

BACHARACH, INC.
MATERIAL SAFETY DATA SHEET

This Material Safety Data Sheet has been prepared to comply with the EC Directive, Canadian WHMIS and OSHA Hazard Communication Regulations.

**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/PREPARATION
AND THE COMPANY/UNDERTAKING**

Bacharach, Inc.
621 Hunt Valley Circle
New Kensington, PA 15068

Emergency Phone: (800) 424-9300 (Chemtrec)
Information Phone: (724) 334-5760
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Product Name: Fluid, Fyrite, CO2

Product Number: 11-0057

MSDS Number: 99-0006

Revision Number: 10

Product Use: Instrument Fluid

MSDS Date of Preparation/Revision: 11/30/09

SECTION 2: COMPOSITION/ INFORMATION INGREDIENTS

Chemical Name	CAS# / EINECS#	%	EU Classification (67/548/EEC)
Potassium Hydroxide	1310-58-3 / 215-181-3	26	C R22, R35
Water	7732-18-5 / 231-791-2	71	Not Applicable
Isooctyl Alcohols (C7-9)	68526-83-0 / 271-231-4	3	Not Applicable

See Section 16 for further information on EU Classification.

SECTION 3: HAZARDS IDENTIFICATION

Red liquid with a slight unpleasant odor.

Emergency Overview: Corrosive material. May cause a slight fire hazard. Liquid causes burns to the eyes and skin. Vapors are irritating and may be harmful. May cause narcosis and other central nervous system effects.

EU Preparation Classification (1999/45/EC): Corrosive (C) R22, R35

SECTION 4: FIRST AID

Eye Contact: Immediately flush with copious amounts of water for at least 30 minutes, lifting the upper and lower lids. Get immediate medical attention.

Skin Contact: Immediately flush with water for 30 minutes while removing any contaminated clothing. Wash thoroughly with soap and water. Get medical attention.

Inhalation: If acute overexposure occurs, remove victim to fresh air. Give artificial respiration if needed. Get immediate medical attention.

Ingestion: Do not induce vomiting. Do not give anything by mouth to a person who is unconscious or convulsing. Immediately dilute with 1-2 glasses of water. Get immediate medical attention.

SECTION 5: FIRE AND EXPLOSION HAZARD DATA

Extinguishing Media: Use foam, dry chemical or water spray.

Special Fire Fighting Procedures: Firefighters should wear NIOSH approved positive pressure self contained breathing apparatus and full protective clothing for all fires involving chemicals.

Unusual Fire And Explosion Hazards: Isooctyl alcohol has a flash point of 161°F and is insoluble in water. Only a small amount is present (<5%) so only a slight fire hazard exists. The balance is not combustible.

Hazardous Combustion Products: Reaction with metals can liberate flammable hydrogen gas. Thermal decomposition may yield oxides of carbon and potassium.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Wear recommended protective equipment. (See Section 8) Contain spill. Dilute spill with water and neutralize with dilute acetic acid. Absorb with an inert absorbent and place into a chemical waste container for disposal. Do not flush to the sewer. Report spill as required by local and federal regulations. Refer to Section 13 for disposal information.

SECTION 7: HANDLING AND STORAGE

Work Practices: Prevent contact with the eyes, skin and clothing. Avoid breathing vapors. When fluid is used in instrument (Fyrite), do not vent in inverted position or before the fluid has drained from the top well of the Fyrite. Hold the Fyrite away from the face when venting instrument. Use in a well ventilated area.

Special Precautions: Always change Fyrite fluid in the immediate vicinity of a sink with running water available in case of contact because of the corrosive effect of Fyrite fluid. DO NOT dispose of fluid down drain.

Storage: Store in a cool, dry place, separate from acid and oxidizer storage. Avoid crushing containers.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Chemical Name	Exposure Limits
Potassium Hydroxide	2 mg/m ³ Ceiling ACGIH TLV 2 mg/m ³ STEL UK WEL
Water	None Established
Isooctyl Alcohols (C7-9)	50 ppm skin TWA ACGIH TLV 50 ppm TWA UK WEL

Ventilation: General ventilation should be adequate for normal use.

Respiratory Protection: None required for normal use. If the exposure limit is exceeded, a NIOSH approved respirator with an organic vapor/dust/mist cartridge should be worn.

Gloves: Rubber or other impervious gloves required when filling Fyrite or performing gas analysis.

Eye Protection: Wear chemical safety goggles and face shield when filling Fyrite or performing gas analysis.

Other Protective Equipment: An available source of running water for eye and skin flushing is recommended.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance And Odor: Red liquid, slight unpleasant odor.

pH: 13-14

Boiling Point: >100°C

Melting Point: <0°

Solubility In Water: Isooctyl alcohol: insoluble
Potassium Hydroxide: Soluble

Octanol/Water Coefficient: Not determined

Flash Point: 161°F/71.6°C (Isooctyl Alcohol)

Autoignition Temperature: Not available

Percent Volatile: 75%

Vapor Pressure: Isooctyl alcohol: 1 mmHg @38°C

Vapor Density: Isooctyl alcohol: 4.5

Specific Gravity: Isooctyl alcohol: 0.83
Potassium Hydroxide: 1.0-2.0

Test Method: TCC

Flammable Limits: LEL: Not available
UEL: Not available

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable

Conditions To Avoid: N/A

Incompatibility: Strong oxidizing agents, acids, aldehydes, monomers and polymerizable esters, alkylene oxides, halogens, acid anhydrides, metals, acetone, chlorinated hydrocarbons.

