



MATERIAL SAFETY DATA SHEET

SECTION I - PRODUCT IDENTIFICATION

Product Name: ROBOTICS
Product Use: Pyrotechnic for technical use
WHMIS/OSHA Class: Not controlled
T.D.G./DOT Classification: 1.4S, UN0432 (EX2004080165)
Manufacturer/Supplier: Le Maitre Ltd
Address: Fourth Drove, Peterborough
 Cambs, PE1 5UR, England
Telephone: USA (512) 451-4392
Emergency Phone Number: CHEM-TEL USA (800) 255-3924

SECTION II - INGREDIENTS

<u>Ingredients</u>	<u>CAS#</u>	<u>ACGIH-TLV</u>	<u>LC₅₀</u>	<u>LD₅₀</u>
Potassium Perchlorate (oxidiser)	7778-74-7	n/k	n/k	n/k
Aluminium powder (fuel)	7429-90-5	n/k	n/k	n/k
Magnesium powder (fuel)	7439-95-4	n/k	n/k	n/k
Graphite (fuel)	7782-42-5	n/k	n/k	n/k
Titanium powder (fuel)	7440-32-6	n/k	n/k	n/k

SECTION III - PHYSICAL DATA

Boiling Point (deg C): Not available
Vapour Pressure (mmHg @ 20°C): Not available
Vapour Density (Air = 1): Not available
Solubility in Water: Perchlorate soluble
Physical State: Powder
Appearance and Odour: Grey free flowing powder with slight Odour in outer casing.

Specific Gravity (H₂O = 1): Not available
% Volatile (Wt %): Not available
Evaporation Rate (Water = 1): Not available
pH: Not known
Viscosity: Not available
Odour Threshold (ppm): Not available

SECTION IV - FIRE AND EXPLOSION DATA

Flammability: Flammable
Flash Point (deg C, TCC): Not available **LEL:** Not available **UEL:** Not available
Hazardous Combustion Products: Not available
Auto ignition Temperature (deg C): Not available.
Means of Extinction: Fight fire with water.
Special Fire Hazards: Localised effect. Hazardous effects normally confined to the package unless the package has been degraded by fire, in which case not such that fire fighting is hindered.

ROBOTICS

SECTION V - REACTIVITY DATA

Conditions for Chemical Instability: Excessive humidity.
Incompatible Materials: Acids

Reactivity, and Under What Conditions: Not available
Hazardous Decomposition Products: If powder becomes wet may produce hydrogen.

SECTION VI - TOXICOLOGICAL PROPERTIES

Route of Entry: Eye, inhalation.
EFFECTS OF EXPOSURE FROM FIRING:
Eye: May cause irritation.
Inhalation: May cause respiratory irritation, difficulty in breathing, headaches, nausea and vomiting. Perchlorate absorption can cause methemoglobinemia. Aluminium may cause pulmonary fibrosis.
Irritancy: Non-hazardous.
Respiratory Tract Sensitization: No data available.
Carcinogenicity: No data available.
Teratogenicity, Reproductive Effects: No data available.
Mutagenicity: No data available.
Synergistic Materials: Not available.

SECTION VII- PREVENTATIVE MEASURES

Gloves: Cotton or leather recommended.
Eye Protection: Safety glasses recommended.
Respiratory Protection: Not required.
Other Protective Equipment: As required by employer code.
Engineering Controls: General ventilation normally adequate.
Leak and Spill Procedure: No smoking. No naked flames. Sweep or pick up articles. Swill down spillage area with water.
Waste Disposal: Pierce cap whilst holding underwater. Shake to allow water entry. Leave outside for 48 hours away from ignition sources. Review federal, provincial and local government requirements prior to disposal.
Storage and Handling Requirements: Store in cool, dry conditions. Keep area clean and employ good working practices.

SECTION VIII - FIRST AID

Eye: Immediately flush with water. Remove contact lenses, if applicable, and continue flushing for 15 minutes. Obtain medical attention if irritation develops.
Skin: Not a normal route of harmful exposure. Flush with water. Wash thoroughly with soap and water. Obtain medical attention if irritation develops.
Inhalation: Not a normal route of harmful exposure. If symptoms develop, move victim to fresh air. If symptoms persist, obtain medical attention.
Ingestion: Do not induce vomiting. Rinse mouth with water, then drink one glass of water. Obtain medical attention. Never give anything by mouth if victim is unconscious, is rapidly losing consciousness or is convulsing.

SECTION IX - PREPARATION INFORMATION

Date: 16th July 2009 **MSDS Prepared by:** Le Maitre Ltd
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