (and outer packaging) must bear the prescribed labelling, including the Hazchem code, UN number, flammability warning and name of contents. Always wash hands with soap and water after handling. Work clothes should be laundered separately.
<b>Handling</b>	Handle with care - avoid bumps, friction and impact. Use spark free tools when handling. Keep exposure to a minimum, and minimise the quantities kept in work areas. See section 8 with regard to personal protective equipment requirements. Avoid skin and eye contact and inhalation of vapour, mist or aerosols.

### 8. Exposure Controls / Personal Protective Equipment

#### Workplace Exposure Standards

A workplace exposure standard (WES) has not been established by WorkSafe NZ for this product. There is a general limit of 3mg/m<sup>3</sup> for respirable particulates and 10mg/m<sup>3</sup> for inhalable particulates when limits have not otherwise been established.

NZ Workplace Exposure Stds	Ingredient	WES-TWA	WES-STEL
	glycerol trinitrate	0.05ppm, 0.46mg/m <sup>3</sup>	data unavailable
	Diphenylamine	10mg/m <sup>3</sup>	data unavailable
	lead 2,4,6-trinitroresorcinoxide	0.05 mg/m <sup>3</sup> (lead dust and fumes)	data unavailable

#### Engineering Controls

In industrial situations, it is expected that employee exposure to hazardous substances will be controlled to a level as far below the WES as practicable by applying the hierarchy of control required by the Health and Safety at Work Act (2015) and the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016. Exposure can be reduced by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. If you believe air borne concentrations of mists, dusts or vapours are high, you are advised to modify processes or increase ventilation.

### Personal Protective Equipment

<b>Eyes</b>	Wear eye protection with using this article. Eye glasses with side protection or visor made of safety glass.
<b>Skin</b>	Protective gloves are not normally necessary. Wear anti-static footwear and clothing.
<b>Respiratory</b>	No personal respiratory protective equipment normally required. A respirator when airborne concentrations approach the WES (section 8). Respirators must have filters appropriate to the duty and comply with AS/NZS1716 and selected, used and maintained in accordance with AS/NS 1715. Use a respirator with a dust/particulate filter. If using a respirator, ensure that the cartridges are correct for the potential air contamination and are in good working order. Fit testing and clear guidelines and training for use and maintenance of PPE are necessary.

### WES Additional Information

Not applicable

### 9. Physical & Chemical Properties

<b>Appearance</b>	Blanks/Cartridges
<b>Odour</b>	no data
<b>pH</b>	no data
<b>Vapour pressure</b>	no data
<b>Boiling point</b>	no data
<b>Volatile materials</b>	no data
<b>Freezing / melting point</b>	no data
<b>Solubility</b>	no data
<b>Specific gravity / density</b>	no data
<b>Flash point</b>	no data
<b>Danger of explosion</b>	explosive
<b>Auto-ignition temperature</b>	no data
<b>Upper &amp; lower flammable limits</b>	no data
<b>Corrosiveness</b>	non corrosive

### 10. Stability & Reactivity

<b>Stability</b>	Stable
<b>Conditions to be avoided</b>	Containers should be kept closed in order to avoid contamination. Keep from extreme heat and open flames. Handle with care - avoid bumps, friction and impact.
<b>Incompatible groups</b>	Strong acids and alkali
<b>Substance Specific Incompatibility</b>	none known
<b>Hazardous decomposition products</b>	carbon monoxide, carbon dioxide, nitrous gases (NOx), metal oxides. Thermal decomposition can lead to the escape of irritating gases and vapours.
<b>Hazardous reactions</b>	none known

### 11. Toxicological Information

#### Summary

This product is a cartridge, the physical nature of which makes absorption from any route unlikely. Once the cartridge is fired a small amount of inhalable particles may be created.

The propellants in this cartridge may have the following health effects:

Harmful if swallowed, may cause nausea and vomiting.

Irritating to skin and eyes.

May cause reproductive/developmental toxicity.

May affect organs through prolonged or repeated exposure. (glycerol trinitrate) .

