

## Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and  
OSHA GHS

Printing date: March 10, 2015

Revision: March 10, 2015

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name:** 12-Gauge Warning / Signaling Munition 100m
- **Article number:** 3029
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture** Explosive product.
- **1.3 Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**  
Safariland, LLC  
13386 International Parkway  
Jacksonville, FL 32218  
Customer Care (800) 347-1200
- **Further information obtainable from:** Customer Care Department
- **1.4 Emergency telephone number:**  
ChemTel Inc.  
(800)255-3924, +1 (813)248-0585

### SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**  
The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H412.  
Classifications listed also are applicable to the OSHA GHS Hazard Communication Standard (29CFR1910.1200).



exploding bomb

Expl. 1.4                    H204 Fire or projection hazard.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**  
R5-44-52/53: Heating may cause an explosion. Risk of explosion if heated under confinement.  
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- **Information concerning particular hazards for human and environment:**  
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **Classification system:**  
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.  
The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.

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- **Additional information:**

There are no other hazards not otherwise classified that have been identified.  
0 percent of the mixture consists of component(s) of unknown toxicity

- **2.2 Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H412.

The product is additionally classified and labelled according to the Globally Harmonized System within the United States (GHS).

The product is classified and labelled according to the CLP regulation.

- **Hazard pictograms**



GHS01

- **Signal word** Warning

- **Hazard statements**

The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H412.

H204 Fire or projection hazard.

H412 Harmful to aquatic life with long lasting effects.

- **Precautionary statements**

The following Precautionary Statements are applicable only to the general GHS regulations and not the specific CLP regulation: P374.

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P250 Do not subject to grinding/shock/friction.

P373 DO NOT fight fire when fire reaches explosives.

P374 Fight fire with normal precautions from a reasonable distance.

P372 Explosion risk in case of fire.

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

- **Additional information:**

EUH209 Can become highly flammable in use.

- **Hazard description:**

- **WHMIS-symbols:**

F - Dangerously reactive material



- **NFPA ratings (scale 0 - 4)**



Health = 1

Fire = 2

Reactivity = 3

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· **HMIS-ratings (scale 0 - 4)**

HEALTH	1	Health = 1
FIRE	2	Fire = 2
REACTIVITY	3	Reactivity = 3

Warning: Contains lead salt(s). Long-term health hazard.

· **HMIS Long Term Health Hazard Substances**

7778-74-7	potassium perchlorate
122-39-4	diphenylamine

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Explosive Product Notice**

PREVENTION OF ACCIDENTS IN THE USE OF EXPLOSIVES - The prevention of accidents in the use of explosives is a result of careful planning and observance of the best known practices. The explosives user must remember that he is dealing with a powerful force and that various devices and methods have been developed to assist him in directing this force. He should realize that this force, if misdirected, may either kill or injure both him and his fellow workers.









WARNING - All explosives are dangerous and must be carefully handled and used following approved safety procedures either by or under the direction of competent, experienced persons in accordance with all applicable federal, state, and local laws, regulations, or ordinances. If you have any questions or doubts as to how to use any explosive product, DO NOT USE IT before consulting with your supervisor, or the manufacturer, if you do not have a supervisor. If your supervisor has any questions or doubts, he should consult the manufacturer before use.

## SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**

· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 7778-74-7 EINECS: 231-912-9 Index number: 017-008-00-5	potassium perchlorate  Xn R22;  O R9  Ox. Sol. 1, H271  Acute Tox. 4, H302	10-25%
CAS: 7429-90-5 EINECS: 231-072-3 Index number: 013-001-00-6	aluminium powder (pyrophoric)  F R15-17  Pyr. Sol. 1, H250; Water-react. 2, H261	10-25%
CAS: 7757-79-1 EINECS: 231-818-8	potassium nitrate  O R8  Ox. Sol. 2, H272	10-25%

