



SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Revision Date 06/11/2014

Version 1.1

SECTION 1. Identification

Product identifier

Product number R03465
Product name Lactophenol, Cotton Blue

Relevant identified uses of the substance or mixture and uses advised against

Identified uses Reagent for analysis

Details of the supplier of the safety data sheet

Company EMD Millipore Corporation | 290 Concord Road, Billerica, MA 01821,
United States of America | General Inquiries: +1-978-715-4321 |
Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5)

Emergency telephone 800-424-9300 CHEMTREC (USA)
+1-703-527-3887 CHEMTREC (International)
24 Hours/day; 7 Days/week

SECTION 2. Hazards identification

GHS Classification

Acute toxicity, Category 4, Oral, H302
Acute toxicity, Category 4, Inhalation, H332
Acute toxicity, Category 4, Dermal, H312
Skin corrosion, Category 1B, H314
Germ cell mutagenicity, Category 2, H341
Specific target organ systemic toxicity - repeated exposure, Category 2, H373
For the full text of the H-Statements mentioned in this Section, see Section 16.

GHS-Labeling

Hazard pictograms



Signal Word
Danger

Hazard Statements

H302 + H312 + H332 Harmful if swallowed, in contact with skin or if inhaled.

SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number R03465
Product name Lactophenol, Cotton Blue

Version 1. 1

H314 Causes severe skin burns and eye damage.
H341 Suspected of causing genetic defects.
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary Statements

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P314 Get medical advice/ attention if you feel unwell.
P308 + P310 IF exposed or concerned: immediately call a POISON CENTER or doctor/ physician.

OSHA Hazards

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). This information is based on 29 CFR 1910.1200 criteria prior to adoption of the GHS and may deviate from the GHS information.

Other hazards

None known.

SECTION 3. Composition/information on ingredients

Chemical nature Mixture of inorganic and organic compounds

Hazardous ingredients

Chemical Name (Concentration)

CAS-No.

glycerine (>= 30 % - < 50 %)

56-81-5

Exact percentages are being withheld as a trade secret.

Phenol (>= 10 % - < 30 %)

108-95-2

Exact percentages are being withheld as a trade secret.

SECTION 4. First aid measures

Description of first-aid measures

General advice

First aider needs to protect himself.

Inhalation

After inhalation: fresh air. If breathing stops: mouth-to-mouth breathing or artificial respiration. Oxygen if necessary. Immediately call in physician.

Skin contact

After skin contact: wash off with plenty of water. Immediately remove contaminated clothing. If available swab with polyethylene glycol 400. Call a physician immediately.

Eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist.

SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number R03465
Product name Lactophenol, Cotton Blue

Version 1.1

Ingestion

After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation!). Call a physician immediately. Do not attempt to neutralize.

Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

Irritation and corrosion, Cough, Shortness of breath, respiratory arrest, Drowsiness, Dizziness, Unconsciousness, inebriation, cardiovascular disorders, collapse, Headache, confusion, Vomiting, gastric pain, Diarrhea, death
Risk of blindness!

Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Water, Foam, Carbon dioxide (CO₂), Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

Special hazards arising from the substance or mixture

Combustible.

Development of hazardous combustion gases or vapors possible in the event of fire.

Advice for firefighters

Special protective equipment for fire-fighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information

Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

Protective equipment see section 8.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10).

SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number
Product name

R03465
Lactophenol, Cotton Blue

Version 1. 1

SECTION 7. Handling and storage

Precautions for safe handling

Work under hood. Do not inhale substance/mixture. Avoid generation of vapors/aerosols.

Observe label precautions.

Conditions for safe storage, including any incompatibilities

Tightly closed. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.

