1 Identification

- **Product identifier**
  - **Trade name:** Opti-Fluor O
  - **Article number:** 6013339, 6013331
  - **CAS Number:** 67774-74-7
  - **EC number:** 267-051-0
  - **Index number:** 601-050-00-1
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:** PerkinElmer Health Sciences B.V.
    Rigaweg 22
    9723 TH Groningen
    The Netherlands
    Phone: 0031 50 5445900
    Fax: 0031 50 5445950
    www.perkinelmer.com
  - **Information department:**
    Quality Assurance, Environment, Safety & Health (QA/ESH)
    SDS.Groningen@perkinelmer.com
  - **Emergency telephone number:**
    +31 50 5445971
    CHEMTREC (within U.S.A. and Canada) 1-800-424-9300
    CHEMTREC (from outside U.S.A. and Canada) +1703-527-3887

2 Hazard(s) identification

- **Classification of the substance or mixture**
  - **GHS08 Health hazard**
    Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.
- **Label elements**
  - **GHS label elements**
    The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**
  - **GHS08**
- **Signal word** Danger
- **Hazard-determining components of labeling:**
  - benzene, C10-13-alkyl derivatives
- **Hazard statements**
  - H304 May be fatal if swallowed and enters airways.
51.0.2 Precautionary statements

P301+P310 If swallowed: Immediately call a poison center/doctor.
P331 Do NOT induce vomiting.

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.
vPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterization: Substances

cas No. Description
67774-74-7 benzene, C10-13-alkyl derivatives <100%

Identification number(s)

EC number: 267-051-0
Index number: 601-050-00-1

4 First-aid measures

Description of first aid measures

General information: No special measures required.

After inhalation: Supply fresh air; consult doctor in case of complaints.

After skin contact: Generally the product does not irritate the skin.

After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing: If symptoms persist consult doctor.

Information for doctor:

Most important symptoms and effects, both acute and delayed No further relevant information available.

Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

Extinguishing media

Suitable extinguishing agents:

Foam
Fire-extinguishing powder
Carbon dioxide

Special hazards arising from the substance or mixture No further relevant information available.

Advice for firefighters

Protective equipment: No special measures required.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures Ensure adequate ventilation

Environmental precautions: Do not allow to enter sewers/ surface or ground water.

Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Reference to other sections No dangerous substances are released.
### Protective Action Criteria for Chemicals

<table>
<thead>
<tr>
<th>PAC-1:</th>
<th>92-71-7 2,5-Diphenyloxazole (PPO)</th>
<th>2.5 mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>13280-61-0 1,4-Bis-(2-methylstyryl)-benzene (bis-MSB)</td>
<td>12 mg/m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PAC-2:</th>
<th>92-71-7 2,5-Diphenyloxazole (PPO)</th>
<th>27 mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>13280-61-0 1,4-Bis-(2-methylstyryl)-benzene (bis-MSB)</td>
<td>130 mg/m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PAC-3:</th>
<th>92-71-7 2,5-Diphenyloxazole (PPO)</th>
<th>160 mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>13280-61-0 1,4-Bis-(2-methylstyryl)-benzene (bis-MSB)</td>
<td>790 mg/m³</td>
</tr>
</tbody>
</table>

### Handling and storage

- **Handling:**
  - **Precautions for safe handling:** Ensure good ventilation/exhaustion at the workplace.
  - **Information about protection against explosions and fires:** No special measures required.

- **Conditions for safe storage, including any incompatibilities**
  - **Storage:**
    - **Requirements to be met by storerooms and receptacles:** Store in a cool location.
    - **Information about storage in one common storage facility:** Not required.
    - **Further information about storage conditions:** None.
  - **Specific end use(s)** No further relevant information available.

### Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

- **Control parameters**
  - **Components with limit values that require monitoring at the workplace:** Not required.
  - **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**
  - **Personal protective equipment:**
    - **General protective and hygienic measures:**
      The usual precautionary measures for handling chemicals should be followed.
    - **Breathing equipment:** Not required.
    - **Protection of hands:**
      **Protective gloves**
      The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.
  - **Material of gloves**
    The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
9 Physical and chemical properties

- Information on basic physical and chemical properties
  - General Information
    - Appearance:
      - Form: Fluid
      - Color: Colorless
      - Odor: Characteristic
  - Change in condition
    - Melting point/Melting range: -70 °C (-94 °F)
    - Boiling point/Boiling range: 280 °C (536 °F)
  - Flash point: 150 °C (302 °F)
  - Ignition temperature: 350 °C (662 °F)
  - Danger of explosion: Product does not present an explosion hazard.
  - Explosion limits:
    - Lower: Not determined.
    - Upper: Not determined.
  - Density at 20 °C (68 °F): 0.86 g/cm³ (7.1767 lbs/gal)
  - Solubility in / Miscibility with Water: Not miscible or difficult to mix.
  - Other information: No further relevant information available.