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




**Trade name: 12-Gauge Warning / Signaling Munition 100m**

		(Contd. of page 3)
CAS: 7439-95-4 EINECS: 231-104-6 Index number: 012-001-00-3	magnesium powder (pyrophoric)  F R15-17  Pyr. Sol. 1, H250; Water-react. 1, H260	10-25%
CAS: 9004-70-0 EC number: 603-037-0	Nitrocellulose, colloided, granular  E R3  Expl. 1.1, H201	10-25%
CAS: 7704-34-9 EINECS: 231-722-6 Index number: 016-094-00-1	sulfur  Xi R38  Skin Irrit. 2, H315	≤ 2,5%
CAS: 7440-32-6 EINECS: 231-142-3	titanium  F R15-17  Pyr. Sol. 1, H250; Self-heat. 1, H251; Water-react. 1, H260	≤ 2,5%
CAS: 7440-67-7 EINECS: 231-176-9 Index number: 040-001-00-3	zirconium powder (pyrophoric)  F R15-17  Pyr. Sol. 1, H250; Water-react. 1, H260	≤ 2,5%
CAS: 122-39-4 EINECS: 204-539-4 Index number: 612-026-00-5	diphenylamine  T R23/24/25;  N R50/53 R33  Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331  STOT RE 2, H373  Aquatic Acute 1, H400; Aquatic Chronic 1, H410	≤ 2,5%
CAS: 7440-66-6	zinc metal  N R50/53  Aquatic Acute 1, H400; Aquatic Chronic 1, H410	≤ 2,5%
CAS: 85-98-3 EINECS: 201-645-2	1,3-diethyldiphenylurea  Xn R22  Acute Tox. 4, H302 Aquatic Chronic 3, H412	≤ 2,5%

• **Additional information:**

For the listed ingredients, the identity and exact percentages are being withheld as a trade secret.  
For the wording of the listed risk phrases refer to section 16.

• **Notable Trace Components (≤ 0,1% w/w)**

CAS: 15245-44-0 EINECS: 239-290-0 Index number: 609-019-00-4	lead 2,4,6-trinitro-m-phenylene dioxide  T Repr. Cat. 1, 3 R61;  Xn R62-20/22;  E R3;  N R50/53 R33  Unst. Expl., H200  Carc. 1B, H350; Repr. 1A, H360Df; STOT RE 2, H373  Aquatic Acute 1, H400; Aquatic Chronic 1, H410  Acute Tox. 4, H302; Acute Tox. 4, H332
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### SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:** No special measures required.

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- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**  
Unlikely route of exposure.  
Brush off loose particles from skin.  
If skin irritation is experienced, consult a doctor.
- **After eye contact:**  
Remove contact lenses if worn.  
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Do not induce vomiting; call for medical help immediately.
- **4.2 Most important symptoms and effects, both acute and delayed** Blast injury if mishandled.
- **Hazards** Danger of blast or crush-type injuries.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
Product may produce physical injury if mishandled. Treatment of these injuries should be based on the blast and compression effects.

### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**  
Flood area with water. If no water is available, carbon dioxide, dry chemical or earth may be used. If the fire reaches the cargo, withdraw and let fire burn.
- **For safety reasons unsuitable extinguishing agents:** None.
- **5.2 Special hazards arising from the substance or mixture**  
During heating or in case of fire poisonous gases are produced.  
Product may explode if burned in confined space. Individual cartridges may explode. Mass explosion of many cartridges at once is unlikely.
- **5.3 Advice for firefighters**
- **Protective equipment:**  
Wear self-contained respiratory protective device.  
Wear fully protective suit.
- **Additional information**  
Eliminate all ignition sources if safe to do so.  
Cool endangered receptacles with water spray.  
In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.  
Flammability Classification: (defined by 29 CFR 1910.1200) Explosive. Can explode under fire conditions. Individual devices will randomly explode. Will not mass explode if multiple devices are involved. Burning material may produce toxic and irritating vapors. In unusual cases, shrapnel may be thrown from exploding devices under containment. See 2008 Emergency response Guidebook for further information.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
FOR ALL TRANSPORTATION ACCIDENTS, CALL CHEMTEL AT 1-800-255-3924. Spills of this material should be handled carefully. Do not subject materials to mechanical shock or extreme heat. A spill of this material will normally not require emergency response team capabilities.  
Wear protective equipment. Keep unprotected persons away.