No declaration

SECTION 8. Exposure controls/personal protection

Exposure limit(s)

Ingredients

Basis	Value	Threshold limits	Remarks
<i>glycerine 56-81-5</i>			
OSHA_TRANS	PEL:	15 mg/m ³	Form of exposure: Total dust.
	PEL:	5 mg/m ³	Form of exposure: Respirable fraction.
Z1A	Time Weighted Average (TWA):	10 mg/m ³	Form of exposure: Total dust.
	Time Weighted Average (TWA):	5 mg/m ³	Form of exposure: Respirable fraction.
<i>Phenol 108-95-2</i>			
ACGIH	Time Weighted Average (TWA):	5 ppm	
	Skin designation:		Can be absorbed through the skin.
NIOSH/GUIDE	Skin designation:		Can be absorbed through the skin.
	Ceiling Limit Value and Time Period (if specified):	15.6 ppm 60 mg/m ³	Ceiling Limit Value 15-min
	Recommended exposure limit (REL):	5 ppm 19 mg/m ³	
OSHA_TRANS	Skin designation:		Can be absorbed through the skin.
	PEL:	5 ppm 19 mg/m ³	
Z1A	Time Weighted Average (TWA):	5 ppm 19 mg/m ³	
	Skin designation (Final Rule Limit applies):		Can be absorbed through the skin.

Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number
Product name

R03465
Lactophenol, Cotton Blue

Version 1.1

Individual protection measures

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled. The chemical resistance of the protective equipment should be inquired at the respective supplier.

Hygiene measures

Immediately change contaminated clothing. Apply skin- protective barrier cream. Wash hands and face after working with substance.

Eye/face protection

Tightly fitting safety goggles

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Other protective equipment:

protective clothing

Respiratory protection

required when vapors/aerosols are generated.

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

SECTION 9. Physical and chemical properties

Physical state	liquid
Color	blue
Odor	No strong odor known.
Odor Threshold	No information available.
pH	No information available.
Melting point	No information available.
Boiling point	No information available.
Flash point	No information available.
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	No information available.
Upper explosion limit	No information available.
Vapor pressure	No information available.

SAFETY DATA SHEET
according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number R03465 Version 1.1
Product name Lactophenol, Cotton Blue

Relative vapor density	No information available.
Density	No information available.
Relative density	No information available.
Water solubility	No information available.
Partition coefficient: n-octanol/water	No information available.
Autoignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity, dynamic	No information available.
Explosive properties	Not classified as explosive.
Oxidizing properties	none

SECTION 10. Stability and reactivity

Reactivity

See below

Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

Possibility of hazardous reactions

Exothermic reaction with:

Aluminum, Aldehydes, halogens, hydrogen peroxide, iron(III) compounds, Oxidizing agents, Strong acids, Strong bases, formaldehyde, Oxides of phosphorus

Risk of explosion with:

halogens, Strong oxidizing agents, peroxi compounds, hydrogen peroxide, perchlorates, Nitriles, nitrites, nitrates, salts of oxyhalogenic acids

Nitric acid, with, conc. sulfuric acid

Risk of ignition or formation of inflammable gases or vapors with:

potassium permanganate, halogen oxides, hydrides, chromium(VI) oxide

Conditions to avoid

no information available

Incompatible materials

rubber, various plastics, various alloys, various metals

Hazardous decomposition products

no information available

SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number

R03465

Version 1. 1

Product name

Lactophenol, Cotton Blue

SECTION 11. Toxicological information

Information on toxicological effects

Likely route of exposure

Eye contact, Skin contact

Target Organs

Heart

Eyes

Skin

Respiratory system

Kidneys

Liver

Kidney

Lungs

Bladder

Gastro-intestinal system

Cardio-vascular system

Central nervous system

head

spleen

Respiratory organs

Pancreas

Acute oral toxicity

Acute toxicity estimate: 400 mg/kg

Calculation method

absorption

Symptoms: Vomiting, gastric pain, Diarrhea, If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.

Acute inhalation toxicity

Acute toxicity estimate: 12 mg/l; 4 h

Calculation method

absorption

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

Acute dermal toxicity

Acute toxicity estimate : 1,200 mg/kg

Calculation method

absorption

Skin irritation

Mixture causes burns.

Eye irritation

Mixture causes serious eye damage. Risk of blindness!

SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number
Product name

R03465
Lactophenol, Cotton Blue

Version 1.1

CMR effects

Mutagenicity:

Evidence of genetic defects.

Specific target organ systemic toxicity - single exposure

The substance or mixture is not classified as specific target organ toxicant, single exposure.

