



Material Safety Data Sheet

NFPA	HMIS	Personal Protective Equipment						
	<table border="1" style="margin: auto;"> <tr><td style="background-color: #00FFFF;">Health Hazard</td><td style="text-align: center;">2</td></tr> <tr><td style="background-color: #FFC0CB;">Fire Hazard</td><td style="text-align: center;">3</td></tr> <tr><td style="background-color: #FFFF00;">Reactivity</td><td style="text-align: center;">0</td></tr> </table>	Health Hazard	2	Fire Hazard	3	Reactivity	0	 See Section 15.
Health Hazard	2							
Fire Hazard	3							
Reactivity	0							

Section 1. Chemical Product and Company Identification		Page Number: 1
Common Name/Trade Name	Potassium Hydroxide. 0.1N Alcoholic Solution in Methanol	
Manufacturer	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248	
Commercial Name(s)	Not available.	
Synonym	Not available.	
Chemical Name	Not applicable.	
Chemical Family	Alcohol. (Solvent.)	
Chemical Formula	Not applicable.	
Supplier	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248	
	Catalog Number(s).	P-367
	CAS#	Mixture.
	RTECS	Not applicable.
	TSCA	TSCA 8(b) inventory: Potassium hydroxide; Methyl alcohol
	CI#	Not applicable.
<u>IN CASE OF EMERGENCY</u> <u>CHEMTREC (24hr) 800-424-9300</u> CALL (310) 516-8000		

Section 2. Composition and Information on Ingredients					
Name	CAS #	Exposure Limits			% by Weight
		TWA (mg/m ³)	STEL (mg/m ³)	CEIL (mg/m ³)	
1) Potassium hydroxide	1310-58-3			2	0.66
2) Methyl alcohol	67-56-1	200	250		99.3
Toxicological Data on Ingredients	Methyl alcohol: ORAL (LD50): Acute: 5628 mg/kg [Rat]. DERMAL (LD50): Acute: 15800 mg/kg [Rabbit]. VAPOR (LC50): Acute: 64000 ppm 4 hours [Rat]. Potassium hydroxide: ORAL (LD50): Acute: 273 mg/kg [Rat].				

Section 3. Hazards Identification	
Potential Acute Health Effects	Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation (lung irritant). Slightly hazardous in case of skin contact (corrosive, permeator), of eye contact (corrosive). Liquid or spray mist may produce tissue damage particularly on mucous membranes of eyes, mouth and respiratory tract. Skin contact may produce burns. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Severe over-exposure can result in death.

Potential Chronic Health Effects Slightly hazardous in case of skin contact (sensitizer).
CARCINOGENIC EFFECTS: Not available.
MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast. [Methyl alcohol].
TERATOGENIC EFFECTS: Classified POSSIBLE for human [Methyl alcohol].
DEVELOPMENTAL TOXICITY: Not available.
The substance is toxic to eyes.
The substance may be toxic to blood, kidneys, liver, brain, peripheral nervous system, upper respiratory tract, skin, central nervous system (CNS), optic nerve.
Repeated or prolonged exposure to the substance can produce target organs damage. Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Section 4. First Aid Measures

Eye Contact Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Get medical attention.

Skin Contact In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

Serious Skin Contact Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Serious Inhalation Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. **WARNING:** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

Ingestion If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Serious Ingestion Not available.

Section 5. Fire and Explosion Data

Flammability of the Product Flammable.

Auto-Ignition Temperature The lowest known value is 464°C (867.2°F) (Methyl alcohol).

Flash Points The lowest known value is CLOSED CUP: 12°C (53.6°F) . OPEN CUP: 16°C (60.8°F). (Methyl alcohol)

Flammable Limits The greatest known range is LOWER: 6% UPPER: 36.5% (Methyl alcohol)

Products of Combustion These products are carbon oxides (CO, CO2). Some metallic oxides.

