

Conforms to 93/112/EC and ISO 11014-1

Responsible Name Fred Gartner

? **Section 1. Chemical Product and Company Identification**

Product name **Folin-Ciocalteu Phenol Reagent**

Product No. 1856007 1888340

Supplier	<i>In USA:</i> Pierce P.O. Box 117 Rockford, IL 61105 USA 815.968.0747 or 1.800.874.3723	<i>In Europe:</i> Perbio Science Industriezone III Industrielaan 27 9320 Erembodegem-Aalst Belgium Tel:+32 53 83 44 04 Fax:+32 53 83 76 38	Manufacturer	Pierce Biotechnology P.O. Box 117 Rockford, IL 61105 USA 815.968.0747 or 1.800.874.3723
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In Case of Emergency ☐ HEMTREC:
800.424.9300
OUTSIDE US:
☐ 202.483.7616

Print Date 7/1/2005
Validation Date **7/1/2005**
MSDS# 3779

Intended Use Refer to the instruction booklet for proper and intended use. Otherwise, contact supplier for specific applications.

 **Section 2. Composition, Information on Ingredients**

Substance/Preparation : Preparation

Ingredient name	CAS number	%	EC number	Classification
<input checked="" type="checkbox"/> Lithium Sulfate Anhydrous	10377-48-7	10 - 20	233-820-4	Repr. Cat. 3; R63 Xn; R20/21/22 Xi; R36/37/38
Tungstic Acid Sodium Dihydrate	10213-10-2	7 - 10		Xn; R20/21/22 Xi; R36
Acid. Hydrochloric acid	7647-01-0	3 - 5 1 - 3	231-595-7	C; R34 C; R34 Xi; R37
Molybdic Acid Sodium Dihydrate	10102-40-6	1 - 3		Xi; R36/37/38

 **Section 3. Hazards Identification**

United States Review the most current and approved institutional guideline, protocol, standard operating procedure(s) and MSDS(s) for the proper handling of institutional materials/equipment associated with the use of this product.

Emergency Overview ☐ Danger!
☐ CAUSES RESPIRATORY TRACT, EYE AND SKIN BURNS.
HARMFUL IF INHALED OR SWALLOWED.
CAUSES DAMAGE TO THE FOLLOWING ORGANS: BLOOD, NERVOUS SYSTEM, LIVER, SKIN, EYES, BONE MARROW, CENTRAL NERVOUS SYSTEM.
CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS: KIDNEYS, LUNGS, CARDIOVASCULAR SYSTEM, RESPIRATORY TRACT, EYE, LENS OR CORNEA.
POSSIBLE CANCER HAZARD
CONTAINS MATERIAL WHICH MAY CAUSE CANCER BASED ON ANIMAL DATA.

☐ Do not ingest. Do not get in eyes, on skin or clothing. Do not breathe vapor or mist. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. Risk of cancer depends on duration and level of exposure.

Target organs ☐ Causes damage to the following organs: blood, the nervous system, liver, skin, eyes, bone marrow, central nervous system (CNS).
Contains material which causes damage to the following organs: kidneys, lungs, cardiovascular system, upper respiratory tract, eye, lens or cornea.

Routes of Entry ☐ Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

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Eyes ☑ Corrosive to eyes.

Skin ☑ Corrosive to the skin.

Inhalation ☑ Toxic by inhalation. Corrosive to the respiratory system.

Ingestion ☑ Toxic if swallowed. May cause burns to mouth, throat and stomach.

Potential chronic health effects

Carcinogenic Effects Data

☑ **CARCINOGENIC EFFECTS:** Classified A4 (Not classifiable for human or animal.) by ACGIH, 3 (Not classifiable for human.) by IARC [hydrochloric acid].

MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Classified POSSIBLE for human [Folin-Ciocalteu Phenol Reagent].

Medical Conditions Aggravated by Overexposure:

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.

Overexposure /Signs/Symptoms

Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.
Not available.

