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Home	Contact Us	Company Profile	Online Catalog	Technical Data	MSDS's	Ordering Information	FAQ
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Magnesium AZ31B



Main Menu

- [Home](#)
- [Contact Us](#)
- [Company Profile](#)
- [Online Catalog](#)
- [Technical Data](#)
- [MSDS's](#)
- [Ordering Information](#)
- [FAQ](#)

MATERIAL SAFETY DATA SHEET

I. PRODUCT IDENTIFICATION

Manufacturer/Supplier:

ESPI Metals

1050 Benson Way, Ashland, OR 97520

Toll Free (800) 638-2581 * Fax (541) 488-8313

E-Mail: sales@espimetals.com

Product Name: Magnesium

II. HAZARDOUS INGREDIENTS

Base Metal	CAS Number	Percent (%)	OSHA/PEL	
Magnesium (Mg)	7439-95-4	Bal.	15	10
Alloying Elements:				
Aluminum (Al)	7429-90-5	<9	NE	10
Manganese (Mn)	7439-96-5	<1	5	5 (dust)
Zinc (Zn)	7440-66-6	<6	NE	5 (fume)
Zirconium (Zr)	7440-67-7	<1	5	10

III. PHYSICAL DATA

Boiling Point: N/A

Melting Point: >870 °F

Specific Gravity: <2

Contact Us

ESPI Metals

1050 Benson Way
Ashland, Oregon 97520

541.488.8311 telephone
800.638.2581 toll-free

541.488.8313 fax
800.488.0060 toll-free fax

sales@espimetals.com

Precious Metal Prices

Apr 13, 2012 at 17:15 New York				
	Price	Change	High	
Gold	1658.50	-16.80	1659.50	
Silver	31.50	-0.88	31.60	
Platinum	1581.00	-20.00	1591.00	
Palladium	642.00	-9.00	647.00	

Conversion Tool

Try out our conversion tools by clicking here.

What's New!

For new videos and information relating to Tungsten click here:

Solubility in H₂O: Insoluble

Appearance and Odor: Silver, odorless



IV. FIRE AND EXPLOSION HAZARDS DATA

Flash Point: N/A

Flammable Limits: Upper: N/A **Lower:** N/A

Extinguishing Media: Melting flux, dry sand, metal extinguishing powders such as G-1, MET-L-X, etc. DO NOT USE water or halogen on dust fires.



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V. HEALTH HAZARD INFORMATION

Major Exposure Hazard: Inhalation

Steel products in the natural state do not present an inhalation, ingestion or contact hazard. However, operations such as burning, welding, sawing, brazing and grinding may release fumes and/or dusts which may present health hazards if TLV's are exceeded. Short term exposure to fumes/dust may produce irritation of eyes and respiratory system. Inhalation of high concentrations of freshly formed oxide fumes of iron, manganese, and lead may cause metal fume fever, characterized by a metallic taste in the mouth, dryness and irritation of the throat and influenza symptoms. Subjecting zinc or alloys containing zinc to high temperatures (such as occurs during welding) will cause the formation of zinc oxide. Exposure to zinc oxide fumes or dusts can result in a flu-like illness called metal fume fever. Early symptoms may include a sweet or metallic taste in the mouth, dryness and irritation of the throat, and coughing. These symptoms may progress to shortness of breath, headache, fever, chills, muscle aches, nausea, vomiting, weakness, fatigue and profuse sweating. The attack may last 6-48 hours and is more likely to occur after a period away from the job.

Carcinogenicity: No. The product ingredients are not found in the OSHA, NTP or IARC listings.

EMERGENCY AND FIRST AID PROCEDURES:

INHALATION: If exposed to excessive levels of metal fumes, remove to fresh air, seek medical attention immediately.

EYES: Flush with water for at least 15 minutes.

VI. REACTIVITY DATA

Stability: Stable

Incompatibility (Material to Avoid): Acid, water, reacts with acid to form hydrogen gas. In finely divided form, will react with water & acids to release hydrogen.

VII. SPILL OR LEAK PROCEDURES

Steps to be Taken in Case Material is Released or Spilled: N/A

Waste Disposal Method: In accordance with Local, State and Federal Waste Disposal Regulations.

VIII. SPECIAL PROTECTION INFORMATION

Respiratory Protection (Specify Type): NIOSH/MSHA approved dust & fume respirator should be used to avoid

excessive inhalation of particulates when exposure exceeds TLV's.

Hands, Arms and Body: Protective gloves are recommended during handling of fines exposure.

Eyes and Face: Safety glasses or goggles should be utilized as required by exposure.

Other: Other protective equipment should be utilized as required by the welding standard.

IX. SPECIAL PRECAUTIONS

Ventilation: Local exhaust ventilation should be utilized when welding, burning, sawing, brazing, grinding or machining when exposure exceeds TLV's. In welding, precautions should be taken for airborne contaminants which may originate from components of welding rod. Arc or spark generated when welding or burning could be a source of ignition for combustible and flammable materials. When heated in air to a temperature near its melting point, magnesium alloys ignite and burn with a white flame. Use of water on molten magnesium will produce hydrogen gas and may cause an explosion.

Special Precautions to Be Taken in Handling and Storage: Practice reasonable care in handling magnesium alloy product forms to avoid product damage and/or personal injury. Store product in dry location. Wet, moist or high humidity storage conditions will lead to corrosion of the product. Store away from other combustibles. See National Fire Protection Association Bulletin NFPA 48, "Storage, Handling and Processing of Magnesium" for detailed storage information.

The above information is believed to be correct, but does not purport to be all inclusive and shall be used only as a guide. ESPI shall not be held liable for any damage resulting from handling or from contact with the above product.

Issued By: S. Dierks

Date: December 1997