Fire Hazards in Presence of Various Substances Highly flammable in presence of open flames and sparks, of heat.
Non-flammable in presence of shocks, of oxidizing materials, of reducing materials, of combustible materials, of organic materials, of alkalis, of moisture.

Explosion Hazards in Presence of Various Substances Risks of explosion of the product in presence of mechanical impact: Not available.
Explosive in presence of open flames and sparks, of heat.

Fire Fighting Media and Instructions Flammable liquid, soluble or dispersed in water.
SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use alcohol foam, water spray or fog.

Special Remarks on Fire Hazards Explosive in the form of vapor when exposed to heat or flame. Vapor may travel considerable distance to source of ignition and flash back. When heated to decomposition, it emits acrid smoke and irritating fumes. **CAUTION: MAY BURN WITH NEAR INVISIBLE FLAME** (Methyl alcohol)

Special Remarks on Explosion Hazards Forms an explosive mixture with air due to its low flash point. Explosive when mixed with Chloroform + sodium methoxide and diethyl zinc. It boils violently and explodes. (Methyl alcohol)

Section 6. Accidental Release Measures

Small Spill Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

Large Spill Flammable liquid. Corrosive liquid. Poisonous liquid. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Use water spray curtain to divert vapor drift. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7. Handling and Storage

Precautions Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Never add water to this product. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, metals, acids.

Storage Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

Section 8. Exposure Controls/Personal Protection

Engineering Controls Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection Face shield. Full suit. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves. Boots.

Personal Protection in Case of a Large Spill Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits
Potassium hydroxide
 CEIL: 2 from ACGIH (TLV) [United States] [1999]
Methyl alcohol
 TWA: 200 from OSHA (PEL) [United States]
 TWA: 200 STEL: 250 (ppm) from ACGIH (TLV) [United States] [1999]
 STEL: 250 from NIOSH [United States]
 TWA: 200 STEL: 250 (ppm) from NIOSH SKIN
 TWA: 200 STEL: 250 (ppm) [Canada]

Consult local authorities for acceptable exposure limits.

Section 9. Physical and Chemical Properties

Physical state and appearance	Liquid.	Odor	Alcohol like.
Molecular Weight	Not applicable.	Taste	Not available.
pH (1% soln/water)	Not available.	Color	Clear Colorless.
Boiling Point	The lowest known value is 64.5°C (148.1°F) (Methyl alcohol).		
Melting Point	May start to solidify at -97.8°C (-144°F) based on data for: Methyl alcohol.		
Critical Temperature	The lowest known value is 240°C (464°F) (Methyl alcohol).		
Specific Gravity	The only known value is 0.7915 (Water = 1) (Methyl alcohol).		
Vapor Pressure	The highest known value is 12.3 kPa (@ 20°C) (Methyl alcohol).		
Vapor Density	The highest known value is 1.11 (Air = 1) (Methyl alcohol).		

Volatility	Not available.
Odor Threshold	The highest known value is 100 ppm (Methyl alcohol)
Water/Oil Dist. Coeff.	Not available.
Ionicity (in Water)	Non-ionic.
Dispersion Properties	See solubility in water.
Solubility	Easily soluble in cold water, hot water. Insoluble in diethyl ether.

Section 10. Stability and Reactivity Data

Stability	The product is stable.
Instability Temperature	Not available.
Conditions of Instability	Heat, ignition sources, incompatible materials
Incompatibility with various substances	Reactive with oxidizing agents, metals, acids.
Corrosivity	Corrosive in presence of aluminum, of zinc. Non-corrosive in presence of glass, of stainless steel(316).
Special Remarks on Reactivity	Can react vigorously with oxidizers. Violent reaction with alkyl aluminum salts, acetyl bromide, chloroform + sodium methoxide, chromic anhydride, cyanuirc chlorite, lead perchlorate, phosphorous trioxide, nitric acid. Exothermic reaction with sodium hydroxide + chloroform. Incompatible with beryllium dihydride, metals (potassium and magnesium), oxidants (barium perchlorate, bromine, sodium hypochlorite, chlorine, hydrogen peroxide), potassium tert-butoxide, carbon tetrachloride, alkali metals, metals (aluminum, potassium magnesium, zinc), and dichlormethane. Rapid autocatalytic dissolution of aluminum, magnesium or zinc in 9:1 methanol + carbon tetrachloride - sufficiently vigorous to be rated as potentially hazardous. May attack some plastics, rubber, and coatings. (Methyl alcohol)
Special Remarks on Corrosivity	When wet, attacks metals such as aluminum, tin, lead, and zinc, producing flammable hydrogen gas. Severe corrosive effect on brass and bronze. (Potassium hydroxide)
Polymerization	Will not occur.

