

MATERIAL SAFETY DATA SHEET

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PRODUCT IDENTIFICATION

TRADE NAME: REAGENT SPEEDY MOISTURE TESTER
PRODUCT NO. H 4966

Prepared by: Safety Department
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SECTION 2: HAZARDOUS INGREDIENTS IDENTITY

Hazardous Component(s):	OSHA PEL	ACGIH TLV	OTHER LIMITS	CAS NO	% BY WT.
Calcium Carbide	None Established		75-20-7		65-85
Calcium Oxide	5mg/m ³	2 mg/m ³	1305-78-8		10-30

NOTE; NO EXPOSURE LEVELS EXIST FOR CALCIUM CARBIDE. EXPOSURE LEVELS MAY BE APPLICABLE TO CONSTITUENT ELEMENTS.

SECTION 3: PHYSICAL AND CHEMICAL CHARACTERISTICS

- 1) Boiling Point: N/A
- 2) Specific Graviy: 2.2
- 3) Solubility in Water: Decomposes in water to form acetylene gas.
- 4) Reactivity with Water: Calcium Carbide reacts with water to form acetylene extremely flammable acetylene gas. Calcium oxide reacts with water forming Ca (OH, and liberating heat.
- 5) Appearance and Odor: Gray to bluish black. Odor on exposure to air resembles garlic.
- 6) Melting Point: 1925 degrees C.

SECTION 4: FIRE AND EXPLOSION DATA

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| 1) | Combustibility: | None, as long as sources of water are excluded.
NOTE: When exposed to air or water, acetylene is formed. Acetylene is lighter than air with a wide explosive range (2.5% to 100% by volume in air) and with a comparatively low ignition temperature. |
| 2) | Extinguishing Media: | An acetylene fire from wet CaC_2 should not be extinguished.

Acetylene may continue to be generated and become confined. Once confined the acetylene will explode if ignited.

DO NOT USE ANY WATER ON CaC_2 - ACETYLENE FIRE.
Contain fire and allow to burn itself out. |
| 3) | Special Fire Fighting Procedures: | More water will generate acetylene. If possible, contain fire and allow to burn out. |

SECTION 5: PHYSICAL/CHEMICAL HAZARDS (REACTIVITY DATA)

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|----|--|--|---------------------|
| 1) | Stability: | Stable: (X) | Unstable () |
| 2) | Conditions to Avoid: | Moisture either in air, in other moist materials, or in water solutions.
Ventilation should be supplied to storage areas. | |
| 3) | Incompatibility
(Materials to Avoid): | Moisture. | |
| 4) | Hazardous Decomposition
Products: | Acetylene is a highly explosive and flammable gas. Hydrate lime, acetylene and heat are generated during the reaction with water. Grounding of CaC ₂ containers to prevent static electricity discharge is recommended. Copper ground straps or cable should not be used. | |
| 5) | Hazardous Polymerization: | May occur: () | Will Not Occur: (X) |

SECTION 6: HEALTH HAZARDS

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| 1) | Acute: | Dry powder reacts with body moisture to form alkali which irritates the skin, eyes and respiratory passages. |
| 2) | Chronic: | Over exposure symptoms are similar and larger in scale. Dry powder and lump material have a low order of toxicity. |
| 3) | Signs and Symptoms of Exposure: | Irritation of skin, eyes and respiratory passages. |
| 4) | Medical Conditions Generally Aggravated by Exposure: | Not Known. |

5) Chemicals Listed as Carcinogen or Potential Carcinogen:

National Toxicology Program: Yes () No (X)
I.A.R.C. MONOGRAPHS: Yes () No (X) OSHA: Yes () No (X)

SECTION 7: EMERGENCY AND FIRST AID PROCEDURES

IF SYMPTOMS OF OVEREXPOSURE DEVELOP, ALWAYS SEEK IMMEDIATE MEDICAL ATTENTION.

ROUTES OF ENTRY:

- 1) Inhalation (Breathing): Remove from dusty area to fresh air.
Support breathing as required.
- 2) Eye Contact: Flush with water to ensure that no material remains in the eye.
- 3) Skin Contact: Wash with soap and water. Treat irritant as you would a burn.
- 4) Ingestion (Swallowing): Seek immediate medical attention. DO NOT INDUCE VOMITING.

SECTION 8: SPECIAL PRECAUTIONS AND SPILL / LEAK PROCEDURES:

- 1) Precautions to be taken in Handling and Storage: CaC_2 can be stored outdoors under cover, in full, unopened, well sealed metal containers. Adequate ventilation should be provided to storage building and bins where exposed material is stored. This prevents the accumulation of acetylene. Frequent periodic examination of drums should be made to check for excessive rusting.

LABELING: Flammable Solid and Dangerous When Wet.

- 2) Other Precautions: Keep sources of high heat, sparks, or open flames away from open containers.
- 3) Steps to be Taken in Case Material is Released or Spilled: Eliminate all heat and ignition sources from the spill area. Cleanup personnel should wear appropriate respiratory protective equipment, and protect against skin and eye contact. Avoid the use of compressed air to maneuver spills or leaks of fine material. Cover spilled material with an inert, noncombustible material such as dry sand. Avoid contact with water. Scoop up material using a non-sparking tool, and place into a dry container. Cover container but do not tightly seal to prevent pressure buildup.

Store container under cover away from personnel and buildings.
Compliance is required with OSHA regulation 29 CFR 1910.120.

- 4) Waste Disposal Methods (Always Consult Federal, State, Regional, and Local Regulations Pertaining to This Material Before Using Any Method Suggested Here). CaC_2 Fines - Handle as you would a spill or leak. CaC_2 is an EPA Hazardous Waste:
Dispose of according to applicable federal, state or local rules.
- 5) Consult Local Waste Disposal Professionals.

SECTION 9: SPECIAL PROTECTION INFORMATION/CONTROL MEASURES

General: Always Use Protective Equipment / Clothing as Necessary to Keep Exposure to This Material Below Applicable Exposure Limits.

- 1) Respiratory Protection
(Specify Type): In dusty areas, use NIOSH- approved Schedule 21C respirator.
In oxygen-deficient areas, use SCBA. Compliance is required with OSHA respirator regulations, 29 CFR 1910.134 (USA) and CSA Standard E94-4-M1982 (Canada).
- 2) Ventilation: Recommended.
- 3) Local Exhaust: For dusty areas.
- 4) Mechanical (General). N/A.
- 5) Protective Gloves: Cotton, Vinyl.
- 6) Eye Protection: Safety goggles are recommended.
- 7) Other Protective Clothing or Equipment: Gloves should be used when handling lump material. Avoid contamination of clothing with CaC_2 . Button work clothes at wrist and neck. The use of a scarf around the neck in hot weather helps avoid chafing from the collar. Barrier creams may also be useful in preventing skin irritation.
- 8) Work / Hygienic Practices: Wash skin and clothing with soap and water after use.