Europe

Classification ☑ Xi; R36/38

Physical/chemical hazards Not applicable.

Human health hazards ☑ Irritating to eyes and skin.

Environmental hazards ☑ Not applicable.

See Toxicological Information (section 11)

+ Section 4. First Aid Measures

Notice to Reader Get immediate medical attention.

Effects and symptoms

Inhalation ☑ Extremely hazardous in case of inhalation (lung irritant). Hazardous in case of inhalation (lung corrosive). Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Over-exposure by inhalation may cause respiratory irritation.

Ingestion ☑ Very hazardous in case of ingestion. May be fatal if swallowed. May cause burns to mouth, throat and stomach.

Skin Contact ☑ Sensitization of the product: Not available.

Extremely hazardous in case of skin contact (irritant). Very hazardous in case of skin contact (corrosive). Skin contact may produce burns. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Eye Contact ☑ Extremely hazardous in case of eye contact (irritant). Very hazardous in case of eye contact (corrosive). Inflammation of the eye is characterized by redness, watering, and itching.

Aggravating conditions 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.

First-Aid Measures

Inhalation ☑ In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

Ingestion ☑ Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms appear.

Skin Contact ☑ In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

Eye Contact ☑ In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

Notes to Physician Not available.

Protection of first-aiders Not available.

🔥 Section 5. Fire Fighting Measures

Flammability of the Product May be combustible at high temperature.

Flash Points Not available.

Fire Hazards in Presence of Various Substances

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Folin-Ciocalteu Phenol Reagent

Fire Fighting Media and Instructions Use an extinguishing agent suitable for surrounding fires.

Protective Clothing (Fire) Be sure to use an approved/certified respirator or equivalent.

Special Remarks on Fire Hazards Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.
Some are oxidizers and may ignite combustibles (wood, paper, oil, clothing, etc.).
Contact with metals may evolve flammable hydrogen gas.
Containers may explode when heated. (Acid.)

Hazardous thermal (de)composition products These products are sulfur oxides (SO₂, SO₃...), halogenated compounds, phosphates, hydrogen chloride. Some metallic oxides.

Section 6. Accidental Release Measures

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

Environmental Precautions and Clean-up Methods 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. Eliminate all ignition sources. Call for assistance on disposal. **Neutralize the residue with a dilute solution of sodium carbonate.**

Small Spill and Leak Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. If necessary: **Neutralize the residue with a dilute solution of sodium carbonate.**

Section 7. Handling and Storage

Handling Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

Storage Keep container tightly closed. Keep container in a cool, well-ventilated area.

Intended Use Refer to the instruction booklet for proper and intended use. Otherwise, contact supplier for specific applications.

Packaging materials

Suitable / Not suitable Use original container.

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 occupational exposure limits. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Exposure Limit Values

Ingredient Name

United States

Acid.

Hydrochloric Acid

Occupational Exposure Limits

ACGIH (United States).

TWA: 1 mg/m³

STEL: 3 mg/m³

TWA: 1 mg/m³

STEL: 3 mg/m³

NIOSH (United States, 0/1994).

TWA: 1 mg/m³

STEL: 3 mg/m³

OSHA (United States, 0/1989).

TWA: 1 mg/m³

STEL: 3 mg/m³

ACGIH (United States, 0/2004).

CEIL: 5 ppm

OSHA (United States, 0/2004).

CEIL: 5 ppm

ACGIH TLV (United States, 1/2004). Notes: ACGIH 2003 Adoption Refers to Appendix A – Carcinogens.

CEIL: 2 ppm Form: All forms

NIOSH REL (United States, 12/2001).

CEIL: 7 mg/m³ Form: All forms

CEIL: 5 ppm Form: All forms

OSHA PEL (United States, 8/1997).

