

SECTION I NAME		24 HOUR EMERGENCY ASSISTANCE	
Product	CALCIUM METAL	1 2 3 4 CHEMTREC 800-424-9300 Day 716-226-6177 Night 716-334-4222 NFPA HAZARD RATING LEAST SLIGHT MODERATE HIGH EXTREME 0 1 2 3 4 Health Fire Reactivity HMIS *	
Chemical Synonyms	Calcium Metal, Granular, Turnings		
Formula	Ca		
Unit(s) Size	100 to 500 grams		
C.A.S. No.	7440-70-2		

SECTION II HAZARDOUS INGREDIENTS OF MIXTURES		
Principal Hazardous Component(s)	%	TLV Units
Calcium Metal: (CAS No. 7440-70-2)	99%	Not established
Magnesium Metal: (CAS No. 7439-95-4)	0.7%	Not established
WARNING! FLAMMABLE SOLID - A FIRE HAZARD		
KEEP DRY AND WELL CLOSED. DANGEROUS WHEN WET.		

SECTION III				PHYSICAL DATA	
Melting Point (°F)	839°C (1544°F)		Specific Gravity (H ₂ O = 1)	1.54 @ 20°C	
Boiling Point (°F)	1487°C (2817°F)		Percent Volatile by Volume (%)	Non-volatile (NA)	
Vapor Pressure (mm Hg)	10 mm @ 983°C		Evaporation Rate (= 1)	Non-volatile (NA)	
Vapor Density (Air=1)	Not listed				
Solubility in Water	Caution: Reacts violently with water to produce hydrogen gas.				
Appearance & Odor	Lustrous, silver-white surface when freshly cut, tarnishes to grayish-white on exposure to air; no odor.				

SECTION IV FIRE AND EXPLOSION HAZARD DATA			
Flash Point (Method Used)	Non-flammable	Flammable Limits in Air % by Volume NA	Lower Upper
Extinguisher Media	Use dry graphite, soda ash, powdered sodium chloride, sand, G-I powder.		

SPECIAL FIREFIGHTING PROCEDURES	Do not use water or halogenated hydrocarbons such as Carbon Tetrachloride. Carbon dioxide and dry chemicals are ineffective. Wear a self-contained breathing apparatus; wear goggles. USE: Special mixtures of dry chemical or lime is only extinguishing agent to be used.
---------------------------------	---

(1990 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.5, GUIDE PAGE NO. 40)

UNUSUAL FIRE AND EXPLOSION HAZARDS	Calcium reacts with water to form the hydroxide and hydrogen. Mixed with air, the liberated hydrogen may present an explosion hazard. Explosion or violent reaction may take place if care is not exercised in selecting extinguishants applied to a calcium fire. Finely divided calcium is considered pyrophoric and will cause an explosion when an ignition source is applied. Moderate explosion hazard in intimate contact with very powerful oxidizing agents.
------------------------------------	---

D.O.T.	CALCIUM, 4.3, UN 1401
--------	-----------------------

Approved by U.S. Department of Labor "essentially similar" to form OSHA-20

SECTION V HEALTH HAZARD DATA	
Threshold Limited Value	None established.

Effects of Overexposure	Solid material will cause skin and eye burns since it reacts with moisture to form caustic. Similarly, the fumes from burning calcium are highly irritating to skin, eyes, and mucous membranes.
Emergency and First Aid Procedures	SKIN: Wipe excess metal from skin. Wash with soap and water. EYES: Flush with water for 15 minutes. Get prompt medical attention. INGESTION: Specific data is not available. Call physician immediately.

SECTION VI REACTIVITY DATA		
Stability	Unstable Stable	Conditions to Avoid X Unstable when exposed to moist atmosphere - heat.
Incompatibility (Materials to Avoid)	Moisture from any source, alkali - metal hydroxides and carbonates.	
Hazardous Decomposition Products	Calcium and water react to produce hydrogen. Burning calcium is self-sustaining and strongly reducing to adjacent media.	
Hazardous Polymerization	Conditions to Avoid	
May Occur	Will Not Occur	Not applicable.
	X	

SECTION VII SPILL OR LEAK PROCEDURES	
Steps to be taken in case material is released or spilled	Wear protective equipment and clothing. Collect spilled material for reclamation or disposal in sealed containers. Avoid contact with water. Avoid inhalation of dust.

Waste Disposal Method	Discharge, treatment, or disposal may be subject to Federal, State or Local laws. These disposal guidelines are intended for the disposal of catalog-size quantities only. Recycle or dispose of in an approved incinerator or contract with a licensed chemical waste disposal service.
-----------------------	--

SECTION VIII SPECIAL PROTECTION INFORMATION				
Respiration Protection (Specify Type)		Normally none needed. A NIOSH-approved dust filter mask if needed.		
Ventilation	Local Exhaust	Recommended	Special	No
	Mechanical (General)	Recommended	Other	No
Protective Gloves		Rubber	Eye Protection	Chemical safety glasses.
Other Protective Equipment		Safety glasses, smock, apron, eye wash station and a fire extinguisher.		

SECTION IX SPECIAL PRECAUTIONS	
Precautions to be Taken in Handling & Storing	Store in a cool, dry place. No smoking or open flames when opening container. Wash thoroughly after handling.
Keep container tightly closed when not in use.	

Other Precautions	Read label on container before using. Do not wear contact lenses when working with chemicals. Store under kerosene or other neutral oil. Never store under halogenated hydrocarbons. Remove and wash contaminated clothing.
-------------------	---

For laboratory use only. Not for drug, food or household use. Keep out of reach of children.

Rev. No.	No. 6	Date	5/11/93	Approved	Alexander A. Piccirilli	Chemical Safety Coordinator	AP
----------	-------	------	---------	----------	-------------------------	-----------------------------	----

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. * Hazardous Materials Industrial Standards.