Safety Data Sheet

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: **CERIUM MAGNESIUM ALLOY**

Recommended Use of the Chemical and Restrictions on Use Alloy.

Supplier: Ixom Operations Pty Ltd
ABN: 51 600 546 512
Street Address: Level 8, 1 Nicholson Street
East Melbourne Victoria 3002
Australia

Telephone Number: +61 3 9906 3000
Emergency Telephone: **1 800 033 111 (ALL HOURS)**

Please ensure you refer to the limitations of this Safety Data Sheet as set out in the "Other Information" section at the end of this Data Sheet.

2. HAZARDS IDENTIFICATION

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

This material is hazardous according to Safe Work Australia; HAZARDOUS CHEMICAL.

Classification of the chemical:
Flammable solids - Category 1
Substances and mixtures, which in contact with water, emit flammable gases - Category 1

SIGNAL WORD: DANGER

Hazard Statement(s):
H228 Flammable solid.
H260 In contact with water releases flammable gases which may ignite spontaneously.

Precautionary Statement(s):

Prevention:
P210 Keep away from heat, sparks, open flames, hot surfaces. No smoking.
P223 Keep away from any possible contact with water, because of violent reaction and possible flash fire.
P231+P232 Handle under inert gas. Protect from moisture.
P240 Ground or bond container and receiving equipment.
P241 Use explosion-proof electrical, ventilating, lighting equipment.
P280 Wear protective gloves / protective clothing / eye protection / face protection.

Response:
P335+P334 Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.
P370+P378 In case of fire: Use extinguishing media as outlined in Section 5 of this Safety Data Sheet to extinguish.

Storage:
P402+P404 Store in a dry place. Store in a closed container.

Disposal:
P501 Dispose of contents and container in accordance with local, regional, national, international regulations.

Poisons Schedule (SUSMP): None allocated.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Product Description: Cerium (CAS number 7440-45-1)-magnesium (CAS number 7439-95-4) alloy, 100%.

4. FIRST AID MEASURES

For advice, contact a Poisons Information Centre (e.g. phone Australia 131 126; New Zealand 0800 764 766) or a doctor.

Inhalation:
Remove victim from area of exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If patient finds breathing difficult and develops a bluish discolouration of the skin (which suggests a lack of oxygen in the blood - cyanosis), ensure airways are clear of any obstruction and have a qualified person give oxygen through a face mask. Apply artificial respiration if patient is not breathing. Seek immediate medical advice.

Skin Contact:
If skin contact occurs, remove contaminated clothing and wash skin with running water. If irritation occurs seek medical advice.

Eye Contact:
If in eyes, wash out immediately with water. In all cases of eye contamination it is a sensible precaution to seek medical advice.

Ingestion:
Rinse mouth with water. If swallowed, do NOT induce vomiting. Seek immediate medical assistance.

Indication of immediate medical attention and special treatment needed:
Treat symptomatically.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media:
Dry agent (carbon dioxide, dry chemical powder) - water MUST NOT be allowed to come into contact with substance.

Unsuitable Extinguishing Media:
Water.

Hazchem or Emergency Action Code: 4W

Specific hazards arising from the chemical:
Flammable solid. Reacts violently with water, giving off hydrogen gas which may explode. May ignite spontaneously on exposure to moist air. During a fire, irritating and toxic gases may be generated by thermal decomposition or combustion. May form flammable dust clouds in air. For precautions necessary refer to Safety Data Sheet "Dust Explosion Hazards".

Special protective equipment and precautions for fire-fighters:
Dangerous when wet. May ignite on contact with water. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to products of decomposition.

6. ACCIDENTAL RELEASE MEASURES

Emergency procedures/Environmental precautions:
Shut off all possible sources of ignition. Clear area of all unprotected personnel. If contamination of sewers or waterways has occurred advise local emergency services.

Personal precautions/Protective equipment/Methods and materials for containment and cleaning up:
Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contact and breathing in vapours/dust. Collect and seal in properly labelled containers. Use non-sparking tools. DO NOT allow material to get wet.

7. HANDLING AND STORAGE

Precautions for safe handling:
Avoid skin and eye contact and breathing in dust. Avoid handling which leads to dust formation. May form flammable dust clouds in air. For precautions necessary refer to Safety Data Sheet "Dust Explosion Hazards". Take precautionary measures against static discharges. Wash hands before breaks and at the end of the work day.

Conditions for safe storage, including any incompatibilities:
Dangerous when wet. Keep dry - reacts with water, may lead to drum rupture. Protect from moisture. Protect from humidity. Store in a cool, dry, well ventilated place. Store away from combustible materials. Store away from incompatible materials described in Section 10. Keep containers closed when not in use - check regularly for spills.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters: No value assigned for this specific material by Safe Work Australia. However, Workplace Exposure Standard(s) for particulates:

Dusts not otherwise classified: 8hr TWA = 10 mg/m^3

As published by Safe Work Australia Workplace Exposure Standards for Airborne Contaminants.

