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MSDS COVER SHEET

Pages including cover sheet: 8

Product Name: **Deprotection Solution**

Catalog Number: **60-4600-XX**

Product Description: 0.05M Potassium Carbonate in
Methanol

Glen Research Corporation provides Material Safety Data Sheets (MSDS) based on the hazardous components of each product.

Components and MSDS attached

Methanol (97.4%)	CAS number	67-56-1
Potassium Carbonate (2.6%)	CAS number	584-08-7



Material Safety Data Sheet

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Section I: Identification & Information

Name: Methanol

Chemical Family: Alcohol

Synonyms: Methyl Alcohol, Wood Alcohol, Wood Naphtha, Wood Spirit, Methyl Hydrate, Methyl Hydroxide

Formula: CH₃OH

M.W.: 32.04

DOT Proper Shipping Name: Methanol

DOT Identification No.: UN1230 CAS No.: 67-56-1

DOT Hazard Class: Flammable Liquid

Section II: Physical Properties

Appearance: Clear, colorless liquid
Vapor Pressure @ 20°C: 97mmHg
Percent Volatile by Volume: ca 95%
Evaporation Rate (Butyl acetate=1) ~5
Boiling Point: 148°F (65°C)
Freezing point: -144°F (-98°C)

Odor: Sweet, aromatic; ether-like
Vapor Density (air=1): 1.1
Specific Gravity (H₂O=1): 0.79
Stability: Stable
Solubility in H₂O: Soluble
Water Reactive: n/a

Section III: Reactivity Hazard Data

Stable material at room temperature in closed containers under normal storage and handling conditions. Hazardous polymerization is not expected to occur.

Conditions to avoid: Heat, sparks, open flames, open containers, poor ventilation, and direct sunlight.

Materials to avoid: Strong oxidizing and reducing agents, strong acids and bases, acid chlorides, acid anhydrides, alkali metals.

Hazardous decomposition products: Incomplete combustion can generate carbon monoxide and carbon dioxide.

Section IV: Fire and Explosion Hazard Data

Flash Point: 11°C (52°F) Autoignition temperature: 725°F
Explosion Limits in air % by volume: Lower limit: 6% Upper limit: 36%

General Information: Containers can build up pressure if exposed to heat or fire. Use water spray to keep containers cool.

Extinguishing Media: dry chemical, CO₂. Water may spread fire.

Special Fire Fighting Procedures: Wear full protective clothing and self-contained breathing apparatus. May give off toxic vapors. Very volatile and extremely flammable.

Unusual Fire and Explosion Hazards: Vapor may be heavier than air. Vapors may travel and be ignited by distant ignition sources. Water may be ineffective. Dangerous fire hazard when exposed to heat or flame.

Section V: Hazardous Ingredients

Methanol ca 100%

Occupational Exposure Limits:

OSHA PEL=8H TWA 200ppm; ACGIH: TLV-TWA 200ppm;
STEL 250ppm IDLH=6000ppm

Section VI: Toxicity and Health Hazard Data

See Registry of Toxic Effects of Chemical Substances (RTECS).

Primary routes of entry: Inhalation, skin absorption, ingestion. Possible risk of irreversible effects through inhalation, ingestion, or contact through skin.

- Inhalation: Toxic by inhalation. Material may cause irritation to mucous membranes of nose and upper respiratory tract.
- Ingestion: May cause death or blindness if ingested. May cause central nervous system depression, kidney damage, and liver damage. May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause dizziness, weakness, confusion, drowsiness, unconsciousness, and convulsions.
- Eye contact: May cause eye irritation.
- Skin contact: May cause skin irritation. May be absorbed in harmful amounts.
- Chronic exposure can produce damage to the liver and kidneys. Preclude from exposure those individuals with diseases of the liver, kidneys, skin, and central nervous system.

Target Organs: Eyes, liver, kidneys, central nervous system, and heart.

Emergency First Aid:

- Ingestion: Call poison control center for assistance immediately. Get emergency medical assistance. Never induce vomiting or give anything by mouth to a victim who is unconscious or having convulsions.
- Eye contact: Rinse with copious amounts of water for at least 15 minutes. Get emergency medical assistance.
- Skin contact: Flush thoroughly with water for at least 15 minutes. Wash affected skin with soap and water. Remove contaminated clothes and shoes. Wash clothing before reuse. Get emergency medical assistance.
- Inhalation: Immediately remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Keep patient warm and at rest. Get emergency medical assistance.

Section VII: Special Protection

Ventilation: Adequate ventilation is required to control vapors and odor. Use in a chemical fume hood.

Respiratory Protection: Use approved respiratory equipment. Follow NIOSH and equipment manufacturer's recommendations to determine appropriate equipment. Do not breathe vapor

Skin Protection: Protective gloves and clothing are recommended. The choice of material must be based on chemical resistance and other user requirements.

Eye Protection: Laboratory safety glasses are minimum protection. Goggles are preferred.

