MSDS *Material Safety Data Sheet*

24 hour Emergency Telephone:
Chemtrec: 1-800-424-9300

Outside U.S. and Canada Chemtrec: 202-483-7616

NOTE: CHEMTREC and National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

From: Vinquiry, Inc.
7795 Bell Road
Windsor, CA 95492

All Non-emergency questions should be directed to Customer Service (1-707-838-6312) for assistance.

Folin Ciocalteu's Phenol Reagent

Vinquiry Product Codes: 10-100-0000, 10-100-0118, 10-100-0237, 10-100-0473, 10-100-0946

FOLIN & CIOCALTEU'S PHENOL REAGENT

MSDS Number: FC100--- ***Effective Date: 01/01/04***

1. Product Identification

Synonyms: None.

CAS No.: None

Molecular Weight: N/A.

Chemical Formula: N/A.

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Water	7732-18-5	57.5	No
Lithium Sulfate	10377-48-7	15	Yes

Sodium Tungstate Dihydrate	10213-10-2	10	Yes
Hydrochloric Acid >=25%	7647-01-0	10	Yes
Phosphoric Acid, 85 WT% solution in water	None	5	Yes
Molybdic Acid Sodium Dihydrate	10102-40-6	2.5	Yes

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3. Hazards Identification

EMERGENCY OVERVIEW

TOXIC! CORROSIVE!

TOXIC BY INHALATION, SKIN CONTACT AND IF SWALLOWED. CAUSES BURNS. POSSIBLE RISK OF IRREVERSABLE EFFECTS. TERATOGEN, MAY CAUSE HARM TO THE UNBORN CHILD.

Target organ(s): Blood. Nerves. Liver. Central nervous system.

Vinquiry Inc. Safety Data Ratings (Provided here for your convenience)

HEALTH: 4 - (Extreme)

FLAMMABILITY: 0 - (None)

REACTIVITY: 0 - (None)

CONTACT RATING: 4 - (Extreme)

LAB PROTECTIVE EQUIP: GOGGLES AND SHEILD; LAB COAT AND APRON; VENT HOOD; PROPER GLOVES

STORAGE CODE:

*additional chronic hazards present.

For additional information on toxicity, please refer to Section 11.

4. First Aid Measures

Section 4 - First Aid Measures

ORAL EXPOSURE

If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately. Do not induce vomiting.

INHALATION EXPOSURE

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

DERMAL EXPOSURE

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes.

Call a physician.

EYE EXPOSURE

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

5. Fire Fighting Measures

Section 5 - Fire Fighting Measures

FLASH POINT: N/A

AUTOIGNITION TEMP: N/A

FLAMMABILITY: N/A

EXTINGUISHING MEDIA:

Suitable: Carbon dioxide, dry chemical powder, or appropriate foam.

FIREFIGHTING

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Specific Hazard(s): Emits toxic fumes under fire conditions.

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6. Accidental Release Measures

PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL

Evacuate area.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

Cover with dry lime or soda ash, pick up, keep in a closed container, and hold for waste disposal. Ventilate area and wash spill site after material pickup is complete.

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7. Handling and Storage

HANDLING

User Exposure: Do not breathe vapor. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

STORAGE

Suitable: Keep tightly closed.

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8. Exposure Controls/Personal Protection

ENGINEERING CONTROLS

Use only in a chemical fume hood. Safety shower and eye bath.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory: Government approved respirator.

Hand: Compatible chemical-resistant gloves.

Eye: Chemical safety goggles.

Other: Faceshield (8-inch minimum).

GENERAL HYGIENE MEASURES

Wash contaminated clothing before reuse. Discard contaminated shoes. Wash thoroughly after handling.

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9. Physical and Chemical Properties

Appearance Physical State: Liquid

Property Value At Temperature or Pressure

Molecular Weight N/A

pH N/A

BP/BP Range N/A

MP/MP Range N/A

Freezing Point N/A

Vapor Pressure N/A

Vapor Density N/A

Saturated Vapor Conc. N/A

SG/Density N/A

Bulk Density N/A

Odor Threshold N/A

Volatile% N/A

VOC Content N/A

Water Content N/A

Solvent Content N/A

Evaporation Rate N/A

Viscosity N/A

Surface Tension N/A

Partition Coefficient N/A

Decomposition Temp. N/A

Flash Point N/A

Explosion Limits N/A

Flammability N/A

Autoignition Temp N/A

Refractive Index N/A

Optical Rotation N/A

Miscellaneous Data N/A

Solubility N/A

N/A = not available

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10. Stability and Reactivity

STABILITY

Stable: Stable.

Materials to Avoid: Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

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11. Toxicological Information

ROUTE OF EXPOSURE

Skin Contact: Causes burns.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: Causes burns.

Inhalation: Toxic if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

Ingestion: Toxic if swallowed.

TARGET ORGAN(S) OR SYSTEM(S)

Liver. Blood. Nerves. Bone marrow.

SIGNS AND SYMPTOMS OF EXPOSURE

Inhalation may result in spasm, inflammation and edema of the larynxand bronchi, chemical pneumonitis, and pulmonary edema.

Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting. Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

May cause cyanosis (blue-gray coloring of skin and lips caused by lack of oxygen). To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

CHRONIC EXPOSURE - TERATOGEN

Result: May cause congenital malformation in the fetus.

12. Ecological Information

Section 12 - Ecological Information

No data available.

13. Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

14. Transport Information

DOT

Proper Shipping Name: Corrosive liquid, acidic, inorganic, n.o.s.

UN#: 3264

Class: 8

Packing Group: Packing Group II

Hazard Label: Corrosive

PIH: Not PIH

IATA

Proper Shipping Name: Corrosive liquid, acidic,

inorganic, n.o.s.

IATA UN Number: 3264

Hazard Class: 8

Packing Group: II

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15. Regulatory Information

EU ADDITIONAL CLASSIFICATION

Symbol of Danger: Xi

Indication of Danger: Irritant.

R: 36/38

Risk Statements: Irritating to eyes and skin.

S: 26

Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Toxic.

Risk Statements: Toxic by inhalation and if swallowed. Causes burns. May cause harm to the unborn child.

Safety Statements: Do not breathe vapor. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

US Statements: Target organ(s): Blood. Nerves. Central nervous system.

UNITED STATES REGULATORY INFORMATION

SARA LISTED: Yes

NOTES: This product is or contains a component that is subject to SARA313 reporting requirements.

CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: No

NDSL: No

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16. Other Information

Section 16 - Other Information

For R&D use only. Not for drug, household or other uses.

Disclaimer

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