Continued on Next Page

Sweden

Fungstic Acid Sodium Dihydrate

Hydrochloric acid

Molybdc Acid Sodium Dihydrate

Denmark

Fungstic Acid Sodium Dihydrate

Hydrochloric acid

Molybdc Acid Sodium Dihydrate

Norway

Fungstic Acid Sodium Dihydrate

Hydrochloric acid

Molybdc Acid Sodium Dihydrate

France

Hydrochloric acid

Molybdc Acid Sodium Dihydrate

Netherlands

Fungstic Acid Sodium Dihydrate

Hydrochloric acid

Molybdc Acid Sodium Dihydrate

Germany

Fungstic Acid Sodium Dihydrate

Hydrochloric acid

Molybdc Acid Sodium Dihydrate

Finland

CEIL: 7 mg/m³ Form: All forms
 CEIL: 5 ppm Form: All forms
 OSHA PEL 1989 (United States, 3/1989).
 CEIL: 7 mg/m³ Form: All forms
 CEIL: 5 ppm Form: All forms

AFS (Sweden, 0/1996).

NGV: 5 mg/m³

AFS (Sweden, 7/2000).

TGV: 8 mg/m³ Form: All forms

TGV: 5 ppm Form: All forms

KTV: 8 mg/m³ 15 minute(s). Form: All forms

KTV: 5 ppm 15 minute(s). Form: All forms

AFS (Sweden, 0/1996).

NGV: 10 mg/m³

DK-Arbejdstilsynet (Denmark, 0/1996).

GV: 5 mg/m³

Arbejdstilsynet (Denmark, 10/2002).

Loftværdi: 7 mg/m³ Form: All forms

Loftværdi: 5 ppm Form: All forms

GV: 7 mg/m³ 8 hour(s). Form: All forms

GV: 5 ppm 8 hour(s). Form: All forms

DK-Arbejdstilsynet (Denmark, 0/1996).

GV: 10 mg/m³

N-Arbejdstilsynet (Norway, 0/1996).

AN: 1 mg/m³

Arbejdstilsynet (Norway, 10/2003).

Takverdi: 7 mg/m³ Form: All forms

Takverdi: 5 ppm Form: All forms

AN: 7 mg/m³ 8 hour(s). Form: All forms

AN: 5 ppm 8 hour(s). Form: All forms

N-Arbejdstilsynet (Norway, 0/1996).

AN: 10 mg/m³

INRS (France, 6/2004). Notes: Advisory

VLE: 7.6 mg/m³ 15 minute(s). Form: All forms

VLE: 5 ppm 15 minute(s). Form: All forms

INRS (France, 0/1996).

VME: 5 mg/m³VLE: 10 mg/m³

Arbeidsinspectie (Netherlands, 0/1999).

TGG: 1 mg/m³

Nationale MAC-lijst (Netherlands, 3/2004). Notes: Administrative

TGG 15 min: 15 mg/m³ 15 minute(s). Form: All forms

TGG 15 min: 10 ppm 15 minute(s). Form: All forms

TGG: 8 mg/m³ 8 hour(s). Form: All forms

TGG: 5 ppm 8 hour(s). Form: All forms

Arbeidsinspectie (Netherlands, 0/1999).

TGG: 5 mg/m³

BAUA (Germany, 0/1997).

TWA: 5 mg/m³

MAK-Werte Liste (Germany, 7/2004).

Spitzenbegrenzung: 6 mg/m³ 15 minute(s). Form: All forms

Spitzenbegrenzung: 4 ppm 15 minute(s). Form: All forms

TWA: 3 mg/m³ 8 hour(s). Form: All forms

TWA: 2 ppm 8 hour(s). Form: All forms

TRGS900 MAK (Germany, 8/2004).

Spitzenbegrenzung: 8 mg/m³ Form: All formsTWA: 8 mg/m³ 8 hour(s). Form: All forms

BAUA (Germany, 0/1997).

