

World Headquarters  
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Loveland, CO USA 80539  
(970) 669-3050

MSDS No: M00043

## SAFETY DATA SHEET

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

**Product Name:** Potassium 1 Reagent Powder Pillows  
**Catalog Number:** 1432198

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:** M00043

**Chemical Name:** Glycine, N,N'-1,2-ethanediyldis[N-(carboxymethyl)-, Tetrasodium Salt

**Chemical Formula:** C<sub>10</sub>H<sub>12</sub>N<sub>2</sub>Na<sub>4</sub>O<sub>8</sub> 2H<sub>2</sub>O

**Chemical Family:** Substituted organic acid

**Use of the substance/preparation:** Laboratory Reagent

**CAS No.:** 64-02-8

**Hazard:** May cause irritation.

**Date of MSDS Preparation:**

**Day:** 08

**Month:** May

**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

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### 2. COMPOSITION / INFORMATION ON INGREDIENTS

#### **EDTA Tetrasodium Salt**

**EEC Number:** 2005739

**CAS No.:** 64-02-8

**Percent Range:** 100,0

**Percent Range Units:** weight / weight

**Ingredient EEC Symbol:** Xi - IRRITATING

**Ingredient R phrase(s) (R phrase details given in Heading 16):** R 36/37/38

**TLV:** Not established

**PEL:** Not established

**EU Occupational Exposure Limits:** 3 mg/m<sup>3</sup>, Inhalable dust

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### 3. HAZARDS IDENTIFICATION

#### **Emergency Overview:**

**Appearance:** White powder

**Odor:** None

**EU Symbols:** Xi - IRRITATING

**R PHRASES:** R 36/37/38: Irritating to eyes, respiratory system and skin.

**Protective Equipment:**

**Potential Health Effects:**

**Eye Contact (EC):** Causes moderate irritation

**Skin Contact (EC):** Causes moderate irritation

**Skin Absorption (EC):** No effects anticipated

**Target Organs (SA E):** Not applicable

**Ingestion (EC):** May cause: calcium deficiency in the blood Very large doses may cause: gastrointestinal tract irritation fever kidney damage

**Target Organs (Ing E):** Kidneys

**Inhalation:** May cause: irritation of nose and throat

**Target Organs (Inh E):** None Reported

**Medical Conditions Aggravated:** None reported

**Chronic Effects:** Chronic overexposure may cause kidney damage

**Cancer / Reproductive Toxicity Information:**

IARC Listed: No

**Additional Cancer / Reproductive Toxicity Information:** None reported

**Toxicologically Synergistic Products:** None reported

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## 4. FIRST AID MEASURES

**Eye Contact:** Immediately flush eyes with water for 15 minutes. Call physician.

**Skin Contact (First Aid):** Wash skin with plenty of water. Call physician if irritation develops.

**Ingestion (First Aid):** Give large quantities of water. Call physician immediately.

**Inhalation:** Remove to fresh air.

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## 5. FIRE FIGHTING MEASURES

**Flammable Properties:** Can burn in fire, releasing toxic vapors.

**Hazardous Combustion Products:** Toxic fumes of: carbon monoxide, carbon dioxide, nitrogen oxides, sodium monoxide

**Fire / Explosion Hazards:** None reported

**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.

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## 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:** Stop spilled material from being released to the environment. Cover spilled solid material with sand or other inert material.

**Clean-up Technique:** Scoop up spilled material into a large beaker and dissolve with water. Adjust to a pH between 6 and 9 with an acid, such as sulfuric or citric. Flush reacted material to the drain with a large excess of water. Decontaminate the area of the spill with a weak acid solution.

**Evacuation Procedure:** Evacuate as needed to perform spill clean-up. If conditions warrant, increase the size of the evacuation.

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## 7. HANDLING AND STORAGE

**Handling:** Avoid contact with eyes skin Do not breathe dust. Wash thoroughly after handling. Maintain general industrial hygiene practices when using this product.