Specific target organ systemic toxicity - repeated exposure

Mixture may cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

Regarding the available data the classification criteria are not fulfilled.

Carcinogenicity

IARC	No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
ACGIH	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

Further information

After absorption:

Systemic effects:

Headache, Drowsiness, inebriation, confusion, Unconsciousness, Dizziness, Cyanosis, cardiovascular disorders, collapse, Changes in the blood count, respiratory arrest, death

Damage to:

Liver, Kidney, Cardiac

Other dangerous properties can not be excluded.

This substance should be handled with particular care.

Ingredients

glycerine

Acute oral toxicity

LD50 rat: 12,600 mg/kg (IUCLID)

Acute dermal toxicity

LD50 rabbit: > 18,700 mg/kg (IUCLID)

Skin irritation

rabbit

Result: No irritation
(IUCLID)

SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number

R03465

Version 1.1

Product name

Lactophenol, Cotton Blue

Eye irritation

rabbit

Result: No eye irritation

OECD Test Guideline 405

Sensitization

Patch test: human

Result: negative

(IUCLID)

Germ cell mutagenicity

Genotoxicity in vitro

Ames test

Result: negative

(IUCLID)

Phenol

Acute oral toxicity

LD50 rat: 317 mg/kg (RTECS)

LDLO human: 140 mg/kg (RTECS)

Acute inhalation toxicity

LC50 rat: 0.316 mg/l; 4 h (RTECS)

LC0 rat: 0.9 mg/l; 8 h ; aerosol

OECD Test Guideline 403

Acute dermal toxicity

LD50 rat: 660 mg/kg

OECD Test Guideline 402

Skin irritation

rabbit

Result: Causes burns.

(IUCLID)

Eye irritation

rabbit

Result: Corrosive

OECD Test Guideline 405

Sensitization

Sensitization test: guinea pig

Result: negative

(IUCLID)

Germ cell mutagenicity

Genotoxicity in vitro

Ames test

Salmonella typhimurium

Result: negative

(National Toxicology Program)

Mutagenicity (mammal cell test): chromosome aberration.

Result: positive

Method: OECD Test Guideline 473

Mutagenicity (mammal cell test): micronucleus.

Result: positive

Method: OECD Test Guideline 405

SAFETY DATA SHEET
according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number R03465
Product name Lactophenol, Cotton Blue

Version 1.1

SECTION 12. Ecological information

Ecotoxicity

No information available.

Persistence and degradability

No information available.

Bioaccumulative potential

No information available.

Mobility in soil

No information available.

Ingredients

glycerine

Toxicity to fish

LC50 Carassius auratus (goldfish): > 5,000 mg/l; 24 h (Lit.)

Toxicity to daphnia and other aquatic invertebrates

EC5 E.sulcatum: 3,200 mg/l; 72 h (Lit.)

EC50 Daphnia magna (Water flea): > 10,000 mg/l; 24 h (IUCLID)

Toxicity to algae

IC5 Scenedesmus quadricauda (Green algae): > 10,000 mg/l; 7 d (Lit.)

Toxicity to bacteria

EC5 Pseudomonas putida: > 10,000 mg/l; 16 h (Lit.)

Biodegradability

63 %; 14 d

OECD Test Guideline 301C

Readily biodegradable.

Biochemical Oxygen Demand (BOD)

870 mg/g (5 d)

(External MSDS)

Chemical Oxygen Demand (COD)

1,160 mg/g

(External MSDS)

Theoretical oxygen demand (ThOD)

1,217 mg/g

(Lit.)

Ratio BOD/ThBOD

BOD5 71 %

(Lit.)

Ratio COD/ThBOD

95 %

(Lit.)