TWA: 5 mg/m³Spitzenbegrenzung: 20 mg/m³

⚠ungstic Acid Sodium Dihydrate

Hydrochloric acid

Molybdc Acid Sodium Dihydrate

United Kingdom (UK)

⚠ydrochloric acid

Austria

⚠ydrochloric acid

Molybdc Acid Sodium Dihydrate

Switzerland

⚠ungstic Acid Sodium Dihydrate

Hydrochloric acid

Molybdc Acid Sodium Dihydrate

Belgium

⚠ungstic Acid Sodium Dihydrate

Hydrochloric acid

Molybdc Acid Sodium Dihydrate

Spain

⚠ydrochloric acid

Turkey

⚠cid.

Hydrochloric acid

Czech Republic

⚠ydrochloric acid

Ireland

⚠ydrochloric acid

Italy

Tyoterveyslaitos (Finland, 0/1998).

TWA: 1 mg/m³

Työterveyslaitos (Finland, 3/2002).

STEL: 7.6 mg/m³ 15 minute(s). Form: All forms

STEL: 5 ppm 15 minute(s). Form: All forms

Tyoterveyslaitos (Finland, 0/1998).

TWA: 5 mg/m³

EH40-OES (United Kingdom (UK), 5/2003).

STEL: 8 mg/m³ 15 minute(s). Form: All forms

STEL: 5 ppm 15 minute(s). Form: All forms

TWA: 2 mg/m³ 8 hour(s). Form: All forms

TWA: 1 ppm 8 hour(s). Form: All forms

BMWA_MAK (Austria, 4/2004).

Spitzenbegrenzung: 15 mg/m³ 8 times per shift, 5 minute(s). Form: All forms

Spitzenbegrenzung: 10 ppm 8 times per shift, 5 minute(s). Form: All forms

TWA: 8 mg/m³ 8 hour(s). Form: All forms

TWA: 5 ppm 8 hour(s). Form: All forms

AUVA (Austria, 0/1995).

TWA: 5 mg/m³

Spitzenbegrenzung: 50 mg/m³

SUVA (Switzerland, 0/1997).

MAK: 1 mg/m³

SUVA (Switzerland, 1/2003).

Kurzzeitgrenzwerte: 7.5 mg/m³ 15 minute(s). Form: All forms

Kurzzeitgrenzwerte: 5 ppm 15 minute(s). Form: All forms

MAK: 7.5 mg/m³ 8 hour(s). Form: All forms

MAK: 5 ppm 8 hour(s). Form: All forms

SUVA (Switzerland, 0/1997).

MAK: 5 mg/m³

TWA: 1 mg/m³

STEL: 3 mg/m³

Lijst Grenswaarden / Valeurs Limites (Belgium, 12/2003).

STEL: 15 mg/m³ 15 minute(s). Form: All forms

STEL: 10 ppm 15 minute(s). Form: All forms

TWA: 8 mg/m³ 8 hour(s). Form: All forms

TWA: 5 ppm 8 hour(s). Form: All forms

TWA: 5 mg/m³

INSHT (Spain, 1/2004).

VLA-EC: 15 mg/m³ 15 minute(s). Form: All forms

VLA-EC: 10 ppm 15 minute(s). Form: All forms

VLA-ED: 7.6 mg/m³ 8 hour(s). Form: All forms

VLA-ED: 5 ppm 8 hour(s). Form: All forms

NIOSH (United States, 0/1994).

TWA: 1 mg/m³

STEL: 3 mg/m³

NIOSH REL (United States, 12/2001).

CEIL: 7 mg/m³ Form: All forms

CEIL: 5 ppm Form: All forms

178/2001 (Czech Republic, 12/2002).

STEL: 15 mg/m³ 10 minute(s). Form: All forms

STEL: 10.185 ppm 10 minute(s). Form: All forms

TWA: 8 mg/m³ 8 hour(s). Form: All forms

TWA: 5.432 ppm 8 hour(s). Form: All forms

NAOSH (Ireland, 3/2002).

OELV: 14 mg/m³ 15 minute(s). Form: All forms

OELV: 10 ppm 15 minute(s). Form: All forms

OELV: 7 mg/m³ 8 hour(s). Form: All forms

OELV: 5 ppm 8 hour(s). Form: All forms

Hydrochloric acid

Ministero della Salute (Italy, 3/2004).

