SECTION 1: Identification

1.1. Identification

Product form: Substance
Substance name: Phenolphthalein, ACS
CAS-No.: 77-09-8
Product code: LC18198
Formula: \( C_{20}H_{14}O_4 \)
Synonyms:
- 1-(3H)-isobenzofuranone, 3,3-bis(4-hydroxyphenyl)-/2,2-bis(para-hydroxyphenyl) phthalide/
- 2,2-bis(4-hydroxyphenyl) phthalide/
- 2-bis(4-hydroxyphenyl)methylbenzoic acid/
- 3,3-bis(4-hydroxyphenyl)-1(3H)iso-benzofuranone/
- 3,3-bis(p-hydroxyphenyl) phthalide
BIG No.: 15948

1.2. Recommended use and restrictions on use

Use of the substance/mixture:
- Laboratory chemical
- Veterinary medicine

1.3. Supplier

LabChem, Inc.
1010 Jackson's Pointe Ct.
Zelienople, PA 16063 - USA
T 412-826-5230 - F 724-473-0647
info@labchem.com - www.labchem.com

1.4. Emergency telephone number

Emergency number: CHEMTREC: 1-800-424-9300 or +1-703-741-5970

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification
Carcinogenicity Category 2: H351 - Suspected of causing cancer
Full text of H statements: see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling
Hazard pictograms (GHS US):

Signal word (GHS US): Warning
Hazard statements (GHS US): H351 - Suspected of causing cancer
Precautionary statements (GHS US):
- P201 - Obtain special instructions before use.
- 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.
- P405 - Store locked up.
- P501 - Dispose of contents/container to comply with local, state and federal regulations.

2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification: Combustible Dust.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Substance type: Mono-constituent
Phenolphthalein, ACS
Safety Data Sheet

Full text of hazard classes and H-statements : see section 16

3.2. Mixtures

SECTION 4: First-aid measures

4.1. Description of first aid measures


First-aid measures after inhalation: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

First-aid measures after skin contact: Rinse with water. Soap may be used. Take victim to a doctor if irritation persists.

First-aid measures after eye contact: Rinse with water. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.


4.2. Most important symptoms and effects (acute and delayed)

Potential Adverse human health effects and symptoms: Slightly irritant to skin. Slightly irritant to eyes.

Symptoms/effects after inhalation: AFTER INHALATION OF DUST: Slight irritation. Coughing.

Symptoms/effects after skin contact: Slight irritation.

Symptoms/effects after eye contact: Slight irritation.


4.3. Immediate medical attention and special treatment, if necessary

No additional information available

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media


5.2. Specific hazards arising from the chemical

Fire hazard: DIRECT FIRE HAZARD. Most organic solids may burn if strongly heated.

Explosion hazard: DIRECT EXPLOSION HAZARD. Most organic solids are liable to dust explosion hazard. INDIRECT EXPLOSION HAZARD. Dust cloud can be ignited by a spark. Reactions with explosion hazards: see "Reactivity Hazard".

5.3. Special protective equipment and precautions for fire-fighters

Precautionary measures fire: Exposure to fire/heat: keep upwind. Exposure to fire/heat: have neighbourhood close doors and windows.

Firefighting instructions: Cool tanks/drums with water spray/remove them into safety. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it.


SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel


Emergency procedures: Mark the danger area. Prevent dust cloud formation. No naked flames. Wash contaminated clothes.
Measures in case of dust release: In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows.

### 6.1.2. For emergency responders

**Protective equipment:** Equip cleanup crew with proper protection. Do not breathe dust.

**Emergency procedures:** Stop release. Ventilate area. If a major spill occurs, all personnel should be immediately evacuated and the area ventilated.

### 6.2. Environmental precautions

Prevent soil and water pollution. Prevent spreading in sewers.

### 6.3. Methods and material for containment and cleaning up

**For containment:** Contain released substance, pump into suitable containers. Plug the leak, cut off the supply. Dam up the solid spill. Knock down/dilute dust cloud with water spray. Provide equipment/receptacles with earthing.

**Methods for cleaning up:** Stop dust cloud by covering with sand/earth. Scoop solid spill into closing containers. Carefully collect the spill/leftovers. Clean contaminated surfaces with a soap solution. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

**Precautions for safe handling:** Avoid raising dust. Take precautions against electrostatic charges. Keep away from naked flames/heat. In finely divided state: use spark/explosionproof appliances. Finely divided: keep away from ignition sources/sparks. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Powdered form: no compressed air for pumping over. Keep container tightly closed.

**Hygiene measures:** Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not eat, drink or smoke when using this product.

### 7.2. Conditions for safe storage, including any incompatibilities

**Incompatible products:** Strong oxidizers. Strong bases.

**Incompatible materials:** Generation of airborne dust.

**Heat-ignition:** KEEP SUBSTANCE AWAY FROM: heat sources, ignition sources.

**Prohibitions on mixed storage:** KEEP SUBSTANCE AWAY FROM: oxidizing agents, reducing agents.

**Storage area:** Store in a cool area. Store in a dry area. Store in a dark area. Keep container in a well-ventilated place. Keep locked up. Provide the tank with earthing. Meet the legal requirements.

**Special rules on packaging:** SPECIAL REQUIREMENTS: closing, clean, opaque, correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Appropriate engineering controls

**Appropriate engineering controls:** Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Provide adequate general and local exhaust ventilation.

