

Product Safety Data Sheet

1. PRODUCT IDENTIFICATION/COMPANY DETAILS

PRODUCT NAME:	BIRDFRITE
STOCK CODE:	BIRDFRITE
PRODUCT TYPE:	Pyrotechnic Device
USE:	Produce noise and light to scare birds
SYNONYMS:	Nil
MANUFACTURER:	Chemring Australia Pty Ltd
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2. HAZARDS IDENTIFICATION

NON HAZARDOUS DANGEROUS GOODS

The contents of this product are **not classified as hazardous** according to the criteria of WorkSafe Australia Technical Report, "List of Designated Hazardous Substances", [NOHSC:10005(1994)], March 1994.

Three of the products are fume silica [7631-86-9], graphite [7782-42-5] and magnesium oxide (fume) [1309-48-4]. All are specifically classified as hazardous according to the criteria of Worksafe Australia Technical Report, "Exposure Standards for Atmospheric Contaminants in the Occupational Environment", NOHSC: 3008 (1995). However the levels of these materials produced or released in the reaction are all below the limits listed [refer Table in Section 11].

- **When functioned, the ejection of the ignition system could be a noise hazard to those in the vicinity.**
- **Do not fire in confined spaces.** The unit is designed for outside use only.

DANGEROUS GOODS

The product is classified as Dangerous Goods, 1.4S, in accordance with the Australian Code for the Transport of Explosives by Road and Rail, 2nd ed., March 2000.

CLASS: 1.4S

U.N. NO:0405

SUBSIDIARY RISK: Nil

Risk Phrases

- R8 Contact with combustible material may cause fire.
R15 Contact with water liberates highly flammable gases.

Safety Phrases

- S1/2 Keep locked up and out of the reach of children.
S9 Keep the container in a well-ventilated place.
S16 Keep away from ignition sources – No smoking.
S41 In case of fire do not breathe fumes.

3. COMPOSITION / INFORMATION ON INGREDIENTS

The major components (> 5%) of the compound are cellulose-based biodegradable plastic, propellant, potassium perchlorate and magnesium. The minor ingredients (< 5%) are graphite and Aerosil.

4. FIRST AID MEASURES

Exposure to the smoke may cause irritation to the eyes and throat. Move the patient to fresh air. Symptoms that may arise if the compound is mishandled are:

Ingestion: Symptoms. Discomfort
Induce vomiting but only if conscious.

Eye Contact: Symptoms. Irritation
Immediately flush the eyes with copious quantities of water. Eyelids to be held open. If irritation persists seek medical advice.

Skin Contact: Symptoms. Irritation
Wash the exposed area with copious amounts of soap and water. If irritation occurs seek medical advice.

Inhalation: Symptoms. Throat irritation, shortness of breath
Remove to fresh air. If irritation persists, seek medical assistance.

5. FIRE FIGHTING MEASURES

It is recommended that a safety distance of 100 m be applied **if this item is burning in bulk quantities.**

Use self-contained breathing apparatus for fires in enclosed areas. Toxic fumes (carbon monoxide) may be produced in such reactions.

6. ACCIDENTAL RELEASE MEASURES

Remove ignition sources.

Sweep up, place in a container and hold for disposal. Spill area can then be washed thoroughly with large quantities of water.

Contact Chemring Australia for further advice.

7. HANDLING AND STORAGE

Store in manufacturer's approved packaging in a well ventilated area away from sources of heat and direct sunlight.

8. EXPOSURE CONTROLS AND PERSONNEL PROTECTION

Exposure Controls

The product is designed to produce a bright flash and a loud report and there is a risk of contact with plastic fragments if within 50 m of the explosion. Those who regularly use this product should wear eye and hearing protection. Noise levels of 140 dB have been measured at 10 m.

9. PHYSICAL AND CHEMICAL PROPERTIES

The item is deployed from a 12-gauge shotgun. Upon firing the pressed pyrotechnic delay in the base is ignited from the cap. After a 2 s delay the photoflash composition ignites producing noise and light.

The housing is composed of a biodegradable cellulose-based polymer which slowly degrades after firing. Cartridges will degrade if left out in the atmosphere. If not used, they should be resealed and stored in a dry, cool environment.

10. STABILITY AND REACTIVITY

Stability

The product is stable under the recommended storage conditions. If left unsealed, the magnesium fuel will slowly oxidise if exposed to the atmosphere, releasing hydrogen gas.

Solubility

The delay contains potassium nitrate which dissolves in water. In addition, the cellulose-based housing slowly degrades chemically in water.

Reactivity

The cellulose-based housing may be attacked by alcohols and ketones.

Chemical Incompatibilities

Organic solvents.

11. TOXICOLOGICAL INFORMATION

No adverse health effects are expected if the product is handled according to this PSDS. If mishandling occurs, consult first aid measures above.

The most likely route of exposure would be by inhalation of the particulates from the reaction. It is recommended that any effects from inhalation of the dust should be treated as outlined in Section 4: First Aid Measures.

On a per item basis the quantity of magnesium oxide (fume), graphite and silica (fume) released is less than 1 for the three hazardous ingredients. The time-weighted exposure levels are listed in Table 1.

Table 1. TWA values for hazardous ingredients in Birdfrite

Substance	CAS Number	TWA value (mg/m ³)
Magnesium oxide	1309-48-4	10
Graphite	7782-42-5	3
Aerosil	7631-86-9	2

12. ECOTOXICITY INFORMATION

In the unlikely event of a spillage neither the composition nor the reaction products (in the event of an associated fire) should represent only a short term hazard to the soil or the aquatic environment.

In the event of spillage the preferred method of disposal after collection of the bulk material would be to clean up with water. If contamination of the waterways occurred this would be of low level.

The main products of the reaction if ignited would be magnesium oxide and potassium chloride, potassium hydroxide and cellulose resin as solids as well as carbon dioxide, nitrogen and water as gases. Graphite and Aerosil are two ingredients which are not part of the reaction, but are released into the atmosphere.

The cellulose-based housing also slowly degrades in the atmosphere.

13. DISPOSAL CONSIDERATIONS

It is important to observe the advice on service life related to this item.

Bulk quantities or time-expired cartridges should be disposed of in accordance with local regulations.

14. TRANSPORT INFORMATION

CLASS: 1.4S

U.N. NO:0405

Proper Shipping Name: CARTRIDGES, SIGNAL

Packaging instruction 135 for inner and outer packaging (Australian Code for the transport of Explosives by Road and Rail, 2nd Ed, March 2000, Appendix A4)

Transport in accordance with the local requirements for Class 1.4S products.

15. REGULATORY INFORMATION

No Poisons Schedule numbers are allocated for the ingredients in this composition.

16. OTHER INFORMATION

Nil

Issue date: 26th October, 2006

END of PSDS

DISCLAIMER

This PSDS summarises at the date of issue our best knowledge of the health and safety information of the product particularly in relation to its safe handling and use in its intended environment. Since Chemring Australia cannot anticipate or control the conditions under which the product may be used, each end user should, prior to use, review the PSDS in the context of how the user intends to handle and use the product.

If clarification or further information is needed to ensure that an appropriate assessment can be made, the user should contact Chemring Australia.

Our responsibility for the product as sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is available upon request.