STEL: 15 mg/m³ 15 minute(s). Form: All forms

STEL: 10 ppm 15 minute(s). Form: All forms

TWA: 8 mg/m³ 8 hour(s). Form: All forms

TWA: 5 ppm 8 hour(s). Form: All forms

Personal Protection

Eyes Splash goggles.

Body Lab coat.

Hands Gloves.

Respiratory Respirator is not needed under normal and intended conditions of use, if exposures are kept below established limits.

Feet Boots.

Protective Clothing
(Pictograms)



Section 9. Physical and Chemical Properties

Physical State and Appearance Liquid. (Clear sparkling liquid.)

Color Yellow.

Odor Not available.

Molecular Weight Not applicable.

Taste Not available.

pH (1% Soln/Water) Acidic.

Boiling/Condensation Point The lowest known value is 53°C (127.4°F) (hydrochloric acid). Weighted average: 101.43°C (214.6°F)

Melting/Freezing Point May start to solidify at 42.27°C (108.1°F) based on data for: Acid.. Weighted average: -0.57°C (31°F)

Critical Temperature The lowest known value is 51.5°C (124.7°F) (hydrochloric acid).

Specific Gravity Weighted average: 1.25 (Water = 1)

Vapor Pressure The highest known value is 25.3 kPa (190 mm Hg) (at 20°C) (hydrochloric acid). Weighted average: 3.1 kPa (23.25 mm Hg) (at 20°C)

Vapor Density The highest known value is 3.4 (Air = 1) (Acid.). Weighted average: 0.81 (Air = 1)

Evaporation Rate The highest known value is 0.36 () Weighted average: 0.36 compared to Butyl acetate.

Dispersion Properties See solubility in water, methanol.

Solubility Easily soluble in cold water, hot water.
Soluble in methanol.



Section 10. Stability and Reactivity

Stability and Reactivity The product is stable.

Conditions to avoid Not available.

Materials to avoid Highly reactive with oxidizing agents.
Reactive with organic materials, alkalis.

Hazardous Polymerization Slightly reactive to reactive with metals.
Will not occur.

Hazardous Decomposition Products These products are halogenated compounds, hydrogen chloride.



Section 11. Toxicological Information

Toxicity to Animals

ORAL (LD50):	Acute: >90000 mg/kg [Rat].
Lithium Sulfate Anhydrous:	
ORAL (LD50):	Acute: 1190 mg/kg [Mouse].
Tungstic Acid Sodium Dihydrate	
LD50: Not available.	
LC50: Not available.	
Milli-Q Water:	
ORAL (LD50):	Acute: >90000 mg/kg [Rat].
Acid.:	
ORAL (LD50):	Acute: 1530 mg/kg [Rat].
DERMAL (LD50):	Acute: 2470 mg/kg [Rabbit].
hydrochloric acid:	
ORAL (LD50):	Acute: 900 mg/kg [Rabbit]. 151 mg/kg [Mouse]. 2950 mg/kg [Mouse].
Molybdic Acid Sodium Dihydrate	
LD50: Not available.	
LC50: Not available.	

Chronic Effects on Humans **☑ CARCINOGENIC EFFECTS:** Classified A4 (Not classifiable for human or animal.) by ACGIH, 3 (Not classifiable for human.) by IARC [hydrochloric acid].
☑ TERATOGENIC EFFECTS: Classified POSSIBLE for human [Folin-Ciocalteu Phenol Reagent].
 Causes damage to the following organs: blood, the nervous system, liver, skin, eyes, bone marrow, central nervous system (CNS).
 Contains material which causes damage to the following organs: kidneys, lungs, cardiovascular system, upper respiratory tract, eye, lens or cornea.

Other Toxic Effects on Humans ☑ Extremely hazardous in case of eye contact (irritant), of inhalation (lung irritant).
 ☑ Very hazardous in case of eye contact (irritant), of inhalation (lung irritant).