**Storage:** Protect from: heat moisture

**Special Packaging Instructions:** Not applicable

**Use of the substance/preparation:** Laboratory Reagent

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## 8. EXPOSURE CONTROLS / PROTECTIVE EQUIPMENT

**Engineering Controls:** Have an eyewash station nearby. 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:** adequate ventilation

**Precautionary Measures:** Avoid contact with: eyes skin Do not breathe: dust Wash thoroughly after handling. Protect from: heat moisture

**TLV:** Not established

**PEL:** Not established

**EU Occupational Exposure Limits:** 3 mg/m<sup>3</sup>, Inhalable dust

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## 9. PHYSICAL / CHEMICAL PROPERTIES

**Appearance:** White powder

**Physical State:** Solid

**Odor:** None

**pH:** of a 1% solution = 11

**Vapor Pressure:** Not applicable

**Vapor Density (air = 1):** Not applicable

**Boiling Point:** Not applicable

**Melting Point:** > 300 °C >572 °F

**Flash Point:** Not applicable

**Method:** Not applicable

**Autoignition Temperature:** Not determined

**Flammability Limits:**

**Lower Explosion Limits:** Not applicable

**Upper Explosion Limits:** Not applicable

**Specific Gravity (water = 1):** Not determined

**Evaporation Rate (water = 1):** Not applicable

**Volatile Organic Compounds Content:** Not determined

**Partition Coefficient (n-octanol / water):** Not applicable

**Solubility:**

**Water:** Soluble

**Acid:** Not determined

**Other:** Soluble in alcohol

**Metal Corrosivity:**

**Steel:** 0,000 in/yr

**Aluminum:** 0,000 in/yr

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## 10. STABILITY / REACTIVITY

**Chemical Stability:** Stable when stored under proper conditions.

**Conditions to Avoid:** Extreme temperatures Excess moisture

**Reactivity / Incompatibility:** Incompatible with: oxidizers

**Hazardous Decomposition:** Heating to decomposition releases toxic and/or corrosive fumes of: carbon dioxide carbon monoxide nitrogen oxides

**Hazardous Polymerization:** Will not occur.

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## 11. TOXICOLOGICAL INFORMATION

**Product Toxicological Data:**

**LD50:** None reported

**LC50:** None reported

**Dermal Toxicity Data:** None reported

**Skin and Eye Irritation Data:** Skin rabbit 500mg/24H, MODERATE; Eye rabbit 1900µg; Eye rabbit 100mg/24H, MODERATE

**Mutation Data:** None reported

**Reproductive Effects Data:** None reported

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**Ingredient Toxicological Data:** Not applicable

IARC Listed: No

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## 12. ECOLOGICAL INFORMATION

**Product Ecological Information:** BOD 0.02 g/g; COD 0.54 g/g; Fish toxicity: Bluegill LC50 = 410 mg/l for 96 hours.

**Ingredient Ecological Information:** --  
Not applicable

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## 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.

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## 14. TRANSPORT INFORMATION

**I.C.A.O.:**

**I.C.A.O. Proper Shipping Name:** Not Currently Regulated

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**ICAO Hazard Class:** NA

**ICAO Subsidiary Risk:** NA

**ICAO UN/ID Number:** NA

**ICAO Packing Group:** NA

**I.M.O.:**

**I.M.O. Proper Shipping Name:** Not Currently Regulated

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**I.M.O. Hazard Class:** NA

**I.M.O. Subsidiary Risk:** NA

**I.M.O. UN Number:** NA

**I.M.O. Packing Group:** NA

**A.D.R.:**

**A.D.R. Proper Shipping Name:** Not Currently Regulated

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**A.D.R Hazard Class:** NA

*A.D.R. Subsidiary Risk:* NA

*A.D.R. UN-Number:* NA

*A.D.R. Packing Group:* NA

**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

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## 15. REGULATORY INFORMATION

**National Inventories:**

**EEC Inventory Status:** EINECS Listed: Yes

**EEC Number:** 2005739

**EEC LABEL COPY:**

**EU Symbols:** Xi - IRRITATING

**R PHRASES:** R 36/37/38: Irritating to eyes, respiratory system and skin.

**S PHRASES:** S 26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S 36: Wear suitable protective clothing.

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## 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. Technical Judgment. Gosselin, R. E. et al. Clinical Toxicology of Commercial Products, 5th Ed. Baltimore: The Williams and Wilkins Co., 1984. In-house information. Vendor Information.