#### Supporting Data

<b>Acute</b>	<b>Oral</b>	Using LD <sub>50</sub> 's for ingredients, the Acute Toxicity Estimate (ATE) (oral) for the mixture is between 300 and 2,000 mg/kg. Data considered includes: glycerol trinitrate 105mg/kg (rat), Diphenylamine 300 mg/kg bw (guinea pig).
	<b>Dermal</b>	Using LD <sub>50</sub> 's for ingredients, the Acute Toxicity Estimate (ATE) (dermal) for the mixture is between 2000 and 5000 mg/kg. Data considered includes: glycerol trinitrate >280mg/kg (rabbit)
	<b>Inhaled</b>	Using LD <sub>50</sub> 's for ingredients, the Acute Toxicity Estimate (ATE) (inhalation) for the mixture is >5mg/L/4h.
	<b>Eye</b>	The mixture is not considered to be an eye irritant.
	<b>Skin</b>	The mixture is not considered to be a skin irritant.

<b>Chronic</b>	<b>Sensitisation</b> <b>Mutagenicity</b> <b>Carcinogenicity</b> <b>Reproductive / Developmental Systemic</b>	<p>No ingredient present at concentrations &gt; 0.1% is considered a sensitizer.</p> <p>No ingredient present at concentrations &gt; 0.1% is considered a mutagen.</p> <p>No ingredient present at concentrations &gt; 0.1% is considered a carcinogen.</p> <p>This mixture is considered to be a reproductive/developmental toxicant. glycerol trinitrate and lead 2,4,6-trinitroresorcinoxide are considered 6.8B.</p> <p>The mixture is considered to be a suspected target organ toxicant, because at least one of the ingredients (Glycerol trinitrate) present in greater than 1% is suspected to be a target organ toxicant. May affect the liver.</p>
	<b>Aggravation of existing conditions</b>	None known.

### 12. Ecological Data

#### Summary

Intact cartridge is not considered harmful in the aquatic environment, however the ingredients (propellants), if released may be toxic to aquatic organisms.

#### Supporting Data

<b>Aquatic</b>	Using EC <sub>50</sub> 's for ingredients, the calculated EC <sub>50</sub> for the mixture is between 10 mg/L and 100 mg/L. Data considered includes: glycerol trinitrate 2.05mg/L (96hr, fish), 32mg/L (48hr, crustacean), 0.4mg/L (96hr, Algae), Diphenylamine 0.31 (0.27 - 0.36) mg/L (48hr, Daphnia magna), 1.50 mg/l (72hr, Scenedesmus subspicatus (Algae)), 3.79 mg/l (96hr, Pimephales promelas Fathead minnow).
<b>Bioaccumulation</b>	No data
<b>Degradability</b>	No data
<b>Soil</b>	No evidence of soil toxicity.
<b>Terrestrial vertebrate</b>	See acute toxicity.
<b>Terrestrial invertebrate</b>	No evidence of ecotoxicity towards terrestrial invertebrates.
<b>Biocidal</b>	No data
<b>Environmental effect levels</b>	No EELs are available for this mixture or ingredients

### 13. Disposal Considerations

<b>Restrictions</b>	There are no product-specific restrictions, however, local council and resource consent conditions may apply, including requirements of trade waste consents.
<b>Disposal method</b>	Disposal of this product must comply with the Hazardous Substances (Disposal) Notice 2017 and the requirements of the Resource Management Act for which approval should be sought from the Regional Authority. The substance must be treated and therefore rendered non-hazardous before discharge to the environment. Do not deposit in a landfill or sewage facility. Do not detonate to dispose of this substance.
<b>Contaminated packaging</b>	Disposal of contaminated packaging must comply with the Hazardous Substances (Disposal) Notice 2017 clause 12. Ensure that the package is rendered incapable of containing any substance and is disposed in a manner that is consistent with the requirements of the substance it contained and the material of the package. If possible reuse or recycle packaging.

### 14. Transport Information

#### Land Transport Rule: Dangerous Goods 2005 - NZS 5433:2007

Transport according to NZS 5433 (Transport of Hazardous Substances on Land). Considered a dangerous good for transport.

<b>UN number:</b>	0323	<b>Proper shipping name:</b>	CARTRIDGES, POWER DEVICE
<b>Class(es)</b>	1.4S	<b>Packing group:</b>	NA
<b>Precautions:</b>	Explosive	<b>Hazchem code:</b>	NA

### 15. Regulatory Information

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO). Approval code: HSR100249, CARTRIDGES, POWER DEVICES. All ingredients appear on the New Zealand Inventory of Chemicals NZIoC.