TWA - The time-weighted average airborne concentration of a particular substance when calculated over an eight-hour working day, for a five-day working week.

These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

Appropriate engineering controls:
Ensure ventilation is adequate to maintain air concentrations below Workplace Exposure Standards. Keep containers closed when not in use.

If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.

Individual protection measures, such as Personal Protective Equipment (PPE):
The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, SAFETY SHOES, SAFETY GLASSES, GLOVES, DUST MASK.

Wear overalls, safety glasses and impervious gloves. Avoid generating and inhaling dusts. If determined by a risk assessment an inhalation risk exists, wear a dust mask/respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Solid
Colour:	Silver - White
Odour:	Odourless
Solubility:	Reacts with water.
Specific Gravity:	1.6
Relative Vapour Density (air=1):	Not available
Vapour Pressure (20 °C):	Not available
Flash Point (°C):	Not available
Flammability Limits (%):	Not available
Autoignition Temperature (°C):	Not available
Melting Point/Range (°C):	450
Boiling Point/Range (°C):	1007
pH:	Not applicable

10. STABILITY AND REACTIVITY

Reactivity:	In contact with water releases flammable gases which may ignite spontaneously.
Chemical stability:	Stable.
Possibility of hazardous reactions:	Reacts with water liberating flammable hydrogen gas. Dust explosion hazard.
Conditions to avoid:	Avoid contact with water. Avoid exposure to moisture. Avoid dust generation. Avoid exposure to extreme heat.
Incompatible materials:	Incompatible with acids , oxidising agents , water , moisture , halogens , halocarbons , and acid chlorides .
Hazardous decomposition products:	None known.

11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Ingestion: Swallowing may result in nausea, vomiting, and abdominal pain.

Eye contact: May be an eye irritant. Exposure to the dust may cause discomfort due to particulate nature. May cause physical irritation to the eyes.

Skin contact: Contact with skin may result in irritation.

Inhalation: Breathing in dust may result in respiratory irritation. Breathing in fumes from heating may produce symptoms of 'metal fume fever'. This condition is characterised by influenza type symptoms occurring a few hours after exposure and lasting up to 48 hours. Symptoms may include chills, fever, headache, tightness of the chest, coughing, weakness, dryness of nose and mouth, muscular pain, nausea, and vomiting.

Acute toxicity: No LD50 data available for the product.

Chronic effects: Not listed as carcinogenic according to the International Agency for Research on Cancer (IARC).

12. ECOLOGICAL INFORMATION

Ecotoxicity Avoid contaminating waterways.

13. DISPOSAL CONSIDERATIONS

Disposal methods:
Refer to Waste Management Authority. Dispose of contents and container in accordance with local, regional, national, international regulations.

14. TRANSPORT INFORMATION

Road and Rail Transport
Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

UN No:	3132
Transport Hazard Class:	4.3 Dangerous When Wet
Subrisk 1:	4.1 Flammable Solid
Packing Group:	I
Proper Shipping Name or Technical Name:	WATER-REACTIVE SOLID, FLAMMABLE, N.O.S. (CERIUM MAGNESIUM ALLOY)
Hazchem or Emergency Action Code:	4W

Marine Transport
Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

The transport of this substance shall be prohibited except with special authorization granted by the competent authority of the country concerned.

UN No:	3132
Transport Hazard Class:	4.3 Dangerous When Wet
Subrisk 1:	4.1 Flammable Solid
Packing Group:	I
Proper Shipping Name or Technical Name:	WATER-REACTIVE SOLID, FLAMMABLE, N.O.S. (CERIUM MAGNESIUM ALLOY)
IMDG EMS Fire:	F-G
IMDG EMS Spill:	S-N

Air Transport
Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS. TRANSPORT PROHIBITED under the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air in Passenger and Cargo Aircraft; may be transported by Cargo Aircraft Only.

UN No:	3132
Transport Hazard Class:	4.3 Dangerous When Wet
Subrisk 1:	4.1 Flammable Solid
Packing Group:	I
Proper Shipping Name or Technical Name:	WATER-REACTIVE SOLID, FLAMMABLE, N.O.S. (CERIUM MAGNESIUM ALLOY)

15. REGULATORY INFORMATION

Classification:
This material is hazardous according to Safe Work Australia; HAZARDOUS CHEMICAL.

Classification of the chemical:
Flammable solids - Category 1
Substances and mixtures, which in contact with water, emit flammable gases - Category 1

Hazard Statement(s):
H228 Flammable solid.
H260 In contact with water releases flammable gases which may ignite spontaneously.

Poisons Schedule (SUSMP): None allocated.

All the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS).

16. OTHER INFORMATION

Supplier Material Safety Data Sheet; 06/ 2017.

This safety data sheet has been prepared by Ixom Operations Pty Ltd Toxicology & SDS Services.

Reason(s) for Issue:
Reissue of an obsolete SDS

This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Ixom Operations Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

If clarification or further information is needed, the user should contact their Ixom representative or Ixom Operations Pty Ltd at the contact details on page 1.

Ixom Operations Pty Ltd's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.