**R PHRASES:** R 36/37/38: Irritating to eyes, respiratory system and skin.

**Use of the substance/preparation:** Laboratory Reagent

**Revision Summary:** European MSDS Only Updates in Heading(s) 2,

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### 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.

**THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.**

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MSDS No: M00281

## SAFETY DATA SHEET

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### 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

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### 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<sup>3</sup>)

#### 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<sup>3</sup>

**PEL:** 0.75 ppm. See the OSHA Standard at 29CFR1910.1048.

**EU Occupational Exposure Limits:** 0,5 ppm (0,62 mg/m<sup>3</sup>)

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## **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

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## **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.

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## 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.

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## 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.

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## 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

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## 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<sup>3</sup>); Methanol: 200 ppm (260 mg/m<sup>3</sup>)

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## 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 (788° 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

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## 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.

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## 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<sup>3</sup>; 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

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## 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

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## 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.

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## 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

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**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

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**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

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## 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.

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## 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,

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### 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.

**THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.**

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(970) 669-3050

MSDS No: M00069

## SAFETY DATA SHEET

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

**Product Name:** Potassium 3 Reagent  
**Catalog Number:** 1432399

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:** M00069

**Chemical Name:** Sodium Tetraphenylborate

**Chemical Formula:** C<sub>24</sub>H<sub>20</sub>BNa

**Chemical Family:** Aromatic Compounds

**Use of the substance/preparation:** Determination of potassium

**CAS No.:** 143-66-8

**Hazard:** Toxic properties unknown. May cause irritation.

**Date of MSDS Preparation:**

**Day:** 11

**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

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### 2. COMPOSITION / INFORMATION ON INGREDIENTS

#### Sodium Tetraphenylborate

**EEC Number:** 2056055

**CAS No.:** 143-66-8

**Percent Range:** 100,0

**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:** 3 mg/m<sup>3</sup>, Inhalable dust

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### 3. HAZARDS IDENTIFICATION

#### **Emergency Overview:**

**Appearance:** White crystals

**Odor:** None

**EU Symbols:** Xn - HARMFUL

**R PHRASES:** R 22: Harmful if swallowed.

**Protective Equipment:**

**Potential Health Effects:**

**Eye Contact (EC):** May cause irritation

**Skin Contact (EC):** May cause irritation

**Skin Absorption (EC):** None Reported

**Target Organs (SA E):** None Reported

**Ingestion (EC):** May cause: nausea vomiting abdominal pain diarrhea

**Target Organs (Ing E):** None Reported

**Inhalation:** May cause: respiratory tract irritation

**Target Organs (Inh E):** None Reported

**Medical Conditions Aggravated:** None reported

**Chronic Effects:** None reported

**Cancer / Reproductive Toxicity Information:**

IARC Listed: No

**Additional Cancer / Reproductive Toxicity Information:** None reported

**Toxicologically Synergistic Products:** None reported

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## 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.

**Ingestion (First Aid):** Give large quantities of water. Call physician immediately.

**Inhalation:** Remove to fresh air. Give artificial respiration if necessary. Call physician.

---

## 5. FIRE FIGHTING MEASURES

**Flammable Properties:** During a fire, irritating and highly toxic gases may be generated by thermal decomposition.

**Hazardous Combustion Products:** May emit acrid smoke and fumes.

**Fire / Explosion Hazards:** None reported

**Static Discharge:** None reported.

**Mechanical Impact:** None reported

**Extinguishing Media:** Water. Carbon dioxide Dry chemical.

**Extinguishing Media NOT To Be Used:** Not applicable Not applicable Not applicable

**Fire Fighting Instruction:** As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear.

---

## 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:** Stop spilled material from being released to the environment.

**Clean-up Technique:** Sweep up material. Dispose of material in an E.P.A. approved hazardous waste facility.

**Evacuation Procedure:** Evacuate as needed to perform spill clean-up. If conditions warrant, increase the size of the evacuation.

---

## 7. HANDLING AND STORAGE

**Handling:** Avoid contact with eyes skin Do not breathe dust. Wash thoroughly after handling. Maintain general industrial hygiene practices when using this product.