#### Specific Controls

Key workplace requirements are:

SDS	To be available within 10 minutes in workplaces storing any quantity.
Inventory	An inventory of all hazardous substances must be prepared and maintained.
Packaging	All hazardous substances should be appropriately packaged including substances that have been decanted, transferred or manufactured for own use or have been supplied.
Labelling	Must comply with the Hazardous Substances (Labelling) Notice 2017.
Controlled substance licence	Exempt.
Emergency plan	Required if > 200kg is stored.
Certified handler	Exempt
Tracking	Exempt.
Bunding & secondary containment	Required if > 200kg is stored.
Signage	Required if > 5000kg is stored.
Location compliance certificate	Required if > 10000kg is stored.
Flammable zone	Not required.
Fire extinguisher	If > 50kg present.

Note: The above workplace requirements apply if only this particular substance is present. The complete set of controls for a location will depend on the classification and total quantities of other substances present in that location.

#### Other Legislation

In New Zealand, the use of this product may come under the Resource Management Act and Regulations, the Health and Safety at Work Act 2015 and the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016, local Council Rules and Regional Council Plans.

### 16. Other Information

#### Abbreviations

<b>Approval Code</b>	Approval HSR100249, CARTRIDGES, POWER DEVICES Controls, EPA. www.epa.govt.nz
<b>CAS Number</b>	Unique Chemical Abstracts Service Registry Number
<b>EC<sub>50</sub></b>	Ecotoxic Concentration 50% – concentration in water which is fatal to 50% of a test population (e.g. daphnia, fish species)
<b>EPA</b>	Environmental Protection Authority (New Zealand)
<b>HAZCHEM Code</b>	Emergency action code of numbers and letters that provide information to emergency services, especially fire fighters
<b>HSNO</b>	Hazardous Substances and New Organisms (Act and Regulations)
<b>IARC</b>	International Agency for Research on Cancer
<b>LEL</b>	Lower Explosive Limit
<b>LD<sub>50</sub></b>	Lethal Dose 50% – dose which is fatal to 50% of a test population (usually rats).
<b>LC<sub>50</sub></b>	Lethal Concentration 50% – concentration in air which is fatal to 50% of a test population (usually rats)
<b>NZIoC</b>	New Zealand Inventory of Chemicals
<b>MSDS (SDS)</b>	Material Safety Data Sheet (or Safety Data Sheet)
<b>STEL</b>	Short Term Exposure Limit - The maximum airborne concentration of a chemical or biological agent to which a worker may be exposed in any 15 minute period, provided the TWA is not exceeded
<b>TWA</b>	Time Weighted Average – generally referred to WES averaged over typical work day (usually 8 hours)
<b>UEL</b>	Upper Explosive Limit
<b>UN Number</b>	United Nations Number
<b>WES</b>	Workplace Exposure Standard - The airborne concentration of a biological or chemical agent to which a worker may be exposed during work hours (usually 8 hours, 5 days a week). The WES relates to exposure that has been measured by personal monitoring using procedures that gather air samples in the worker's breathing zone.

### References

<b>Data</b>	Unless otherwise stated comes from the EPA HSNO chemical classification information database (CCID).
<b>Controls</b>	EPA notices, <a href="http://www.epa.govt.nz">www.epa.govt.nz</a> , Health and Safety at Work (Hazardous Substances) Regulations 2017, <a href="http://www.legislation.govt.nz">www.legislation.govt.nz</a>
<b>WES</b>	The latest NZ Workplace Exposure Standards, published by WorkSafe NZ and available on their web site – <a href="http://www.worksafe.govt.nz">www.worksafe.govt.nz</a> .
<b>Other References:</b>	EU ECHA, ingredients SDS's, ChemIDplus, old SDS

### Review

<b>Date</b>	<b>Reason for review</b>
September 2020	Not applicable – new SDS

### Disclaimer

This SDS was prepared by Datachem LTD and is based on our current state of knowledge, including information obtained from suppliers. The SDS is given in good faith and constitutes a guideline (not a guarantee of safety). The level of risk each substance poses is relevant to its properties (as summarised in the SDS) AND HOW THE SUBSTANCE IS USED. While guidelines are given for personal protective equipment, such precautions must be relevant to the use. The likely HSNO classifications for this SDS have been estimated based on general information from the supplier (e.g., hazard, toxicological). This SDS is copyright Datachem and must not be copied, edited or used for other than intended purpose. To contact the SDS author, email [info@datachem.co.nz](mailto:info@datachem.co.nz) or phone: +64 9 940 30 80.

