

# Safety Data Sheet

acc. to OSHA HCS (29 CFR 1910.1200) and WHMIS 2015 regulations

Printing date: January 20, 2017

Revision: January 20, 2017

## 1 Identification

- **Product identifier**
- **Trade name: Aerial Warning Signaling Munition Inert Marking - 300 Meters**
- **Product code:** 60311M
- **Recommended use and restriction on use**
- **Recommended use:** Explosive product.
- **Restrictions on use:** Contact manufacturer/supplier
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**  
Safariland, LLC  
13386 International Parkway  
Jacksonville, FL 32218  
Customer Care (800) 347-1200
- **Information department:** Customer Care Department
- **Emergency telephone number:**  
ChemTel Inc.  
(800)255-3924, +1 (813)248-0585



## 2 Hazard(s) identification

- **Classification of the substance or mixture**  
Expl. 1.4 H204 Fire or projection hazard.
- **Label elements**
- **GHS label elements**  
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms:**



GHS01

- **Signal word:** Warning
- **Hazard statements:**  
H204 Fire or projection hazard.
- **Precautionary statements:**  
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.
- **NFPA ratings (scale 0 - 4)**



Health = 0  
Fire = 0  
Reactivity = 3

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**· HMIS-ratings (scale 0 - 4)**

HEALTH	1	Health = 1
FIRE	0	Fire = 0
REACTIVITY	3	Reactivity = 3

**· Other hazards**
**· 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.

## 3 Composition/information on ingredients

**· Chemical characterization: Mixtures**
**· Components:**

7631-86-9	silicon dioxide	20-40%
7757-79-1	potassium nitrate ⚠ Ox. Sol. 2, H272	10-20%
7778-74-7	potassium perchlorate ⚠ Ox. Sol. 1, H271 ⚠ Acute Tox. 4, H302	10-20%
7429-90-5	aluminium powder (pyrophoric) ⚠ Pyr. Sol. 1, H250; Water-react. 2, H261	5-<10%
7439-95-4	magnesium powder (pyrophoric) ⚠ Pyr. Sol. 1, H250; Water-react. 1, H260	5-<10%
8002-74-2	Paraffin waxes and Hydrocarbon waxes	5-<10%
7704-34-9	sulfur ⚠ Skin Irrit. 2, H315	2.5-5%

**· Additional information:**

For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret.  
For the wording of the listed Hazard Statements refer to section 16.

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## · Notable Trace Components (< 0.1% w/w)

122-39-4	diphenylamine  Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331  STOT RE 2, H373
85-98-3	1,3-diethyldiphenylurea  Acute Tox. 4, H302
15245-44-0	lead 2,4,6-trinitro-m-phenylene dioxide/ lead styphnate  Unst. Expl., H200  Repr. 1A, H360; STOT RE 2, H373  Acute Tox. 4, H302; Acute Tox. 4, H332

## 4 First-aid measures

### · Description of first aid measures

- **General information:** No special measures required.
- **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; immediately call for medical help.
- **Most important symptoms and effects, both acute and delayed:** Blast injury if mishandled.
- **Danger:** Danger of blast or crush-type injuries.
- **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.

## 5 Fire-fighting measures

- **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.
- **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.
- **Advice for firefighters**
- **Protective equipment:**  
Wear self-contained respiratory protective device.  
Wear fully protective suit.

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· **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.

### 6 Accidental release measures

· **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.

Remove persons from danger area.

Ensure adequate ventilation.

Protect from heat.

Isolate area and prevent access.

· **Environmental precautions** No special measures required.

· **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.

· **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.

### 7 Handling and storage

· **Handling**

· **Precautions for safe handling:** Handle with care. Avoid jolting, friction and impact.

· **Information about protection against explosions and fires:**

Protect from heat.

Emergency cooling must be available in case of nearby fire.

· **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.

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· **Specific end use(s)** No relevant information available.

## 8 Exposure controls/personal protection

### · Control parameters

#### · Components with limit values that require monitoring at the workplace:

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.

At this time, the other constituents have no known exposure limits.

#### 7631-86-9 silicon dioxide

NIOSH REL (USA) Long-term value: 6 mg/m<sup>3</sup>

OSHA PEL (USA) Long-term value: 80 mg/m<sup>3</sup>

#### 8002-74-2 Paraffin waxes and Hydrocarbon waxes

REL (USA) Long-term value: 2 mg/m<sup>3</sup>

TLV (USA) Long-term value: 2 mg/m<sup>3</sup>

EL (Canada) Long-term value: 2 mg/m<sup>3</sup>

EV (Canada) Long-term value: 2 mg/m<sup>3</sup>

LMPE (Mexico) Long-term value: 2 mg/m<sup>3</sup>

### · Exposure controls

#### · Personal protective equipment:

#### · General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

#### · Engineering controls: Provide adequate ventilation.

#### · Breathing equipment: Not required under normal conditions of use.

#### · Protection of hands:

Wear gloves for the protection against mechanical hazards according to OSHA and NIOSH rules.

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

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- **Body protection:** Protective work clothing
- **Limitation and supervision of exposure into the environment**  
No relevant information available.
- **Risk management measures**  
See Section 7 for additional information.  
Organizational measures should be in place for all activities involving this product.  
No relevant information available.

