World Headquarters
Hach Company
P.O.Box 389
Loveland, CO USA 80539
(970) 669-3050

MSDS No: M00281

SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Name: Potassium 2 Reagent Solution Pillows
Catalog Number: 1432298

HACH LANGE GmbH
Willstätterstrasse 11
40549 Düsseldorf, Germany
+49-(0)211-52880

Emergency Telephone Numbers:
(Poison Information Center Main)
(+49 (0) 6131 19240) 24 HR

SDS Number: M00281
Chemical Name: Not applicable
Chemical Formula: Not applicable
Chemical Family: Not applicable
Use of the substance/preparation: Laboratory Reagent
CAS No.: Not applicable
Hazard: Cannot be made non-toxic. Causes irritation. Sensitizer. Causes burns. Carcinogen.
Date of MSDS Preparation:
Day: 12
Month: April
Year: 2007
Additional Emergency Response Numbers: Austria: +49 (0)6131 19240, Belgium: +32-(0)70-245245, France: +33-(0)1-40370404, Italy: +39-02-66101029, Netherlands: +31-(0)30-2748888, Switzerland: +41-(0)1-2515151

2. COMPOSITION / INFORMATION ON INGREDIENTS

Methyl Alcohol
EEC Number: 2006596
CAS No.: 67-56-1
Percent Range: 10,0 - 20,0
Percent Range Units: weight / weight
Ingredient EEC Symbol: F - HIGHLY FLAMMABLE Xn - HARMFUL
Ingredient R phrase(s) (R phrase details given in Heading 16): R 10 R 20/22
TLV: 200 ppm
PEL: 200 ppm
EU Occupational Exposure Limits: 200 ppm (260 mg/m^3)

Demineralized Water
EEC Number: 2317912
CAS No.: 7732-18-5
Percent Range: 50,0 - 60,0
Percent Range Units: weight / weight
Ingredient EEC Symbol: Not applicable
Ingredient R phrase(s) (R phrase details given in Heading 16): Not applicable
TLV: Not established
PEL: Not established

EU Occupational Exposure Limits: Not established

Formaldehyde

EEC Number: 2000018
CAS No.: 50-00-0
Percent Range: 30,0 - 40,0
Percent Range Units: weight / weight
Ingredient EEC Symbol: T - TOXIC
Ingredient R phrase(s) (R phrase details given in Heading 16): R 23/24/25 R 34 R 40 R 43
TLV: C: 0,37mg/m^3
PEL: 0.75 ppm. See the OSHA Standard at 29CFR1910.1048.
EU Occupational Exposure Limits: 0,5 ppm (0,62 mg/m^3)

3. HAZARDS IDENTIFICATION

Emergency Overview:

Appearance: Clear, colorless
Odor: Pungent
EU Symbols: T - TOXIC F - HIGHLY FLAMMABLE
R PHRASES: R 10: Flammable. R 23/24/25: Toxic by inhalation, in contact with skin and if swallowed. R 34: Causes burns. R 40: Limited evidence of a carcinogenic effect. R 43: May cause sensitization by skin contact.

Protective Equipment:

Potential Health Effects:

Eye Contact (EC): Causes burns
Skin Contact (EC): Causes burns May cause: skin sensitization
Skin Absorption (EC): Effects similar to those of ingestion Effects similar to those of inhalation
Target Organs (SA E): Circulatory system Kidneys Liver Optic nerve Central nervous system
Ingestion (EC): Methanol causes cardiovascular effects such as cardiac depression and blood pressure changes. Methanol causes central nervous system depression, symptoms may include: drunkenness, drowsiness, dizziness, lightheadedness, unconsciousness and coma. Methanol may cause irritation of the eyes, visual impairment or blindness. May cause: vomiting kidney damage liver damage circulatory collapse
Target Organs (Ing E): Central nervous system Circulatory system Kidneys Liver Optic nerve
Inhalation: Methanol causes cardiovascular effects such as cardiac depression and blood pressure changes. Methanol causes central nervous system depression, symptoms may include: drunkenness, drowsiness, dizziness, lightheadedness, unconsciousness and coma. Methanol may cause irritation of the eyes, visual impairment or blindness. May cause: respiratory tract irritation allergic respiratory reaction shortness of breath Very large doses may cause: lung damage Effects similar to those of ingestion.
Target Organs (Inh E): Central nervous system Circulatory system Kidneys Liver Optic nerve Lungs
Medical Conditions Aggravated: Allergies or sensitivity to formaldehyde. Persons with eye, kidney, liver, or respiratory problems may be more susceptible to formaldehyde.
Chronic Effects: Chronic overexposure may cause cancer skin sensitization allergic respiratory reactions liver damage kidney damage
Cancer / Reproductive Toxicity Information:
An ingredient of this mixture is: IARC Group 1: Recognized Carcinogen
Formaldehyde
Additional Cancer / Reproductive Toxicity Information: Contains: an experimental mutagen. an experimental teratogen.
Toxicologically Synergistic Products: None reported

4. FIRST AID MEASURES

Eye Contact: Immediately flush eyes with water for 15 minutes. Call physician.
Skin Contact (First Aid): Wash skin with soap and plenty of water for 15 minutes. Call physician immediately.
Ingestion (First Aid): Do not induce vomiting. Give 1-2 glasses of water. Call physician immediately. Never give anything by mouth to an unconscious person.
Inhalation: Remove to fresh air. Give artificial respiration if necessary. Call physician.

