

SAFETY DATA SHEET

according to Occupational Safety And Health (Classification,
Labelling And Safety Data Sheet Of Hazardous Chemicals)
Regulations 2013 (CLASS 2013)

Revision Date 19.11.2018

Version 1.2

SECTION 1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Catalogue No. R03465

Product name Lactophenol-Cotton Blue For Mycology Harleco®

REACH Registration Number This product is a mixture. REACH Registration Number see section 3.

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

Identified uses Reagent for analysis
For additional information on uses please refer to the Merck Chemicals portal (www.merckgroup.com).

1.3 Details of the supplier of the safety data sheet

Company Merck KGaA * 64271 Darmstadt *Germany* Telefon:+49 6151 72-0

Responsible Department LS-QHC * e-mail: prodsafe@merckgroup.com

Regional representation Merck Sdn. Bhd. (Co. No: 178145), No. 4, Jalan U1/26, Section U1,
Hicom Glenmarie Industrial Park, 40150 Shah Alam, Selangor. Tel:
03-74943688 Fax: 03-74910850

1.4 Emergency telephone number Customer Call Centre: + 62 0800 140 1253 (Toll Free)

SECTION 2. Hazards identification

2.1 Classification of the substance or mixture

Classification according to CLASS regulations 2013

SAFETY DATA SHEET

according to Occupational Safety And Health (Classification,
Labelling And Safety Data Sheet Of Hazardous Chemicals)
Regulations 2013 (CLASS 2013)

Catalogue No. R03465
Product name Lactophenol-Cotton Blue For Mycology Harleco®

Acute toxicity, Category 4, Oral, H302
Acute toxicity, Category 4, Inhalation, H332
Skin corrosion, Category 1B, H314
Germ cell mutagenicity, Category 2, H341
Specific target organ toxicity - repeated exposure, Category 2, Central nervous system, Kidney, Liver,
Skin, H373

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements

Labelling according to CLASS regulations 2013

Hazard pictograms



Signal word

Danger

Hazard statements

H302 + H332 Harmful if swallowed or if inhaled.

H314 Causes severe skin burns and eye damage.

H341 Suspected of causing genetic defects.

H373 May cause damage to organs (Central nervous system, Kidney, Liver, Skin) through prolonged or repeated exposure.

Precautionary statements

Prevention

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact

SAFETY DATA SHEET

according to Occupational Safety And Health (Classification,
Labelling And Safety Data Sheet Of Hazardous Chemicals)
Regulations 2013 (CLASS 2013)

Catalogue No.

R03465

Product name

Lactophenol-Cotton Blue For Mycology Harleco®

lenses, if present and easy to do. Continue rinsing.

P308 + P310 IF exposed or concerned: immediately call a POISON CENTER or doctor/ physician.

Reduced labelling (≤125 ml)

Hazard pictograms



Signal word

Danger

Hazard statements

H314 Causes severe skin burns and eye damage.

H341 Suspected of causing genetic defects.

Precautionary statements

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

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 + P310 IF exposed or concerned: immediately call a POISON CENTER or doctor/ physician.

Contains: fenol

2.3 Other hazards

None known.

SECTION 3. Composition/information on ingredients

Chemical nature

Mixture of inorganic and organic compounds

3.1 Substance

Not applicable

3.2 Mixture

SAFETY DATA SHEET

according to Occupational Safety And Health (Classification,
Labelling And Safety Data Sheet Of Hazardous Chemicals)
Regulations 2013 (CLASS 2013)

Catalogue No. R03465
Product name Lactophenol-Cotton Blue For Mycology Harleco®

Hazardous components according to CLASS regulations 2013

Chemical name (Concentration)

CAS-No. Registration number Classification

fenol ($\geq 20\%$ - $< 25\%$)

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

108-95-2	*)	Germ cell mutagenicity, Category 2, H341 Acute toxicity, Category 3, H331 Acute toxicity, Category 3, H311 Acute toxicity, Category 3, H301 Specific target organ toxicity - repeated exposure, Category 2, H373 Skin corrosion, Category 1B, H314
----------	----	--

*) A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4. First aid measures

4.1 Description of first aid measures

General advice

First aider needs to protect himself.