## 9 Physical and chemical properties

### · Information on basic physical and chemical properties

- **Appearance:**
  - **Form:** Solid metal container containing liquid and solid contents.
  - **Color:** According to product specification
- **Odor:** Odorless
- **Odor threshold:** Not determined.
- **pH-value:** Not applicable.
- **Melting point/Melting range:** Not determined.
- **Boiling point/Boiling range:** Not determined.
- **Flash point:** Not applicable.
- **Flammability (solid, gaseous):** Not determined.
- **Auto-ignition temperature:** Not determined.
- **Decomposition temperature:** Not determined.
- **Danger of explosion:** Heating may cause an explosion.
- **Explosion limits**
  - **Lower:** Not determined.
  - **Upper:** Not determined.
- **Vapor pressure:** Not applicable.
- **Density:** Not determined.
- **Relative density:** Not determined.
- **Vapor 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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**Other information**

No relevant information available.

## 10 Stability and reactivity

- **Reactivity:** No relevant information available.
- **Chemical stability:**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used and stored according to specifications.
- **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 oxidizing agents.
- **Conditions to avoid** Sources of ignition, open flame, incompatible materials.
- **Incompatible materials** Oxidizers
- **Hazardous decomposition products**  
Carbon monoxide and carbon dioxide  
Nitrogen oxides  
Sulfur oxides (SOx)

## 11 Toxicological information

· **Information on toxicological effects**

· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

**122-39-4 diphenylamine**

Oral	LD50	1120 mg/kg (rat)
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**15245-44-0 lead 2,4,6-trinitro-m-phenylene dioxide/ lead styphnate**

Oral	LD50	650 mg/kg (rat)
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· **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.

· **IARC (International Agency for Research on Cancer):**

7631-86-9	silicon dioxide	3
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15245-44-0	lead 2,4,6-trinitro-m-phenylene dioxide/ lead styphnate	2B
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· **NTP (National Toxicology Program):**

15245-44-0	lead 2,4,6-trinitro-m-phenylene dioxide/ lead styphnate	R
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· **OSHA-Ca (Occupational Safety & Health Administration):**

None of the ingredients are listed.

## 12 Ecological information

· **Toxicity**

· **Aquatic toxicity** No relevant information available.

· **Persistence and degradability** No relevant information available.

· **Bioaccumulative potential:** May be accumulated in organism

· **Mobility in soil:** No relevant information available.

· **Ecotoxicological effects:**

· **Remark:** Harmful to fish

· **Additional ecological information**

· **General notes:**

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.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects** No relevant information available.

## 13 Disposal considerations

· **Waste treatment methods**

· **Recommendation:**

Must not be disposed of 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 packagings**

· **Recommendation:** Disposal must be made according to official regulations.

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## 14 Transport information

· UN-Number · DOT, ADR, IMDG, IATA	UN0303
· UN proper shipping name · DOT, IMDG, IATA · ADR	AMMUNITION, SMOKE WITH EXPELLING CHARGE 0303, AMMUNITION, SMOKE WITH EXPELLING CHARGE
· Transport hazard class(es) · DOT	
	
· Class · Label	1.4 1.4G
· ADR, IMDG	
	
· Class · Label	1.4 1.4G
· IATA	
	
· Label	1.4G
· Packing group · DOT, ADR, IMDG, IATA	II
· Environmental hazards · Marine pollutant:	No
· Special precautions for user · EMS Number: · Segregation groups	Not applicable. F-A,S-Q Perchlorates
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.

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**15 Regulatory information**

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **United States (USA)**
- **SARA**

· **Section 302 (extremely hazardous substances):**

None of the ingredients are listed.

· **Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

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

7757-79-1 | potassium nitrate

7429-90-5 | aluminium powder (pyrophoric)

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

All ingredients are listed.

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

Present in trace quantities.

15245-44-0 | lead 2,4,6-trinitro-m-phenylene dioxide/ lead styphnate

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**

Present in trace quantities.

15245-44-0 | lead 2,4,6-trinitro-m-phenylene dioxide/ lead styphnate

· **Carcinogenic categories**· **EPA (Environmental Protection Agency):**

7778-74-7 | potassium perchlorate

NL

· **IARC (International Agency for Research on Cancer):**

None of the ingredients are listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health):**

None of the ingredients are listed.

· **Canadian Domestic Substances List (DSL):**

All ingredients are listed.

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

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## 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.

· **Date of preparation / last revision** 01/20/2017 / -

· **Abbreviations and acronyms:**

ADR: 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 Harmonized System of Classification and Labelling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Expl. 1.4: Explosives – Division 1.4

Pyr. Sol. 1: Pyrophoric solids – Category 1

Water-react. 1: Substances and mixtures which in contact with water emit flammable gases – Category 1

Water-react. 2: Substances and mixtures which in contact with water emit flammable gases – Category 2

Ox. Sol. 1: Oxidizing solids – Category 1

Ox. Sol. 2: Oxidizing solids – Category 2

Acute Tox. 4: Acute toxicity – Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

· **Sources**

SDS Prepared by:

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