Material Safety Data Sheet

Magnesium Anodes — Cast and Extruded
(Product Code 40)
American Carbon Company, Inc.

1) Identification

Effective Date: 10/11/2008

Product Name: Magnesium Anodes—Cast and Extruded High and Low Potential

2) Composition

Element	Range WT %
Magnesium (Mg)	Remainder
Manganese (Mn)	0.5 — 1.3
Silicon (Si)	0.05 max
Copper (Cu)	0.02 max
Nickel (Ni)	0.001 max
Iron (Fe)	0.03 max
Aluminum (Al)	0.01 max

3) Physical Properties

Physical Form:	Solid
Boiling Point:	1,110°C or 2,030°F
Melting Point:	650°C or 1,202°F
Vapor Pressure:	N/A
Vapor Density:	N/A
Soluble in water:	N/A
Odor:	None
Specific Gravity:	1.75
Appearance:	Silver

4) Exposure Limits

Compound	OSHA-PEL (1989)	ACGIH-TLV (1991)
MgO*	10 mg/m^3	10 mg/m^3
Mn	5 mg/m^3	3 mg/m^3

*Comment: MgO is a combustion product of the metal.

5) Fire and Explosion Hazard Data

Flash Point (Method Used):	N/A (N/A)
Flammable Limits:	N/A
LFL: N/A	UEL: N/A
Extinguishing Media:	Melting flux, dry sand, metal extinguishing powders.
Special Fire Fighting Procedures:	Wear positive pressure self-contained breathing apparatus.
Fire and Explosion Hazards:	When heated to a temperature near its melting point, magnesium ignites and burns with a white flame. Water should not be used on a magnesium fire, as it acts as an accelerant. Water on molten magnesium will produce hydrogen gas and may cause and explosion.

6) Reactivity Data

Stability: Stable

Incompatibility (Materials to Avoid): Acids and water. Reacts with acid to form hydrogen gas. In finely divided form, magnesium will react with water and acids to release hydrogen.

Hazardous Decomposition or Byproducts: None under normal use or storage.

Hazardous Polymerization: Will not occur.

7) Health Hazard Data

Route(s) of Entry:

Eyes: Mechanical injury only.

Skin Contact: Mechanical injury only. Molten material will burn skin.

Inhalation: Fumes or dust may cause irritation to upper respiratory system.

Ingestion: Unlikely due to physical state. Dusts produced incidental to industrial handling are not likely to cause serious injury; however, ingestion of larger amounts could cause serious injury because the acute toxicity of magnesium is considered moderate.

Health Hazards (Acute and Chronic): Based upon available data, repeated exposure is not known to cause any significant adverse effects.

Carcinogenicity: N/A

Signs and Symptoms of Exposure: Fever, chills, headache, "flu-like" symptoms and metallic taste.

Medical Conditions Generally Aggravated by Exposure: May be allergic, may aggravate respiratory problems ie: emphysema & asthma.

Emergency and First Aid Procedures: Note to physician: No specific antidote, supportive care. Treatment based upon judgment of physician in response to reaction of the patient.

8) Precautions for Safe Handling and Use

Ventilation: Good general ventilation should be sufficient for most conditions. Local exhaust ventilation may be necessary for some operations.

Respiratory: No respiratory protection should be needed.

Skin Protection: No protections other than clean body covering should be needed.

Eye Protection: Use safety glasses. If there is a potential for exposure to particles, use chemical goggles.

Precautions to be taken in Handling and Storage: Practice reasonable care in handling all forms of magnesium products. Magnesium or magnesium alloy ingots should be preheated to a minimum of 300°F (149°C) to eliminate moisture prior to use in any melting operation. Water, either on the surface or entrapped in surface pores of magnesium ingot will rapidly change to vapor and may cause a steam explosion.

9) Control Measures (Other Precautions)

Actions to take for leaks or spills: Clean ff and use.

Disposal Method: Material can be recycled through secondary scrap reclaimers.

D.O.T: Magnesium is not a D.O.T. Hazardous Material when shipped in solid cast, extruded rod, extruded ribbon, or ingot (solid) form.

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