After inhalation: fresh air. Call in physician.

After contact with skin: rinse out with polyethylene glycol 400 or a mixture of polyethylene glycol 300/ethanol 2:1 and wash with plenty of water. If neither is available wash with plenty of water.

Immediately take off contaminated clothing. Call a physician immediately.

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

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

SAFETY DATA SHEET

according to Occupational Safety And Health (Classification,
Labelling And Safety Data Sheet Of Hazardous Chemicals)
Regulations 2013 (CLASS 2013)

Catalogue No.	R03465
Product name	Lactophenol-Cotton Blue For Mycology Harleco®

4.2 Most important symptoms and effects, both acute and delayed

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

4.3 Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5. Firefighting measures

5.1 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.

5.2 Special hazards arising from the substance or mixture

Combustible.

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

5.3 Advice for firefighters

Special protective equipment for firefighters

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

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapours, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

SAFETY DATA SHEET

according to Occupational Safety And Health (Classification,
Labelling And Safety Data Sheet Of Hazardous Chemicals)
Regulations 2013 (CLASS 2013)

Catalogue No.	R03465
Product name	Lactophenol-Cotton Blue For Mycology Harleco®

Advice for emergency responders:

Protective equipment see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 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). Take up carefully with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

6.4 Reference to other sections

Indications about waste treatment see section 13.

SECTION 7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Observe label precautions.

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

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

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

Recommended storage temperature see product label.

7.3 Specific end use(s)

SAFETY DATA SHEET

according to Occupational Safety And Health (Classification,
Labelling And Safety Data Sheet Of Hazardous Chemicals)
Regulations 2013 (CLASS 2013)

Catalogue No. R03465
Product name Lactophenol-Cotton Blue For Mycology Harleco®

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8. Exposure controls/personal protection

8.1 Control parameters

glycerine (56-81-5)

MY OEL Time Weighted Average 10 mg/m³ Form of exposure: Mist.
(TWA):

fenol (108-95-2)

MY OEL Skin designation: Can be absorbed through the skin.
Time Weighted Average 5 ppm
(TWA): 19 mg/m³

8.2 Exposure controls

Engineering measures

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

See section 7.1.

Individual protection measures

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Eye/face protection

Tightly fitting safety goggles

Hand protection

full contact:

Glove material: Viton (R)
Glove thickness: 0.70 mm

SAFETY DATA SHEET

according to Occupational Safety And Health (Classification,
Labelling And Safety Data Sheet Of Hazardous Chemicals)
Regulations 2013 (CLASS 2013)

Catalogue No. R03465
Product name Lactophenol-Cotton Blue For Mycology Harleco®

Break through time: > 480 min

splash contact:

Glove material: Viton (R)
Glove thickness: 0.70 mm
Break through time: > 480 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 890 Vitoject® (full contact), KCL 890 Vitoject® (splash contact).

This recommendation applies only to the product stated in the safety data sheet(>,<)> supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Other protective equipment

protective clothing

Respiratory protection

required when vapours/aerosols are generated.

Recommended Filter type: Filter A-(P3)

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Environmental exposure controls

Do not let product enter drains.

SECTION 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form liquid

SAFETY DATA SHEET

according to Occupational Safety And Health (Classification,
Labelling And Safety Data Sheet Of Hazardous Chemicals)
Regulations 2013 (CLASS 2013)

Catalogue No.	R03465
Product name	Lactophenol-Cotton Blue For Mycology Harleco®

Colour	blue
Odour	No strong odour known.
Odour 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.
Vapour pressure	No information available.
Relative vapour density	No information available.
Density	No information available.
Relative density	No information available.
Water solubility	No information available.

SAFETY DATA SHEET

according to Occupational Safety And Health (Classification,
Labelling And Safety Data Sheet Of Hazardous Chemicals)
Regulations 2013 (CLASS 2013)

Catalogue No.	R03465
Product name	Lactophenol-Cotton Blue For Mycology Harleco®

Partition coefficient: n-
octanol/water No information available.

Auto-ignition temperature No information available.

Decomposition temperature No information available.

Viscosity, dynamic No information available.

Explosive properties Not classified as explosive.

