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SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

Version 8.4 Revision Date 06.08.2024 Print Date 07.08.2024 GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

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

| 1.1 | Product identifiers | |
|-----|---------------------|---|
| | Product name | : |

| : | Phenolphthalein |
|---|-----------------|
| | |

| : | 105945 |
|---|-----------------------|
| : | Sigma-Aldrich |
| : | 604-076-00-1 |
| : | 01-2119498295-24-XXXX |
| : | 77-09-8 |
| | : |

- **1.2** Relevant identified uses of the substance or mixture and uses advised against Identified uses : Laboratory chemicals, Manufacture of substances
- **1.3 Details of the supplier of the safety data sheet**Company :
- **1.4 Emergency telephone**

| Emergency Phone # | : | +(44)-870-8200418 (CHEMTREC (GB)) |
|-------------------|---|------------------------------------|
| | | +(353)-19014670 (CHEMTREC Ireland) |
| | | 001-803-017-9114 (CHEMTREC India) |

SECTION 2: Hazards identification

| 2.1 Classification of the substance of Skin irritation, (Category 2) | | or mixture H315: Causes skin irritation. | |
|-----------------------------------------------------------------------------|-----------------------------------------|---------------------------------------------|--|
| | Germ cell mutagenicity, (Category 2) | H341: Suspected of causing genetic defects. | |
| | Carcinogenicity, (Category 1B) | H350: May cause cancer. | |
| | Reproductive toxicity, (Category 2) | H361f: Suspected of damaging fertility. | |
| | | | |

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008 Pictogram

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| Signal Word | Danger |
|----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| Hazard Statements H315 H341 H350 H361f | Causes skin irritation. Suspected of causing genetic defects. May cause cancer. Suspected of damaging fertility. |
| Precautionary Statements | |
| P202 | Do not handle until all safety precautions have been read and understood. |
| P264 | Wash skin thoroughly after handling. |
| P280 | Wear protective gloves/ protective clothing/ eye protection/ face protection. |
| P302 + P352 | IF ON SKIN: Wash with plenty of water. |
| P308 + P313 | IF exposed or concerned: Get medical advice/ attention. |
| P332 + P313 | If skin irritation occurs: Get medical advice/ attention. |
| Supplemental Hazard Statements | none |
| | |

Restricted to professional users.

Reduced Labeling (<= 125 ml)

Pictogram



| Signal Word | Danger |
|--------------------------------------------|------------------------------------------------------------------------------------------------|
| Hazard Statements H341 H350 H361f | Suspected of causing genetic defects. May cause cancer. Suspected of damaging fertility. |
| Precautionary Statements | |
| P202 | Do not handle until all safety precautions have been read and understood. |
| P280 | Wear protective gloves/ protective clothing/ eye protection/ face protection. |
| P308 + P313 | IF exposed or concerned: Get medical advice/ attention. |
| Supplemental Hazard Statements | none |

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. Toxicological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.





SECTION 3: Composition/information on ingredients

| 1 | Substances Synonyms | : | 3,3-Bis(4-hydroxypt | nenyl)-1(3H)-isobenzofuranoi | ıe |
|---|---------------------------------------------------------------|----------|--------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|---------------|
| | Formula Molecular weight CAS-No. EC-No. Index-No. | : | C ₂₀ H ₁₄ O ₄ 318.32 g/mol 77-09-8 201-004-7 604-076-00-1 | | |
| | Component | | | Classification | Concentration |
| | phenolphthalein Inclue (SVHC) according to Reg | | | of Substances of Very High (| Concern |
| | CAS-No. EC-No. Index-No. | 77 20 | -09-8 1-004-7 4-076-00-1 | Skin Irrit. 2; Muta. 2; Carc. 1B; Repr. 2; H315, H341, H350, H361f | <= 100 % |

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

Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. Call in physician.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

In case of eye contact

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

If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed No data available

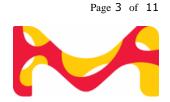
SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.Water Foam Carbon dioxide (CO2) Dry powder

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Unsuitable extinguishing media

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

5.2 Special hazards arising from the substance or mixture Carbon oxides Combustible. Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice 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.

5.4 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: Avoid generation and inhalation of dusts in all circumstances. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection 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. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Work under hood. Do not inhale substance/mixture.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

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

Storage class

Storage class (TRGS 510): 6.1C: Combustible, acute toxic Cat.3 / toxic compounds or compounds which causing chronic effects

7.3 Specific end use(s)

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

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Page 4 of 11

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters

8.2 Exposure controls

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

Skin protection

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 EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Full contact Material: Nitrile rubber Minimum layer thickness: 0.11 mm Break through time: 480 min Material tested:KCL 741 Dermatril® L

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 EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Splash contact Material: Nitrile rubber Minimum layer thickness: 0.11 mm Break through time: 480 min Material tested:KCL 741 Dermatril® L

Body Protection

protective clothing

Respiratory protection

required when dusts are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system. Recommended Filter type: Filter type P3

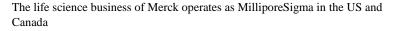
The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Control of environmental exposure

Do not let product enter drains.