Section 11. Toxicological Information

Routes of Entry	Absorbed through skin. Eye contact. Inhalation. Ingestion.
Toxicity to Animals	Acute oral toxicity (LD50): 5628 mg/kg [Rat.]. (Methyl alcohol). Acute dermal toxicity (LD50): 15800 mg/kg [Rabbit.]. (Methyl alcohol).
Chronic Effects on Humans	MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast. [Methyl alcohol]. TERATOGENIC EFFECTS: Classified POSSIBLE for human [Methyl alcohol]. Contains material which may cause damage to the following organs: blood, kidneys, liver, brain, peripheral nervous system, upper respiratory tract, skin, central nervous system (CNS), optic nerve.
Other Toxic Effects on Humans	Hazardous in case of skin contact (irritant), of ingestion, of inhalation (lung irritant). Slightly hazardous in case of skin contact (permeator).
Special Remarks on Toxicity to Animals	Not available.
Special Remarks on Chronic Effects on Humans	Passes through the placental barrier. May affect genetic material. May cause birth defects and adverse reproductive effects(paternal and maternal effects and fetotoxicity) based on animal studies. (Methyl alcohol)
Special Remarks on other Toxic Effects on Humans	

Acute Potential Health effects:
May cause eye and skin irritation. Methanol can be absorbed through the skin, producing systemic effects that include visual disturbances. Eye contact may also cause conjunctivitis and possible corneal damage.
Inhalation: May cause respiratory tract irritation with coughing and wheezing. May affect behavior/central nervous system/peripheral nervous system, gastrointestinal tract, respiration, lungs, and blood, and heart /cardiovascular system (bradycardia, tachycardia). May also cause metabolic acidosis and severe visual effects which may include reduced reactivity/and or increased sensitivity to light, blurred, double/and or snowy vision, and blindness.
Ingestion: May be harmful and affect eyes (cause significant visual disturbances including blindness) if swallowed. May cause gastrointestinal tract irritation with abdominal pain, fatigue, nausea, vomiting, and diarrhea or constipation. May affect behavior/central nervous system/peripheral nervous system (general anesthetic, dizziness, delirium, confusion, restlessness, giddiness, back pain, headache, muscle weakness, somnolence, spastic paralysis, muscle contraction, ataxia, seizures, unconsciousness, coma), brain, blood(leukocytosis), metabolism, respiration (dyspnea, apnea, hyperventilation, pulmonary edema, coughing, respiratory failure), liver, urinary system (kidneys - renal failure, hematuria), endocrine system (spleen, pancreas (pancreatitis, hyperglycemia)), cardiovascular system (tachycardia, bradycardia, cardiac failure, hypotension). May also cause metabolic acidosis.
Narcotic.
Chronic Potential Effects:
Prolonged or repeated exposure by inhalation or ingestion will have effects similar to those of acute inhalation or ingestion.
Methanol is very slowly eliminated from the body. Because of this slow elimination, methanol should be regarded as a cumulative poison. Though a single exposure may cause no effect, daily exposures may result in the accumulation of harmful amounts
Prolonged or repeated skin contact may cause defating dermatitis with dryness and cracking.