### 8.3. Individual protection measures/Personal protective equipment

**Personal protective equipment:**


**Materials for protective clothing:**

GIVE GOOD RESISTANCE: natural rubber, neoprene, nitrile rubber. PVC

**Hand protection:**

Gloves
Eye protection:
Safety glasses. In case of dust production: protective goggles

Skin and body protection:
Protective clothing

Respiratory protection:
Dust production: dust mask with filter type P3. High dust production: self-contained breathing apparatus

Personal protective equipment symbol(s):

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Solid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Crystalline solid. Crystalline powder.</td>
</tr>
<tr>
<td>Color</td>
<td>White to light yellow</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>263 °C</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>&gt; 450 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>&lt; 0.00001 hPa</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.3 (20 °C)</td>
</tr>
<tr>
<td>Specific gravity / density</td>
<td>1277 kg/m³</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>318.33 g/mol</td>
</tr>
<tr>
<td>Solubility</td>
<td>Insoluble in water. Substance sinks in water. Soluble in ethanol. Soluble in acetone. Soluble in toluene. Soluble in bases. Water: 0.000336 g/100ml Ethanol: 8.5 g/100ml Ether: 1 g/100ml</td>
</tr>
<tr>
<td>Log Pow</td>
<td>2.41 (Experimental value)</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>397 °C</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>

#### 9.2. Other information

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>VOC content</td>
<td>0 %</td>
</tr>
<tr>
<td>Other properties</td>
<td>Basic reaction.</td>
</tr>
</tbody>
</table>

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

Violent to explosive reaction with (strong) oxidizers and with (strong) reducers.
Phenolphthalein, ACS
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

10.2 Chemical stability
Unstable on exposure to light.

10.3 Possibility of hazardous reactions
Not established.

10.4 Conditions to avoid
Avoid dust formation. High temperature. Incompatible materials.

10.5 Incompatible materials
Strong oxidizers. Strong bases.

10.6 Hazardous decomposition products
Carbon dioxide. Carbon monoxide.

SECTION 11: Toxicological information

11.1 Information on toxicological effects
Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified
Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Suspected of causing cancer.
Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified
Viscosity, kinematic : No data available
Likely routes of exposure : Inhalation. Skin and eye contact.
Potential Adverse human health effects and symptoms : Slightly irritant to skin. Slightly irritant to eyes.
Symptoms/effects after inhalation : AFTER INHALATION OF DUST: Slight irritation. Coughing.
Symptoms/effects after skin contact : Slight irritation.
Symptoms/effects after eye contact : Slight irritation.

SECTION 12: Ecological information

12.1 Toxicity
Ecology - general : Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008.
Ecology - air : Not included in the list of substances which may contribute to the greenhouse effect (IPCC). Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014). Photodegradation in the air. Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).
Ecology - water : Slightly harmful to crustacea. Severe water pollutant (surface water). Slightly harmful to algae. pH shift.

Phenolphthalein, ACS (77-09-8)
EC50 Daphnia 1 > 100 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)
12.2. Persistence and degradability
Phenolphthalein, ACS (77-09-8)
Persistence and degradability
Readily biodegradable in water.

12.3. Bioaccumulative potential
Phenolphthalein, ACS (77-09-8)
Log Pow
2.41 (Experimental value)
Bioaccumulative potential
Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil
Phenolphthalein, ACS (77-09-8)
Ecology - soil
No (test)data on mobility of the substance available.

12.5. Other adverse effects
No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods
Waste disposal recommendations
Do not discharge into drains or the environment. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber with energy recovery. Dissolve or mix with a combustible solvent.

Additional information

SECTION 14: Transport information

Department of Transportation (DOT)
In accordance with DOT
Not regulated

SECTION 15: Regulatory information

15.1. US Federal regulations
Phenolphthalein, ACS (77-09-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Subject to reporting requirements of United States SARA Section 313
SARA Section 311/312 Hazard Classes
Health hazard - Carcinogenicity

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.
Phenolphthalein, ACS
CAS-No. 77-09-8
100%

15.2. International regulations

CANADA
Phenolphthalein, ACS (77-09-8)
Listed on the Canadian DSL (Domestic Substances List)
Phenolphthalein, ACS
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EU-Regulations
No additional information available

National regulations
No additional information available

15.3. US State regulations

<table>
<thead>
<tr>
<th>Phenolphthalein, ACS (77-09-8)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. - California - Proposition 65 - Carcinogens List</td>
<td>Yes</td>
</tr>
<tr>
<td>U.S. - California - Proposition 65 - Developmental Toxicity</td>
<td>No</td>
</tr>
<tr>
<td>U.S. - California - Proposition 65 - Reproductive Toxicity - Female</td>
<td>No</td>
</tr>
<tr>
<td>U.S. - California - Proposition 65 - Reproductive Toxicity - Male</td>
<td>No</td>
</tr>
</tbody>
</table>

**WARNING:** This product can expose you to Phenolphthalein, ACS, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date : 03/05/2020

Full text of H-phrases: see section 16:

<table>
<thead>
<tr>
<th>H351</th>
<th>Suspected of causing cancer</th>
</tr>
</thead>
<tbody>
<tr>
<td>NFPA health hazard</td>
<td>1 - Materials that, under emergency conditions, can cause significant irritation.</td>
</tr>
<tr>
<td>NFPA fire hazard</td>
<td>1 - Materials that must be preheated before ignition can occur.</td>
</tr>
<tr>
<td>NFPA reactivity</td>
<td>0 - Material that in themselves are normally stable, even under fire conditions.</td>
</tr>
</tbody>
</table>

Hazard Rating
Health : 2 Moderate Hazard - Temporary or minor injury may occur
Flammability : 0 Minimal Hazard - Materials that will not burn
Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Personal protection : E
E - Safety glasses, Gloves, Dust respirator

SDS US LabChem

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