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Page 5 of 11





SECTION 9: Physical and chemical properties 9.1 Information on basic physical and chemical properties

| T 111 | ormation on basic p | nysical and chemical properties |
|--------------|----------------------------------------------------|---------------------------------------------------------------------------------------|
| a) | Physical state | crystalline |
| b) | Color | white |
| c) | Odor | odorless |
| d) | Melting point/freezing point | Melting point/ range: 261 - 263 °C - lit. |
| e) | Initial boiling point and boiling range | > 450 °C at 1,013 hPa - OECD Test Guideline 103 |
| f) | Flammability (solid, gas) | No data available |
| g) | Upper/lower flammability or explosive limits | No data available |
| h) | Flash point | Not applicable |
| i) | Autoignition temperature | 397 °C - Relative self-ignition temperature for solids |
| j) | Decomposition temperature | No data available |
| k) | рН | No data available |
| I) | Viscosity | Viscosity, kinematic: No data available Viscosity, dynamic: No data available |
| m) | Water solubility | 0.00336 g/l at 20 °C - OECD Test Guideline 105- slightly soluble |
| n) | Partition coefficient: n-octanol/water | log Pow: 0.9 at 25 °C - OECD Test Guideline 117 - Bioaccumulation is not expected. |
| o) | Vapor pressure | < 0.1 hPa at 50 °C - OECD Test Guideline 104 |
| p) | Density | No data available |
| | Relative density | ca.1.29 at 20.6 °C - OECD Test Guideline 109 |
| q) | Relative vapor density | |
| r) | Particle characteristics | No data available |
| -) | | Not elegatified as eveloping |

- s) Explosive properties Not classified as explosive.
- t) Oxidizing properties none

9.2 Other safety information

Surface tension

71.8 mN/m at 20 °C - OECD Test Guideline 115

Page 6 of 11



SECTION 10: Stability and reactivity

10.1 Reactivity

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

10.2 Chemical stability

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

- **10.3 Possibility of hazardous reactions** Violent reactions possible with: Strong oxidizing agents
- **10.4** Conditions to avoid

no information available

- **10.5 Incompatible materials** Strong oxidizing agents
- **10.6 Hazardous decomposition products** In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Oral: No data available Inhalation: No data available Dermal: No data available

Skin corrosion/irritation

Skin - reconstructed human epidermis (RhE) Result: irritating - 42 min (OECD Test Guideline 439)

Serious eye damage/eye irritation

Eyes - In vitro study Result: non-corrosive - 4 h (OECD Test Guideline 437)

Respiratory or skin sensitization

Local lymph node assay (LLNA) - Mouse Result: Not a skin sensitizer. (OECD Test Guideline 429)

Germ cell mutagenicity

Suspected of causing genetic defects. Test Type: Ames test Test system: Salmonella typhimurium Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative

Carcinogenicity

Presumed to have carcinogenic potential for humans

Reproductive toxicity

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Page 7 of 11



Suspected of damaging fertility.

Specific target organ toxicity - single exposure No data available

Specific target organ toxicity - repeated exposure No data available

Aspiration hazard No data available

11.2 Additional Information

Endocrine disrupting properties

Product:

Assessment

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Repeated dose toxicity - Rat - male and female - Oral - 13 Weeks - NOAEL (No observed adverse effect level) - 800 mg/kg

RTECS: SM8380000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

After uptake of large quantities:

Nausea Vomiting Gastrointestinal disturbance Fever cardiovascular disorders CNS disorders

The substance has a laxative effect.

Other dangerous properties can not be excluded.

This substance should be handled with particular care.

SECTION 12: Ecological information

12.1 Toxicity

| Toxicity to daphnia and other aquatic invertebrates | static test EC50 - Daphnia magna (Water flea) - > 100 mg/l $$ - 48 h (OECD Test Guideline 202) |
|-----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| Toxicity to algae | static test ErC50 - Desmodesmus subspicatus (green algae) - > 3.33 mg/l - 72 h (OECD Test Guideline 201) |
| | static test NOEC - Desmodesmus subspicatus (green algae) - 0.57 |

static test NOEC - Desmodesmus subspicatus (green algae) - 0.57

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Page 8 of 11

mg/l - 72 h (OECD Test Guideline 201)

12.2 Persistence and degradability

Biodegradability

aerobic - Exposure time 28 d Result: 76 % - Readily biodegradable. (OECD Test Guideline 301F) Remarks: The 10 day time window criterion is not fulfilled.

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties <u>Product:</u>

Assessment

: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

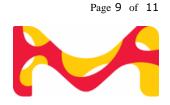
No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods No data available

| SECTION 14: Transport information | | | | |
|----------------------------------------------------------------------------------------|------------------------|---------|--|--|
| 14.1 UN number ADR/RID: - | IMDG: - | IATA: - | | |
| 14.2 UN proper shipping ADR/RID: Not danger IMDG: Not danger IATA: Not danger | ous goods ous goods | | | |
| 14.3 Transport hazard cla ADR/RID: - | ass(es) IMDG: - | IATA: - | | |
| 14.4 Packaging group ADR/RID: - | IMDG: - | IATA: - | | |

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14.5 Environmental hazards ADR/RID: no

IMDG Marine pollutant: no IATA: no

14.6 Special precautions for user

Further information

Not classified as dangerous in the meaning of transport regulations.

SECTION 15: Regulatory information

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

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

| Authorisations and/or restrictions on use REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) | : phenolphthalein |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). | : phenolphthalein |

Other regulations

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Take note of Dir 94/33/EC on the protection of young people at work.

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

SECTION 16: Other information

Full text of H-Statements

| H315 | Causes skin irritation. |
|-------|---------------------------------------|
| H341 | Suspected of causing genetic defects. |
| H350 | May cause cancer. |
| H361f | Suspected of damaging fertility. |

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Page 10 of 11

Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM -American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS -Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx -Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. -Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIOC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Further information

The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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