Phenol

SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number R03465
Product name Lactophenol, Cotton Blue

Version 1.1

Toxicity to fish

LC50 *Oncorhynchus mykiss* (rainbow trout): 5.0 mg/l; 96 h (ECOTOX Database)

semi-static test NOEC *Poecilia reticulata* (guppy): 4 mg/l; 14 d
OECD Test Guideline 204

Toxicity to daphnia and other aquatic invertebrates

EC50 *E.sulcatum*: 33 mg/l; 72 h (IUCLID) (maximum permissible toxic concentration)

static test EC50 *Ceriodaphnia Dubia* (water flea): 3.1 mg/l; 48 h
US-EPA

Toxicity to algae

IC50 *Scenedesmus quadricauda* (Green algae): 7.5 mg/l; 8 d (IUCLID) (maximum permissible toxic concentration)

static test EC50 *Pseudokirchneriella subcapitata* (*Selenastrum capricornutum*): 61.1 mg/l; 96 h
US-EPA

Toxicity to bacteria

EC50 *Pseudomonas putida*: 64 mg/l; 16 h (IUCLID) (maximum permissible toxic concentration)

EC50 activated sludge: 766 mg/l; 3 h
OECD Test Guideline 209

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)

semi-static test EC10 *Daphnia magna* (Water flea): 0.46 mg/l; 16 d
(ECHA)

Biodegradability

100 %; 6 d
OECD Test Guideline 302B
Easily eliminable.

85 %; 14 d
OECD Test Guideline 301C
Readily biodegradable.

62 %; 100 h; aerobic
OECD Test Guideline 301C
Readily biodegradable.

Biochemical Oxygen Demand (BOD)

1,680 mg/g (5 d)
(IUCLID)

Chemical Oxygen Demand (COD)

2,300 mg/g
(IUCLID)

SECTION 13. Disposal considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

SAFETY DATA SHEET
according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number R03465
Product name Lactophenol, Cotton Blue

Version 1. 1

SECTION 14. Transport information

Land transport (DOT)

UN number UN 2810
Proper shipping name TOXIC LIQUID, ORGANIC, N.O.S. (PHENOL)
Class 6.1
Packing group II
Environmentally hazardous --

Air transport (IATA)

UN number UN 2810
Proper shipping name TOXIC LIQUID, ORGANIC, N.O.S. (PHENOL)
Class 6.1
Packing group II
Environmentally hazardous --
Special precautions for user no

Sea transport (IMDG)

UN number UN 2810
Proper shipping name TOXIC LIQUID, ORGANIC, N.O.S. (PHENOL)
Class 6.1
Packing group II
Environmentally hazardous --
Special precautions for user yes
EmS F-A S-A

SECTION 15. Regulatory information

United States of America

OSHA Hazards

Target organ effects
Highly toxic by inhalation
Toxic by ingestion
Toxic by skin absorption
Corrosive to skin
Mutagen

This information is based on 29 CFR 1910.1200 criteria prior to adoption of the GHS, and may deviate from the GHS information on the label and in section 2.

SARA 311/312 Hazards

Acute Health Hazard
Chronic Health Hazard

SARA 313

The following components are subject to reporting levels established by SARA Title III, Section 313:

Ingredients

SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number
Product name

R03465
Lactophenol, Cotton Blue

Version 1. 1

Phenol 108-95-2 20 %

SARA 302

The following components are subject to reporting levels established by SARA Title III, Section 302:

Ingredients

Phenol 108-95-2

Clean Water Act

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

Ingredients

Phenol

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

Ingredients

Phenol

DEA List I

Not listed

DEA List II

Not listed

US State Regulations

Massachusetts Right To Know

Ingredients

glycerine

Phenol

Pennsylvania Right To Know

Ingredients

glycerine

Phenol

water

Lactic acid

New Jersey Right To Know

Ingredients

glycerine

Phenol

water

Lactic acid

California Prop 65 Components

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

Notification status

TSCA: All components of the product are listed in the TSCA-inventory.

DSL: All components of this product are on the Canadian DSL.

SECTION 16. Other information

SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number

R03465

Version 1.1

Product name

Lactophenol, Cotton Blue

Training advice

Provide adequate information, instruction and training for operators.

Full text of H-Statements referred to under sections 2 and 3.

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H332	Harmful if inhaled.
H341	Suspected of causing genetic defects.
H373	May cause damage to organs through prolonged or repeated exposure.

Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at www.wikipedia.org.

Revision Date 06/11/2014

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to appropriate safety precautions. It does not represent a warranty of any product properties and we assume no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

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