Oxidizing properties none

9.2 Other data

none

SECTION 10. Stability and reactivity

10.1 Reactivity

See section 10.3

10.2 Chemical stability

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

10.3 Possibility of hazardous reactions

Exothermic reaction with:

Aluminium, 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 vapours with:

SAFETY DATA SHEET

according to Occupational Safety And Health (Classification,
Labelling And Safety Data Sheet Of Hazardous Chemicals)
Regulations 2013 (CLASS 2013)

Catalogue No.	R03465
Product name	Lactophenol-Cotton Blue For Mycology Harleco®

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

10.4 Conditions to avoid

no information available

10.5 Incompatible materials

rubber, various plastics, various alloys, various metals

10.6 Hazardous decomposition products

no information available

SECTION 11. Toxicological information

11.1 Information on toxicological effects

Mixture

Acute oral toxicity

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

Acute toxicity estimate: 500 mg/kg

Calculation method

Acute inhalation toxicity

Acute toxicity estimate: 15 mg/l; 4 h ; vapour

Calculation method

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

Acute dermal toxicity

absorption

Acute toxicity estimate : > 2,000 mg/kg

Calculation method

SAFETY DATA SHEET

according to Occupational Safety And Health (Classification,
Labelling And Safety Data Sheet Of Hazardous Chemicals)
Regulations 2013 (CLASS 2013)

Catalogue No.

R03465

Product name

Lactophenol-Cotton Blue For Mycology Harleco®

Skin irritation

Mixture causes burns.

Eye irritation

Mixture causes serious eye damage. Risk of blindness!

Sensitisation

This information is not available.

Germ cell mutagenicity

This information is not available.

Carcinogenicity

This information is not available.

Reproductive toxicity

This information is not available.

Teratogenicity

This information is not available.

CMR effects

Mutagenicity:

Evidence of genetic defects.

Specific target organ toxicity - single exposure

This information is not available.

Specific target organ toxicity - repeated exposure

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

Target Organs: Central nervous system, Kidney, Liver, Skin

Aspiration hazard

This information is not available.

11.2 Further information

The Safety Data Sheets for catalogue items are available at www.merckgroup.com

SAFETY DATA SHEET

according to Occupational Safety And Health (Classification,
Labelling And Safety Data Sheet Of Hazardous Chemicals)
Regulations 2013 (CLASS 2013)

Catalogue No. R03465
Product name Lactophenol-Cotton Blue For Mycology Harleco®

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.

Components

fenol

Acute dermal toxicity

LD50 Rat: 660 mg/kg

OECD Test Guideline 402

Skin irritation

In vitro study

Result: Causes burns.

OECD Test Guideline 431

Eye irritation

Rabbit

Result: Corrosive

OECD Test Guideline 405

Sensitisation

Sensitisation test: Guinea pig

Result: negative

(IUCLID)

Germ cell mutagenicity

Genotoxicity in vitro

Mutagenicity (mammal cell test): chromosome aberration.

Result: positive

Method: OECD Test Guideline 473

SAFETY DATA SHEET

according to Occupational Safety And Health (Classification,
Labelling And Safety Data Sheet Of Hazardous Chemicals)
Regulations 2013 (CLASS 2013)

Catalogue No. R03465
Product name Lactophenol-Cotton Blue For Mycology Harleco®

Mutagenicity (mammal cell test): micronucleus.
Result: positive
Method: OECD Test Guideline 487

SECTION 12. Ecological information

Mixture

12.1 Toxicity

No information available.

12.2 Persistence and degradability

No information available.

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

Substance(s) in the mixture do(es) not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII, or a PBT/vPvB assessment was not conducted.

12.6 Other adverse effects

Discharge into the environment must be avoided.

Components

fenol

Toxicity to fish

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

Toxicity to daphnia and other aquatic invertebrates

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

Toxicity to algae

IC5 *Scenedesmus quadricauda* (Green algae): 7.5 mg/l; 8 d
(IUCALID) (maximum permissible toxic concentration)

SAFETY DATA SHEET

according to Occupational Safety And Health (Classification,
Labelling And Safety Data Sheet Of Hazardous Chemicals)
Regulations 2013 (CLASS 2013)

Catalogue No. R03465
Product name Lactophenol-Cotton Blue For Mycology Harleco®

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

Toxicity to bacteria

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

Toxicity to fish (Chronic toxicity)

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

OECD Test Guideline 204

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

Biochemical Oxygen Demand (BOD)

1,680 mg/g (5 d)

(IUCLID)

Chemical Oxygen Demand (COD)

2,300 mg/g

(IUCLID)

Partition coefficient: n-octanol/water

log Pow: 1.47 (30 °C)

(ECHA) Bioaccumulation is not expected.