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Remove persons from danger area.

Ensure adequate ventilation

Protect from heat.

Isolate area and prevent access.

- **6.2 Environmental precautions:** No special measures required.

- **6.3 Methods and material for containment and cleaning up:**

Pick up mechanically.

Dispose contaminated material as waste according to item 13.

Send for recovery or disposal in suitable receptacles.

- **6.4 Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** Handle with care. Avoid jolting, friction and impact.

- **Information about fire - and explosion protection:**

Protect from heat.

Emergency cooling must be available in case of nearby fire.

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

- **Storage:**

- **Requirements to be met by storerooms and receptacles:**

Avoid storage near extreme heat, ignition sources or open flame.

- **Information about storage in one common storage facility:**

Store away from foodstuffs.

Store away from flammable substances.

- **Further information about storage conditions:** Store in cool, dry conditions in well sealed receptacles.

- **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

- **8.1 Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:**

**7440-67-7 zirconium powder (pyrophoric)**

PEL (USA) Long-term value: 5 mg/m<sup>3</sup>  
as Zr

REL (USA) Short-term value: 10 mg/m<sup>3</sup>  
Long-term value: 5 mg/m<sup>3</sup>  
as Zr

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TLV (USA) Short-term value: 10 mg/m<sup>3</sup>  
Long-term value: 5 mg/m<sup>3</sup>  
as Zr

EL (Canada) Short-term value: 10 mg/m<sup>3</sup>  
Long-term value: 5 mg/m<sup>3</sup>  
as Zr

EV (Canada) Short-term value: 10 mg/m<sup>3</sup>  
Long-term value: 5 mg/m<sup>3</sup>  
as zirconium

<b>122-39-4 diphenylamine</b>
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REL (USA) Long-term value: 10 mg/m<sup>3</sup>

TLV (USA) Long-term value: 10 mg/m<sup>3</sup>

EL (Canada) Long-term value: 10 mg/m<sup>3</sup>

EV (Canada) Long-term value: 10 mg/m<sup>3</sup>

- **DNELs** No further relevant information available.
- **PNECs** No further relevant information available.
- **Additional information:** The lists valid during the making were used as basis.

- **8.2 Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

- **Respiratory protection:** Not required under normal conditions of use.

- **Protection of hands:**

Wear gloves for the protection against mechanical hazards according to NIOSH or EN 388.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Safety glasses

- **Body protection:** Protective work clothing

- **Limitation and supervision of exposure into the environment**

No further relevant information available.

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- **Risk management measures**  
See Section 7 for additional information.  
Organizational measures should be in place for all activities involving this product.  
No further relevant information available.

## SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**
  - **Form:** Solid metal container containing liquid and solid contents.
  - **Colour:** According to product specification
- **Odour:** Odourless
- **Odour threshold:** Not determined.
- **pH-value:** Not applicable.
- **Change in condition**
  - **Melting point/Melting range:** Not Determined.
  - **Boiling point/Boiling range:** Undetermined.
- **Flash point:** Not applicable.
- **Flammability (solid, gaseous):** Not determined.
- **Auto/Self-ignition temperature:** Not determined.
- **Decomposition temperature:** Not determined.
- **Self-igniting:** Product is not self-igniting.
- **Danger of explosion:** Heating may cause an explosion.
- **Explosion limits:**
  - **Lower:** Not determined.
  - **Upper:** Not determined.
- **Vapour pressure:** Not applicable.
- **Density:** Not determined.
- **Relative density** Not determined.
- **Vapour density** Not applicable.
- **Evaporation rate** Not applicable.
- **Solubility in / Miscibility with water:** Insoluble.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
  - **Dynamic:** Not applicable.
  - **Kinematic:** Not applicable.