Special Remarks on Toxicity to Animals Not available.

Special Remarks on Chronic Effects on Humans ☑ Exposure can cause coughing, chest pains, difficulty in breathing. Exposure will cause asthma, dermatitis and pulmonary oedema; effects may be delayed. To the best of our knowledge, the toxicological properties of this substance have not been thoroughly investigated.

Special Remarks on Other Toxic Effects on Humans To the best of our knowledge, the toxicological properties of this product have not been thoroughly investigated.

Carcinogenicity ☑ No known significant effects or critical hazards.

Mutagenicity ☑ No known significant effects or critical hazards.

Reproductive toxicity ☑ No known significant effects or critical hazards.

Over-exposure signs/symptoms

Inhalation ☑ No known significant effects or critical hazards.

Ingestion ☑ No known significant effects or critical hazards.

Skin ☑ No known significant effects or critical hazards.

Target organs ☑ Causes damage to the following organs: blood, the nervous system, liver, skin, eyes, bone marrow, central nervous system (CNS).
 Contains material which causes damage to the following organs: kidneys, lungs, cardiovascular system, upper respiratory tract, eye, lens or cornea.



Section 12. Ecological Information

Mobility Not available.

Persistence/degradability Not available.

Bioaccumulative potential Not available.

Ecotoxicity Not available.

Germany water class VCI WGK: No products were found.

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Ecotoxicity data

<u>Ingredient name</u>	<u>Species</u>	<u>Period</u>	<u>Result</u>
Hydrochloric acid	Shrimp (LC50)	24 hour(s)	100 to 330 ppm

Other ecological information

Persistence/degradability

<u>Ingredient name</u>	<u>BOD₅</u>	<u>COD</u>

<u>Ingredient name</u>	<u>Aquatic half-life</u>	<u>Photolysis</u>

Bioaccumulative potential

<u>Ingredient name</u>	<u>LogP_{ow}</u>	<u>BCF</u>

- Mobility : Not available.
- Other adverse effects : No known significant effects or critical hazards.



Section 13. Disposal Considerations

Waste Stream Not available.

Methods of disposal The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

European waste catalogue (EWC) Not available.

Hazardous waste The classification of the product may meet the criteria for a hazardous waste

Denmark – Carcinogenic waste Not available.

Denmark - Waste card number Not available.

Denmark - Waste group Not available.

Sweden - thermoset plastic waste Not available.

Sweden - Waste group Not available.

Austria - Waste catalogue Not available.

Norway - Waste number Not available.

Norway - Hazardous waste The classification of the product may meet the criteria for a hazardous waste

Switzerland - Waste code Not available.

Section 14. Transport Information

Contact the supplier for all information regarding the proper transportation method for this material.



Section 15. Regulatory Information

Label Requirements (Europe)

36/38- Irritating to eyes and skin.
 S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.



HCS Classification
Toxic material
Corrosive material
Carcinogen
Target organ effects

U.S. Federal Regulations
 TSCA 8(b) inventory: Lithium Sulfate Anhydrous; ; Acid.; Hydrochloric Acid, 6N Sequanal Grade
 TSCA 8(d) H and S data reporting: Acid.; Hydrochloric Acid, 6N Sequanal Grade
 SARA 302/304/311/312 extremely hazardous substances: Hydrochloric Acid, 6N Sequanal Grade
 SARA 302/304 emergency planning and notification: Hydrochloric Acid, 6N Sequanal Grade
 SARA 302/304/311/312 hazardous chemicals: Acid.; Hydrochloric Acid, 6N Sequanal Grade
 SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Acid.: Immediate (Acute) Health Hazard; Hydrochloric Acid, 6N Sequanal Grade: Immediate (Acute) Health Hazard, Delayed (Chronic) Health Hazard
 Clean Water Act (CWA) 307: No products were found.
 Clean Water Act (CWA) 311: Acid.; Hydrochloric Acid, 6N Sequanal Grade
 Clean air act (CAA) 112 accidental release prevention: Hydrochloric Acid, 6N Sequanal Grade
 Clean air act (CAA) 112 regulated flammable substances: No products were found.
 Clean air act (CAA) 112 regulated toxic substances: Hydrochloric Acid, 6N Sequanal Grade