Emergency eye wash fountains and safety showers should be available in the vicinity of any potential exposure. Ground and bond metal containers to minimize sparks.

Section VIII: Spill and Disposal Procedures

Wear protective clothing and use approved respiration equipment. If a spill occurs, protect from ignition.. Ventilate area of spill. Absorb spilled material in an absorbent recommended for solvent spills and scoop with a nonsparking tool. Remove waste to a safe location for disposal by approved methods. If released to the environment, comply with all regulatory notification requirements.

Waste Disposal: Dispose of methanol as an EPA Hazardous Waste.

Section IX: Storage

Store in a cool area away from ignition sources, combustibles and oxidizing materials. Protect from temperature extremes and direct sunlight. Keep container tightly closed.

This chemical is subject to the notification requirements of section 313 of the Emergency Planning and Community Right-to-Know Act of 1986. This law requires certain manufacturers to report on annual emissions of specified toxic chemical and chemical categories.

The information provided herein is based on sources believed to be reliable as of 4/5/01 and pertains only to the material designated. Glen Research Corporation makes no warranty or representation to its completeness, accuracy, or currency. This material is intended for use by persons with pertinent technical skills and at their discretion and risk. It is the responsibility of the user to determine the product's suitability for its intended use, the product's safe use, and the product's proper disposal. Disposal of hazardous material may be subject to federal, state or local laws or regulations.

Key:

ca: Approximately

PEL: Permissible Exposure Level

STEL: Short Term Exposure Level

TWA: Time Weighted Average

IDLH: Immediately Dangerous to Life and Health

BuAc: Butyl Acetate

TLV: Threshold Limit Value

n/a: not available



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Section I: Identification & Information

Name: Potassium Carbonate

Synonyms: Carbonic acid, dipotassium salt; Potash; Pearl ash

Formula: K_2CO_3

M.W.: 138.20

DOT Proper Shipping Name: N/A

CAS No.: 584-08-7

Section II: Physical Properties

Appearance: White granular powder

Odor: Odorless

Specific Gravity ($\text{H}_2\text{O}=1$): 2.430

Solubility in H_2O : 1.1g/mL(20°C)

Melting point: 891°C

Stability: Stable at normal temperature and pressure.

Section III: Reactivity Hazard Data

Hazardous polymerization will not occur.

Conditions to avoid: Protect from moisture

Materials to avoid: Strong oxidizing materials, strong acids

Hazardous decomposition products: Carbon monoxide, carbon dioxide

Section IV: Fire and Explosion Hazard Data

Flash Point: n/a

Autoignition Temperature: n/a

Flammable Limits in air % by volume: n/a

Extinguishing Media: water spray, dry chemical powder, CO_2 .

Special Fire Fighting Procedures: Wear full protective clothing and self-contained breathing apparatus.

Unusual Fire and Explosion Hazards: emits toxic fumes under fire conditions.

Section V: Hazardous Ingredients

Potassium carbonate ca100%

Section VI: Toxicity and Health Hazard Data

See Registry of Toxic Effects of Chemical Substances (RTECS).

Primary routes of entry: Inhalation, skin absorption, ingestion.

- Inhalation: Material may cause irritation to mucous membranes of nose and upper respiratory tract.
- Ingestion: Harmful if swallowed.
- Eye contact: May cause eye irritation.
- Skin contact: May cause skin irritation.

Health hazards: Acute. May cause skin, eye, and upper respiratory tract irritation.

The toxicological properties have not been thoroughly investigated.

Emergency First Aid:

- Ingestion: Wash out mouth with water if the person is conscious. Get emergency medical assistance. Never give anything orally to a person who is unconscious or in convulsions.
- Eye contact: Rinse with copious amounts of water for at least 15 minutes. Seek medical advice.
- Skin contact: Remove from contact. Remove contaminated clothes and shoes. Wash with soap and water. Wash clothing and shoes before reuse.
 - Inhalation: Immediately remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Keep patient warm and at rest. Get emergency medical assistance.

Section VII: Special Protection

Ventilation: Mechanical ventilation is required to eliminate dust.

Respiratory Protection: NIOSH approved respirators.

Skin Protection: Protective rubber or neoprene gloves and protective clothing are recommended.

Eye Protection: Laboratory safety glasses are minimum protection. Goggles or faceshield are preferred. Contact lenses should not be worn when working with this material.

Wash thoroughly after handling.

Emergency eye wash fountains and safety showers should be available in the vicinity of any potential exposure.

Section VIII: Spill and Disposal Procedures

Sweep up spilled material, place in a bag and hold for waste disposal. Use approved respiratory protection. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Waste Disposal: Dissolve or mix with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Dispose in accordance with all federal, state, and local environmental laws.

Section IX: Storage

Avoid contact with skin, eyes, and clothing. Store in a tightly sealed container. Store tightly closed in a cool, dry place.

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