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## · 9.2 Other information

No further relevant information available.

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## SECTION 10: Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions**  
Danger of explosion.  
Toxic fumes may be released if heated above the decomposition point.  
Reacts with strong acids and alkali.  
Reacts violently with oxidising agents.
- **10.4 Conditions to avoid** Sources of ignition, open flame, incompatible materials.
- **10.5 Incompatible materials:** Oxidizers
- **10.6 Hazardous decomposition products:**  
Carbon monoxide and carbon dioxide  
Nitrogen oxides  
Sulphur oxides (SO<sub>x</sub>)

## SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values relevant for classification:**

122-39-4 diphenylamine

Oral	LD50	1120 mg/kg (rat)
------	------	------------------

- **Primary irritant effect:**
- **on the skin:**  
Not a skin irritant in unused form. Vapors/particles from used product are possibly irritating to skin.
- **on the eye:**  
Not an eye irritant in unused form. Vapors/particles from used product are possibly irritating to eyes.
- **Additional toxicological information:**  
Normal handling of the undeployed product poses little or no health hazards, One should avoid inhalation by wearing appropriate respiratory protection when exposed to the chemical ingredients of the product above listed TLV's or when exposed to the post ignition by-products. This product is a canister which contains the various components completely sealed within. Therefore, under normal handling of this product, no exposure to any harmful materials will occur. When the product is used, particles may be generated which may be irritating to the eyes and the respiratory tract.

## SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.

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- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** May be accumulated in organism
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.  
The product contains heavy metals. Avoid transfer into the environment. Specific preliminary treatments are necessary  
Harmful to aquatic organisms  
Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment can not be excluded.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

## SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.  
After prior treatment product has to be disposed of in an incinerator for hazardous waste adhering to the regulations pertaining to the disposal of particularly hazardous waste.  
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

## SECTION 14: Transport information

- **14.1 UN-Number**
- **DOT, ADR, IMDG, IATA** UN0297
- **14.2 UN proper shipping name**
- **DOT** Ammunition, illuminating with or without burster, expelling charge or propelling charge
- **ADR** 0297, AMMUNITION, ILLUMINATING WITH OR WITHOUT BURSTER, EXPELLING CHARGE OR PROPELLING CHARGE

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· **IMDG, IATA**

AMMUNITION, ILLUMINATING WITH OR WITHOUT BURSTER, EXPELLING CHARGE OR PROPELLING CHARGE

· **14.3 Transport hazard class(es)**· **DOT, ADR, IMDG, IATA**· **Class**

1.4

· **Label**

1.4G

· **14.4 Packing group**· **DOT, ADR, IMDG, IATA**

II

· **14.5 Environmental hazards:**· **Marine pollutant:**

No

· **Special marking (IATA):**

Cargo Aircraft Only.

· **14.6 Special precautions for user**

Not applicable.

· **EMS Number:**

F-A,S-Q

· **Segregation groups**

Perchlorates

· **14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

· **UN "Model Regulation":**

UN0297, AMMUNITION, ILLUMINATING WITH OR WITHOUT BURSTER, EXPELLING CHARGE OR PROPELLING CHARGE, 1.4G, II

### SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**· **United States (USA)**· **SARA**· **Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**

7429-90-5 aluminium powder (pyrophoric)

7757-79-1 potassium nitrate

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65 (California):**· **Chemicals known to cause cancer:**

Present in trace quantities.