5. FIRE FIGHTING MEASURES

Flammable Properties: Combustible Liquid Combustion generates toxic fumes. Vaporizes easily at normal temperatures. This material does NOT sustain combustion when tested according to the UN Recommendation's "Methods of Testing for Combustibility".
Hazardous Combustion Products: Toxic fumes of: formaldehyde carbon monoxide, carbon dioxide.
Fire / Explosion Hazards: Combustible liquid Do not expose to flames.
Static Discharge: None reported.
Mechanical Impact: None reported
Extinguishing Media: Use media appropriate to surrounding fire conditions
Extinguishing Media NOT To Be Used: Not applicable
Fire Fighting Instruction: As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear. Containers can build up pressure if exposed to heat.

6. ACCIDENTAL RELEASE MEASURES

Spill Response Notice:
Only persons properly qualified to respond to an emergency involving hazardous substances should respond to a spill involving chemicals. See Section 13, Special Instructions for disposal assistance.
Containment Technique: Releases of this material may contaminate the environment. Remove all combustible material from spill area. Remove all ignition and spark-creating sources from the spill area. Cover spilled liquid with a commercially available flammable liquid sorbent such as vapor barrier blanket or activated carbon to avoid evolution of fumes. Vapors may travel to a source of ignition and flash back. May be ignited by: heat, sparks, or flames. Material will float on water creating a fire hazard. Dike the material to create a barrier to combustibles. Dike large spills to keep spilled material from entering sewage and drainage systems or bodies of water.
Clean-up Technique: Eliminate all sources of ignition. Do not breathe the fumes. Cover with an inert material, such as sand. Use only non-sparking tools. Sweep up material. Incinerate material at an E.P.A. approved hazardous waste facility. Decontaminate the area of the spill with a soap solution.
Evacuation Procedure: Evacuate general area (50 foot radius or as directed by your facility's emergency response plan) when: any quantity is spilled. If conditions warrant, increase the size of the evacuation.

7. HANDLING AND STORAGE

Handling: Avoid contact with skin eyes clothing Do not breathe mist or vapors. Use with adequate ventilation. Wash thoroughly after handling. Maintain general industrial hygiene practices when using this product.
Storage: Keep container tightly closed when not in use. Protect from: heat sparks, flames and other ignition sources
Special Packaging Instructions: Not applicable
Use of the substance/preparation: Laboratory Reagent

8. EXPOSURE CONTROLS / PROTECTIVE EQUIPMENT

Engineering Controls: Have an eyewash station nearby. Have a safety shower nearby. Use a fume hood to avoid exposure to dust, mist or vapor. Maintain general industrial hygiene practices when using this product.
Personal Protective Equipment:

Eye Protection: safety glasses with top and side shields
Skin / Hand Protection: disposable latex gloves lab coat
Inhalation Protection: laboratory fume hood
Precautionary Measures: Avoid contact with: eyes skin clothing Do not breathe: mist/vapor Use with adequate ventilation. Wash thoroughly after handling. Protect from: heat
TLV: Formaldehyde: Ceiling: 0,3 ppm; Methanol: 200 ppm
PEL: Formaldehyde: 0,75 ppm; Methanol: 200 ppm
EU Occupational Exposure Limits: Formaldehyde: 0,5 ppm (0,62 mg/m^3); Methanol: 200 ppm (260 mg/m^3)

9. PHYSICAL / CHEMICAL PROPERTIES

Appearance: Clear, colorless
Physical State: Liquid
Odor: Pungent
pH: 2,8-4,0
Vapor Pressure: Not determined
Vapor Density (air = 1): 1,04
Boiling Point: 96 °C 204,8 °F
Melting Point: -15 °C 5 °F
Flash Point: 56-63° C (133-145° F)
Method: Open cup
Autoignition Temperature: 420° C (788º F)
Flammability Limits:
Lower Explosion Limits: 7%
Upper Explosion Limits: 70%
Specific Gravity (water = 1): 1,08
Evaporation Rate (water = 1): Not determined
Volatile Organic Compounds Content: Not available
Partition Coefficient (n-octanol / water): Not applicable
Solubility:
Water: Soluble
Acid: Not determined
Other: Soluble in alcohol and acetone
Metal Corrosivity:
Steel: Not determined
Aluminum: Not determined

10. STABILITY / REACTIVITY

Chemical Stability: Stable when stored under proper conditions.
Conditions to Avoid: Contact with heat, sparks, open flames or other ignition sources. Exposure to air.
Reactivity / Incompatibility: Incompatible with: oxidizers alkalies
Hazardous Decomposition: Heating to decomposition releases toxic and/or corrosive fumes of: formaldehyde carbon dioxide carbon monoxide
Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Product Toxicological Data:
LD50: Oral rat LD50 = 800 mg/kg
LC50: None reported
Dermal Toxicity Data: None reported
Skin and Eye Irritation Data: None reported
Mutation Data: None reported
Reproductive Effects Data: None reported

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Ingredient Toxicological Data: Formaldehyde: Oral rat LD50 = 100mg/kg, Skin rabbit LD50 = 270mg/kg, Inhalation rat LC50 = 203mg/m^3; Methanol Oral rat LD50 = 5628mg/kg, Skin rabbit LD50 = 15800mg/kg, Inhalation rat LC50 = 6400ppm/4Hours.