**Storage:** Protect from: moisture exposure to direct sunlight. Keep container tightly closed when not in use.

**Special Packaging Instructions:** Not applicable

**Use of the substance/preparation:** Determination of potassium

---

## 8. EXPOSURE CONTROLS / PROTECTIVE EQUIPMENT

**Engineering Controls:** 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:** adequate ventilation

**Precautionary Measures:** Avoid contact with: eyes skin Do not breathe: dust Wash thoroughly after handling. Protect from: moisture light

**TLV:** Not established

**PEL:** Not established

**EU Occupational Exposure Limits:** 3 mg/m<sup>3</sup>, Inhalable dust

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## 9. PHYSICAL / CHEMICAL PROPERTIES

**Appearance:** White crystals

**Physical State:** Solid

**Odor:** None

**pH:** 5% soln. = 9,6

**Vapor Pressure:** Not applicable

**Vapor Density (air = 1):** Not applicable

**Boiling Point:** Not applicable

**Melting Point:** >300°C (>572°F)

**Flash Point:** Not applicable

**Method:** Not applicable

**Autoignition Temperature:** Not determined

**Flammability Limits:**

**Lower Explosion Limits:** Not applicable

**Upper Explosion Limits:** Not applicable

**Specific Gravity (water = 1):** Not determined

**Evaporation Rate (water = 1):** Not applicable

**Volatile Organic Compounds Content:** Not applicable

**Partition Coefficient (n-octanol / water):** Not determined

**Solubility:**

**Water:** Soluble

**Acid:** Unstable in acid

**Other:** Soluble in acetone

**Metal Corrosivity:**

**Steel:** Not determined

**Aluminum:** Not determined

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## 10. STABILITY / REACTIVITY

**Chemical Stability:** Stable when stored under proper conditions.

**Conditions to Avoid:** Excess moisture Exposure to air. Heating to decomposition.

**Reactivity / Incompatibility:** Incompatible with: strong acids oxidizers

**Hazardous Decomposition:** Combustion gives off black, sooty, toxic smoke

**Hazardous Polymerization:** Will not occur.

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## 11. TOXICOLOGICAL INFORMATION

**Product Toxicological Data:**

**LD50:** None reported

**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:** Not applicable

Not applicable

IARC Listed: No

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## 12. ECOLOGICAL INFORMATION

**Product Ecological Information:** No information available for this product

Not applicable

**Ingredient Ecological Information:** Not applicable

Not applicable

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## 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.

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## 14. TRANSPORT INFORMATION

**I.C.A.O.:**

**I.C.A.O. Proper Shipping Name:** Not Currently Regulated

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**ICAO Hazard Class:** NA

**ICAO Subsidiary Risk:** NA

**ICAO UN/ID Number:** NA

**ICAO Packing Group:** NA

**I.M.O.:**

**I.M.O. Proper Shipping Name:** Not Currently Regulated

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**I.M.O. Hazard Class:** NA

**I.M.O. Subsidiary Risk:** NA

**I.M.O. UN Number:** NA

**I.M.O. Packing Group:** NA

**A.D.R.:**

**A.D.R. Proper Shipping Name:** Not Currently Regulated

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**A.D.R Hazard Class:** NA

**A.D.R. Subsidiary Risk:** NA

**A.D.R. UN-Number::** NA

**A.D.R. Packing Group:** NA

**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

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## 15. REGULATORY INFORMATION

*National Inventories:*

*EEC Inventory Status:* EINECS Listed: Yes

*EEC Number:* 2056055

*EEC LABEL COPY:*

*EU Symbols:* Xn - HARMFUL

*R PHRASES:* R 22: Harmful if swallowed.

*S PHRASES:* Not applicable

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## 16. OTHER INFORMATION

*References:* 29 CFR 1900 - 1910 (Code of Federal Regulations - Labor). Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992. Technical Judgment. The Merck Index, 11th Ed. Rahway, New Jersey: Merck and Co., Inc., 1989. Vendor Information. In-house information.

*R PHRASES:* R 22: Harmful if swallowed.

*Use of the substance/preparation:* Determination of potassium

*Revision Summary:* Updates in Section(s) 14,

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### 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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