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15245-44-0	lead 2,4,6-trinitro-m-phenylene dioxide		
<b>· Chemicals known to cause reproductive toxicity for females:</b>			
None of the ingredients are listed.			
<b>· Chemicals known to cause reproductive toxicity for males:</b>			
None of the ingredients are listed.			
<b>· Chemicals known to cause developmental toxicity:</b>			
Present in trace quantities.			
15245-44-0	lead 2,4,6-trinitro-m-phenylene dioxide		
<b>· Carcinogenic Categories</b>			
<b>· EPA (Environmental Protection Agency)</b>			
7778-74-7	potassium perchlorate		NL
7440-50-8	copper		D
7440-66-6	zinc metal		D, I, II
<b>· IARC (International Agency for Research on Cancer)</b>			
1309-37-1	diiron trioxide / iron (III) oxide		3
69012-64-2	Silica-Amorphous Silica fume		3
<b>· TLV (Threshold Limit Value established by ACGIH)</b>			
7429-90-5	aluminium powder (pyrophoric)		A4
1309-37-1	diiron trioxide / iron (III) oxide		A4
7440-67-7	zirconium powder (pyrophoric)		A4
122-39-4	diphenylamine		A4
<b>· NIOSH-Ca (National Institute for Occupational Safety and Health)</b>			
None of the ingredients are listed.			
<b>· Canada</b>			
<b>· Canadian Domestic Substances List (DSL)</b>			
All ingredients are listed.			
<b>· Canadian Ingredient Disclosure list (limit 0.1%)</b>			
122-39-4	diphenylamine		
<b>· Canadian Ingredient Disclosure list (limit 1%)</b>			
7429-90-5	aluminium powder (pyrophoric)		
1309-37-1	diiron trioxide / iron (III) oxide		
<b>· Other regulations, limitations and prohibitive regulations</b>			
This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.			
<b>· Substances of very high concern (SVHC) according to REACH, Article 57</b>			
None of the ingredients are listed.			

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· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

- H201 Explosive; mass explosion hazard.
- H250 Catches fire spontaneously if exposed to air.
- H251 Self-heating; may catch fire.
- H260 In contact with water releases flammable gases which may ignite spontaneously.
- H261 In contact with water releases flammable gases.
- H271 May cause fire or explosion; strong oxidiser.
- H272 May intensify fire; oxidiser.
- H301 Toxic if swallowed. H302 Harmful if swallowed. H311 Toxic in contact with skin. H315 Causes skin irritation. H331 Toxic if inhaled.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.
- H412 Harmful to aquatic life with long lasting effects.
- R15 Contact with water liberates extremely flammable gases.
- R17 Spontaneously flammable in air.
- R22 Harmful if swallowed.
- R23/24/25 Toxic by inhalation, in contact with skin and if swallowed.
- R3 Extreme risk of explosion by shock, friction, fire or other sources of ignition.
- R33 Danger of cumulative effects.
- R38 Irritating to skin.
- R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R8 Contact with combustible material may cause fire.
- R9 Explosive when mixed with combustible material.

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
 IMDG: International Maritime Code for Dangerous Goods  
 DOT: US Department of Transportation  
 IATA: International Air Transport Association  
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
 ACGIH: American Conference of Governmental Industrial Hygienists  
 EINECS: European Inventory of Existing Commercial Chemical Substances  
 ELINCS: European List of Notified Chemical Substances  
 CAS: Chemical Abstracts Service (division of the American Chemical Society)  
 NFPA: National Fire Protection Association (USA)  
 HMIS: Hazardous Materials Identification System (USA)  
 WHMIS: Workplace Hazardous Materials Information System (Canada)  
 DNEL: Derived No-Effect Level (REACH)

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**Safety Data Sheet**  
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and  
OSHA GHS

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**Trade name: 12-Gauge Warning / Signaling Munition 100m**

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PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Expl. 1.1: Explosives, Division 1.1

Expl. 1.4: Explosives, Division 1.4

Pyr. Sol. 1: Pyrophoric Solids, Hazard Category 1

Self-heat. 1: Self-Heating Substances and Mixtures, Hazard Category 1

Water-react. 1: Substances and Mixtures which, in contact with water, emit flammable gases, Hazard Category 1

Water-react. 2: Substances and Mixtures which, in contact with water, emit flammable gases, Hazard Category 2

Ox. Sol. 1: Oxidising Solids, Hazard Category 1

Ox. Sol. 2: Oxidising Solids, Hazard Category 2

Acute Tox. 3: Acute toxicity, Hazard Category 3

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2

Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1

Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

**Sources**

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