SAFETY DATA SHEET

according to Occupational Safety And Health (Classification,
Labelling And Safety Data Sheet Of Hazardous Chemicals)
Regulations 2013 (CLASS 2013)

Catalogue No.	R03465
Product name	Lactophenol-Cotton Blue For Mycology Harleco®

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

Surface tension

71.3 mN/m

at 20 °C

SAFETY DATA SHEET

according to Occupational Safety And Health (Classification,
Labelling And Safety Data Sheet Of Hazardous Chemicals)
Regulations 2013 (CLASS 2013)

Catalogue No. R03465
Product name Lactophenol-Cotton Blue For Mycology Harleco®

SECTION 13. Disposal considerations

Waste treatment methods

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

According to Quality Environment Regulation (Scheduled Waste) 2005, waste need to be sent to designated premise for recycle, treatment or disposal. Please contact Kualiti Alam for waste classification and correct disposal method.

SECTION 14. Transport information

Land transport (ADR/RID)

14.1 UN number	UN 2810
14.2 Proper shipping name	TOXIC LIQUID, ORGANIC, N.O.S. (PHENOL)
14.3 Class	6.1
14.4 Packing group	II
14.5 Environmentally hazardous	--
14.6 Special precautions for user	yes
Tunnel restriction code	D/E

Inland waterway transport (ADN)

Not relevant

Air transport (IATA)

SAFETY DATA SHEET

according to Occupational Safety And Health (Classification,
Labelling And Safety Data Sheet Of Hazardous Chemicals)
Regulations 2013 (CLASS 2013)

Catalogue No.	R03465
Product name	Lactophenol-Cotton Blue For Mycology Harleco®

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

Sea transport (IMDG)

14.1 UN number	UN 2810
14.2 Proper shipping name	TOXIC LIQUID, ORGANIC, N.O.S. (PHENOL)
14.3 Class	6.1
14.4 Packing group	II
14.5 Environmentally hazardous	--
14.6 Special precautions for user	yes

EmS F-A S-A

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not relevant

SECTION 15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

All national and local regulations, including Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013, if applicable to the use, should be observed.

National legislation

Storage class 6.1A

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

SAFETY DATA SHEET

according to Occupational Safety And Health (Classification,
Labelling And Safety Data Sheet Of Hazardous Chemicals)
Regulations 2013 (CLASS 2013)

Catalogue No. R03465
Product name Lactophenol-Cotton Blue For Mycology Harleco®

SECTION 16. Other information

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

H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H341	Suspected of causing genetic defects.
H373	May cause damage to organs through prolonged or repeated exposure.

Training advice

Provide adequate information, instruction and training for operators.

Labelling

Hazard pictograms



Signal word

Danger

Hazard statements

H302 + H332 Harmful if swallowed or if inhaled.

H314 Causes severe skin burns and eye damage.

H341 Suspected of causing genetic defects.

H373 May cause damage to organs (Central nervous system, Kidney, Liver, Skin, Nervous system) through prolonged or repeated exposure.

SAFETY DATA SHEET

according to Occupational Safety And Health (Classification,
Labelling And Safety Data Sheet Of Hazardous Chemicals)
Regulations 2013 (CLASS 2013)

Catalogue No.	R03465
Product name	Lactophenol-Cotton Blue For Mycology Harleco®

Precautionary statements

Prevention

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

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 + P310 IF exposed or concerned: immediately call a POISON CENTER or doctor/ physician.

Contains: fenol

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.

Regional representation

Merck Sdn. Bhd. (Co. No: 178145), No. 4, Jalan U1/26, Section U1, Hicom Glenmarie Industrial Park, 40150 Shah Alam, Selangor. Tel: 03-74943688 Fax: 03-74910850

The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.