Section 12. Ecological Information

Ecotoxicity	Not available.
BOD5 and COD	Not available.
Products of Biodegradation	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Toxicity of the Products of Biodegradation	The products of degradation are less toxic than the product itself.
Special Remarks on the Products of Biodegradation	Methanol in water is rapidly biodegraded and volatilized. Aquatic hydrolysis, oxidation, photolysis, adsorption to sediment, and bioconcentration are not significant fate processes. The half-life of methanol in surfact water ranges from 24 hrs. to 168 hrs. Based on its vapor pressure, methanol exists almost entirely in the vapor phase in the ambient atmosphere. It is degraded by reaction with photochemically produced hydroxyl radicals and has an estimated half-life of 17.8 days. Methanol is physically removed from air by rain due to its solubility. Methanol can react with NO2 in polluted to form methyl nitrate. The half-life of methanol in air ranges from 71 hrs. (3 days) to 713 hrs. (29.7 days) based on photooxidation half-life in air. (Methyl alcohol)

Section 13. Disposal Considerations

Waste Disposal	Waste must be disposed of in accordance with federal, state and local environmental control regulations.
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Section 14. Transport Information

DOT Classification	CLASS 3: Flammable liquid.
Identification	UNNA: 1230 : Methanol, solution PG: II
Special Provisions for Transport	Not available.

DOT (Pictograms)



Section 15. Other Regulatory Information and Pictograms

Federal and State Regulations

Connecticut hazardous material survey.: Methyl alcohol
 Illinois toxic substances disclosure to employee act: Methyl alcohol
 Illinois chemical safety act: Methyl alcohol
 New York release reporting list: Potassium hydroxide; Methyl alcohol
 Rhode Island RTK hazardous substances: Methyl alcohol
 Pennsylvania RTK: Potassium hydroxide; Methyl alcohol
 Florida: Potassium hydroxide
 Minnesota: Potassium hydroxide; Methyl alcohol
 Massachusetts RTK: Potassium hydroxide; Methyl alcohol
 Massachusetts spill list: Methyl alcohol
 New Jersey: Potassium hydroxide; Methyl alcohol
 New Jersey spill list: Methyl alcohol
 Louisiana spill reporting: Methyl alcohol
 TSCA 8(b) inventory: Potassium hydroxide; Methyl alcohol
 SARA 313 toxic chemical notification and release reporting: Methyl alcohol 99.34%
 CERCLA: Hazardous substances.: Potassium hydroxide: 1000 lbs. (453.6 kg); Methyl alcohol: 5000 lbs. (2268 kg);

California Proposition 65 Warnings

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: No products were found.
 California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: No products were found.

Other Regulations

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications

WHMIS (Canada)

CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F).
 CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC).
 CLASS D-2B: Material causing other toxic effects (TOXIC).
 CLASS E: Corrosive liquid.

DSCL (EEC)

R11- Highly flammable.
 R23/24/25- Toxic by inhalation, in contact with skin and if swallowed.
 R36/37/38- Irritating to eyes, respiratory system and skin.
 S7- Keep container tightly closed.
 S16- Keep away from sources of ignition - No smoking.
 S36/37/39- Wear suitable protective clothing, gloves and eye/face protection.
 S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

HMIS (U.S.A.)

Health Hazard	2
Fire Hazard	3
Reactivity	0
Personal Protection	0

National Fire Protection Association (U.S.A.)

Health  Flammability
 Reactivity
 Specific hazard

WHMIS (Canada) (Pictograms)



DSCL (Europe) (Pictograms)



**TDG (Canada)
(Pictograms)**



**ADR (Europe)
(Pictograms)**



Protective Equipment



Gloves.



Full suit.



Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.



Face shield.

Section 16. Other Information

MSDS Code P367S

References Not available.

Other Special Considerations Not available.

Validated by Sonia Owen on 3/20/2008.

Verified by Sonia Owen.

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CALL (310) 516-8000

Notice to Reader

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum Quality Products, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.