Hazardous Decomposition Products: Reaction with metals can liberate flammable hydrogen gas. Thermal decomposition may yield oxides of carbon and potassium.

Hazardous Polymerization: Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION**Potential Health Effects:**

Eye Contact: May cause chemical burns with permanent blindness.

Skin Contact: May cause chemical burns, severity depending on duration of contact.

Inhalation: May cause eye, mucous membrane and respiratory irritation. Severe overexposures may cause pulmonary edema. Inhalation of isooctyl alcohol may cause headache, dizziness, narcosis and other nervous system effects.

Ingestion: May cause gastrointestinal corrosion, perforation of the esophagus and stomach, abdominal pain, nausea, vomiting, diarrhea, collapse and shock.

Chronic Health Effects: Chronic dermatitis may follow repeated contact with alkali solutions.

Carcinogen Status: None of the components is listed as a carcinogen or potential carcinogen by IARC, NTP, OSHA, ACGIH or the EU Directives.

Medical Conditions Aggravated By Exposure: Pre-existing skin and respiratory conditions may be aggravated by exposure to this material.

Acute Toxicity Data:

Potassium Hydroxide: LD50 oral rat: 273 mg/kg

Isooctyl Alcohols: No data available

Irritancy Data: This material is corrosive to tissues.

Sensitization: This material has not been tested as a whole. None of the components has been reported to cause sensitization in humans or animals.

Reproductive Toxicity: This material has not been tested as a whole. None of the components have been reported to cause adverse reproductive effects in animals or humans.

Teratogenicity: This material has not been tested as a whole. None of the components have been reported to cause teratogenicity in animals or humans.

Mutagenicity: Potassium hydroxide has been reported to be mutagenic in some test systems.

Synergistic Effects: There are no chemicals known to cause any additive adverse health effects.

SECTION 12: ECOLOGICAL INFORMATION

The ecological effects of this product have not been evaluated.

SECTION 13: DISPOSAL

Dispose in accordance with all local, state, and federal regulations.

RCRA Hazardous Waste Codes: D002

SECTION 14: TRANSPORTATION DATA

DOT Shipping Name: Potassium Hydroxide Solution
DOT Hazard Class: 8, PG II
UN Number: UN1814
DOT Labels Required (49CFR172.101): Corrosive
Hazardous Substance (49CFR172.101): Potassium Hydroxide
Reportable Quantity: 3, 846 lbs. (Product)
Emergency Response Guide Number: 154

IATA Shipping Name: Potassium Hydroxide Solution
IATA Hazard Class: 8, PG II
UN Number: UN1814
IATA Hazard Labels Required: Corrosive (Cargo Aircraft Only 1-30 Liters)

SECTION 15: OTHER REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS:

SARA 311/312: Hazard Categories for SARA Section 311/312 Reporting: Acute health, Fire hazard.

SARA 313: This product contains the following chemicals subject to Annual Release Reporting Requirements under SARA Section 313 (40 CFR 372): None

CERCLA Section 103 Reportable Quantity: 3,846 lbs. (Potassium Hydroxide – 1,000 lbs.)

US Toxic Substances Control Act: All of the components of this product are listed on the EPA TSCA Inventory.

STATE REGULATIONS:

California Proposition 65: This product contains the following substances known to the State of California to cause Cancer and/or Reproductive Harm: None

INTERNATIONAL REGULATIONS:

Australian Inventory Of Chemical Substances: All of the components of this product are listed on the AICS Inventory.

Canadian Environmental Protection Act: All of the components of this product are listed on the Canadian Domestic Substances List.

Canadian WHMIS Classification:

			<p>Class E (Corrosive Material) Class B3 Combustible Liquid Class D, Division 1B (Toxic material causing immediate and serious effects.)</p>
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This product has been classified in accordance with the hazard criteria in the CPR and the MSDS contains all the information required by the CPR.

European Inventory of Commercial Chemical Substances: All of the components of this product are listed on the EINECS Inventory.

European Community Labeling: Contains Potassium Hydroxide

	<p>R22 Harmful if swallowed R35 Causes severe burns S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. 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). S60 This material and/or its container must be disposed of as hazardous waste.</p>
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Corrosive

Inventory of Existing Chemical Substances in China: All the components are listed on the State Environmental Protection Administration of the Peoples Republic of China IECSC.

Japan MITI: All of the components of this product are existing chemical substances as defined in the Chemical Substance Control Law.

Korean Existing Chemical List: All of the components of this product are listed on the KECL Inventory.

Philippines Inventory of Chemicals and Chemical Substances: All of the components in this product are listed on the PICCS Inventory.

SECTION 16: OTHER INFORMATION

NFPA HAZARD RATING: **HEALTH:** 3 **FIRE:** 1 **REACTIVITY:** 0

EU Classes and Risk Phrases for Reference (See Sections 2 and 3):

- C Corrosive
- R22 Harmful if swallowed.
- R35 Causes severe burns.

DATE OF PREVIOUS MSDS REVISION: 03/10/09

Revision Summary: Revised Section 5, 6, 9, 15

The preceding information is believed to be correct and current as of the date of preparation of this Material Safety Data Sheet. Since the use of this information and the conditions of use of the product are not within the control of Bacharach, Inc., it is the users obligation to assure safe use of this product.