10 Stability and reactivity

- Reactivity No further relevant information available.
- Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- Possibility of hazardous reactions No dangerous reactions known.
- Conditions to avoid: No further relevant information available.
- Incompatible materials: No further relevant information available.
- Hazardous decomposition products: Carbon monoxide
11 Toxicological information

- Information on toxicological effects
- Acute toxicity:
  - LD/LC50 values that are relevant for classification:
    - ATE (Acute Toxicity Estimate)
      - Oral LD50 5,029 mg/kg (Rat)
    - 67774-74-7 benzene, C10-13-alkyl derivatives
      - Oral LD50 5,000 mg/kg (Rat)
  - Primary irritant effect:
    - on the skin: No irritant effect.
    - on the eye: No irritating effect.
  - Sensitization: No sensitizing effects known.
  - Additional toxicological information:
    - When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
    - The substance is not subject to classification.
- Carcinogenic categories
  - IARC (International Agency for Research on Cancer)
    - None of the ingredients is listed.
  - NTP (National Toxicology Program)
    - None of the ingredients is listed.
  - OSHA-Ca (Occupational Safety & Health Administration)
    - None of the ingredients is listed.

12 Ecological information

- Toxicity
  - Aquatic toxicity: No further relevant information available.
  - Persistence and degradability: No further relevant information available.
  - Behavior in environmental systems:
  - Bioaccumulative potential: No further relevant information available.
  - Mobility in soil: No further relevant information available.
  - Additional ecological information:
  - General notes: Water hazard class 1 (Assessment by list): slightly hazardous for water
- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.
- Other adverse effects: No further relevant information available.

13 Disposal considerations

- Waste treatment methods
- Recommendation:
  - Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Trade name: Opti-Fluor O

- Uncleaned packagings:
  - Recommendation: Disposal must be made according to official regulations.

### 14 Transport information

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN-Number</td>
<td>Void</td>
</tr>
<tr>
<td>UN, ADN, IMDG, IATA</td>
<td>Void</td>
</tr>
<tr>
<td>ADR, ADN, IMDG, IATA</td>
<td>Void</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>Void</td>
</tr>
<tr>
<td>ADR, ADN, IMDG, IATA</td>
<td>Void</td>
</tr>
<tr>
<td>Class</td>
<td>Void</td>
</tr>
<tr>
<td>Packing group</td>
<td>Void</td>
</tr>
<tr>
<td>ADR, IMDG, IATA</td>
<td>Void</td>
</tr>
<tr>
<td>Environmental hazards:</td>
<td>No</td>
</tr>
<tr>
<td>Marine pollutant:</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Transport in bulk according to Annex II of</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>MARPOL73/78 and the IBC Code</td>
<td></td>
</tr>
<tr>
<td>Transport/Additional information:</td>
<td>Not dangerous according to the above specifications.</td>
</tr>
<tr>
<td>UN &quot;Model Regulation&quot;:</td>
<td>Void</td>
</tr>
</tbody>
</table>

### 15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - Sara
    - Section 355 (extremely hazardous substances):
      None of the ingredient is listed.
    - Section 313 (Specific toxic chemical listings):
      None of the ingredients is listed.
    - TSCA (Toxic Substances Control Act):
      All components have the value ACTIVE.
    - Hazardous Air Pollutants
      None of the ingredients is listed.
    - Proposition 65
      - Chemicals known to cause cancer:
        None of the ingredients is listed.
      - Chemicals known to cause reproductive toxicity for females:
        None of the ingredients is listed.
      - Chemicals known to cause reproductive toxicity for males:
        None of the ingredients is listed.
### Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

### Carcinogenic categories

None of the ingredients is listed.

### EPA (Environmental Protection Agency)

None of the ingredients is listed.

### TLV (Threshold Limit Value established by ACGIH)

None of the ingredients is listed.

### MAK (German Maximum Workplace Concentration)

None of the ingredients is listed.

### NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

### GHS label elements

The substance is classified and labeled according to the Globally Harmonized System (GHS).

### Hazard pictograms

- **Signal word**: Danger
- **Hazard-determining components of labeling**:
  - benzene, C10-13-alkyl derivatives
- **Hazard statements**
  - H304 May be fatal if swallowed and enters airways.
- **Precautionary statements**
  - P301+P310 If swallowed: Immediately call a poison center/doctor.
  - P331 Do NOT induce vomiting.

### Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.

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**16 Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS**: Quality Assurance, Environment, Safety & Health (QA/ESH)
- **Contact**: SDS.Groningen@perkinelmer.com
- **Date of preparation / last revision**: 01/21/2021 / 3
- **Abbreviations and acronyms**:
  - RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
  - IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
  - ICAO: International Civil Aviation Organisation
  - ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - IMDG: International Maritime Code for Dangerous Goods
  - IATA: International Air Transport Association
  - ACGIH: American Conference of Governmental Industrial Hygienists
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent

(Contd. on page 8)
<table>
<thead>
<tr>
<th>Trade name: Opti-Fluor O</th>
</tr>
</thead>
</table>

PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
NIOSH: National Institute for Occupational Safety  
OSHA: Occupational Safety & Health  
TLV: Threshold Limit Value  
PEL: Permissible Exposure Limit  
REL: Recommended Exposure Limit  
Asp. Tox. 1: Aspiration hazard – Category 1  
* Data compared to the previous version altered.