SARA 313

	<u>Product name</u>	<u>CAS number</u>	<u>Concentration</u>
Form R - Reporting requirements	Folin-Ciocalteu Phenol Reagent		98 - 100
Supplier notification	hydrochloric acid	7647-01-0	1 - 3

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

State regulations
 Pennsylvania RTK: Acid.: (environmental hazard); Hydrochloric Acid, 6N Sequanal Grade: (environmental hazard, generic environmental hazard)
 Massachusetts RTK: Acid.; Hydrochloric Acid, 6N Sequanal Grade
 New Jersey: Acid.; Hydrochloric Acid, 6N Sequanal Grade

WHMIS (Canada)
 Class D-1B: Material causing immediate and serious toxic effects (TOXIC).
 Class D-2A: Material causing other toxic effects (VERY TOXIC).
 Class E: Corrosive liquid.

No products were found.

International Regulations

EINECS Not available.

DSCL (EEC) 36/38- Irritating to eyes and skin.

International Lists
 Australia (NICNAS): Lithium Sulfate Anhydrous; Molybdic Acid Sodium Dihydrate; Tungstic Acid Sodium Dihydrate; ; Acid.; Hydrochloric Acid, 6N Sequanal Grade

China: Hydrochloric Acid, 6N Sequanal Grade

Germany water class: Hydrochloric Acid, 6N Sequanal Grade

Japan (METI): Lithium Sulfate Anhydrous; ; Acid.; Hydrochloric Acid, 6N Sequanal Grade

Korea (TCCL): Lithium Sulfate Anhydrous; ; Acid.; Hydrochloric Acid, 6N Sequanal Grade

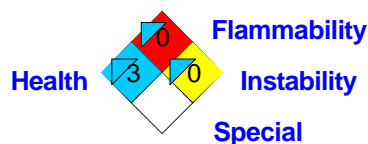
Philippines (RA6969): Lithium Sulfate Anhydrous; Molybdic Acid Sodium Dihydrate; ; Acid.; Hydrochloric Acid, 6N Sequanal Grade

State Regulations
 Pennsylvania RTK: Acid.: (environmental hazard); Hydrochloric Acid, 6N Sequanal Grade: (environmental hazard, generic environmental hazard)
 Massachusetts RTK: Acid.; Hydrochloric Acid, 6N Sequanal Grade
 New Jersey: Acid.; Hydrochloric Acid, 6N Sequanal Grade

Section 16. Other Information

Hazardous Material Information System (U.S.A.)	Health	3
	Fire hazard	0
	Reactivity	0
	Personal protection	C

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



References Not available.

History of Document Changes Any information changes since last document version are marked with a triangle symbol. 

Full text of R phrases referred to in sections 2 and 3 - Europe

- R63- Possible risk of harm to the unborn child.
- R20/21/22- Harmful by inhalation, in contact with skin and if swallowed.
- R34- Causes burns.
- R36- Irritating to eyes.
- R36/37/38- Irritating to eyes, respiratory system and skin.
- R36/38- Irritating to eyes and skin.
- R37- Irritating to respiratory system.

Full text of classifications referred to in sections 2 and 3 - Europe

- Repr. Cat.3 - Toxic for reproduction Category 3
- C - Corrosive
- Xn - Harmful
- Xi - Irritant

Intended Use Refer to the instruction booklet for proper and intended use. Otherwise, contact supplier for specific applications.

Validated by Fred Gartner on 7/1/2005.

Verified by Fred Gartner.

Date of Previous Issue No Previous Validation

Printed 7/1/2005.

Version 0.02

Notice to Reader

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