An ingredient of this mixture is: IARC Group 1: Recognized Carcinogen
Formaldehyde

12. ECOLOGICAL INFORMATION

Product Ecological Information: Bluegill LC50 = 100µg/l/96H; Catfish (fresh water) TLm = 32 ppm/24H; Fathead minnow LC50 = 10-100 µl/l/96H; Rainbow trout LC50 = 168 mg/l/48H

Ingredient Ecological Information: None available

13. DISPOSAL CONSIDERATIONS

NOTICE (Disposal): These disposal guidelines are based on federal regulations and may be superseded by more stringent state or local requirements. Please consult your local environmental regulators for more information. In Europe: Chemical and analysis solutions must be disposed of in compliance with the respective national regulations. Product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system.

14. TRANSPORT INFORMATION

I.C.A.O.:
I.C.A.O. Proper Shipping Name: Formaldehyde Solution, Flammable
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ICAO Hazard Class: 3
ICAO Subsidiary Risk: 8
ICAO UN/ID Number: UN1198
ICAO Packing Group: III

I.M.O.:
I.M.O. Proper Shipping Name: Formaldehyde Solution, Flammable
--
I.M.O. Hazard Class: 3
I.M.O. Subsidiary Risk: 8
I.M.O. UN Number: UN1198
I.M.O. Packing Group: III

A.D.R.:
A.D.R. Proper Shipping Name: Formaldehyde Solution, Flammable
--
A.D.R Hazard Class: 3
A.D.R. Subsidiary Risk: 8
A.D.R. UN-Number:: 1198
A.D.R. Packing Group: III

Additional Information: This product may be shipped as part of a chemical kit composed of various compatible dangerous goods for analytical or testing purposes. This kit would have the following classification: Proper Shipping Name: Chemical Kit Hazard Class: 9 UN Number 3316

15. REGULATORY INFORMATION

National Inventories:

EEC Inventory Status: All ingredients used to make this product are listed on EINECS / ELINCS.

EEC Number: Not applicable

EEC LABEL COPY:

EU Symbols: T - TOXIC F - HIGHLY FLAMMABLE

R PHRASES: R 10: Flammable. R 23/24/25: Toxic by inhalation, in contact with skin and if swallowed. R 34: Causes burns. R 40: Limited evidence of a carcinogenic effect. R 43: May cause sensitization by skin contact.

S PHRASES: S 26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S 36/37/39: Wear suitable protective clothing, gloves and eye/face protection. S 45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). S 51: Use only in well ventilated areas.

16. OTHER INFORMATION

References: TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992. Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. The Merck Index, 11th Ed. Rahway, New Jersey: Merck and Co., Inc., 1989. Sax, N. Irving. Dangerous Properties of Industrial Materials, 7th Ed. New York: Van Nostrand Reinhold Co., 1989. Fire Protection Guide on Hazardous Materials, 10th Ed. Quincy, MA: National Fire Protection Fire Protection Guide on Hazardous Materials, 10th Ed. Quincy, MA: National Fire Protection Association, 1991. NIOSH Pocket Guide to Chemical Hazards. Publ. No. 85-114. Cincinnati: Department of Health and Human Services, 1985. Gosselin, R. E. et al. Clinical Toxicology of Commercial Products, 5th Ed. Baltimore: The Williams and Wilkins Co., 1984. IARC Monographs on the Evaluation of the Carcinogenic Risks to Humans. World Health Organization (Volumes 1-42) Supplement 7. France: 1987. Technical Judgment. Vendor Information. CCINFO RTECS. Canadian Centre for Occupational Health and Safety. Hamilton, Ontario Canada: 30 June 1993. In-house information. Patty, Frank A. Industrial Hygiene and Toxicology, 3rd Revised Edition. Volume 2. New York: A Wiley-Interscience Publication, 1981.

R PHRASES: R 10: Flammable. R 23/24/25: Toxic by inhalation, in contact with skin and if swallowed. R 34: Causes burns. R 40: Limited evidence of a carcinogenic effect. R 43: May cause sensitization by skin contact.

Use of the substance/preparation: Laboratory Reagent

Revision Summary: Updates in Section(s) 14,

Legend:

NA - Not Applicable	w/w - weight/weight
ND - Not Determined	w/v - weight/volume
NV - Not Available	v/v - volume/volume

USER RESPONSIBILITY: Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

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