Material Safety Data Sheet

Printing date 07/28/2000 Reviewed on 06/20/2000

1 Identification of substance:

- **Product details:**

- **Trade name:** 0.45 mic Nitrocellulose/Filter Paper Sandwich

- **Catalog or product number:** 1620234, 1620235, 1620214, 1620215

- **Manufacturer/Supplier:**
  Bio-Rad Laboratories, Life Science Research
  2000 Alfred Nobel Drive
  Hercules, California  94547
  1(510)741-1000

- **Information department:** Technical services, customer support.

- **Emergency information:**
  1(800)424-9300 Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION or ACCIDENT.
  510-741-1000

2 Composition/Information on components:

- **Chemical characterization:**

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Nitrocellulose membrane</td>
</tr>
</tbody>
</table>

- **Identification number(s):**

- **EU Number:** 603-037-01-3
3 Hazards identification

- Emergency overview:
  Flammable.
- Information pertaining to particular dangers for man and environment
  R 10 Flammable.
- Classification system
  The classification was made according to OSHA 29CFR 1910.1200 and 1910.1030, and is expanded upon from company and/or literature information.
- NFPA ratings (scale 0-4)
  Health = 1
  Fire = 2
  Reactivity = 0
- OSHA hazard ratings
  Fire 3: Serious hazard.

4 First aid measures

- 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.
- After swallowing
  Induce vomiting and call for medical help.

5 Fire fighting measures

- Suitable extinguishing agents
  Use fire fighting measures that suit the environment.
- For safety reasons unsuitable extinguishing agents
  Water spray.
  ABC powder
- Protective equipment:
  Wear self-contained respiratory protective device.
6 Accidental release measures

- **Person-related safety precautions:**
  Wear protective equipment (See section 8). Keep unprotected persons away.

- **Measures for environmental protection:** No special measures required.

- **Measures for cleaning/collection:** Ensure adequate ventilation.

7 Handling and storage

- **Handling**
  - **Information for safe handling:**
    No special measures required.
    No special precautions are necessary if used correctly.
  - **Information about protection against explosions and fires:**
    Keep ignition sources away - Do not smoke.
    Protect against electrostatic charges.

- **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:**
    Protect from heat and direct sunlight.

- **Storage class**
  - **Class according to regulation on flammable liquids:** Void

8 Exposure controls and personal protection

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

  **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.

- **Personal protective equipment**
General protective and hygienic measures
Wash hands before breaks and at the end of work.

Protection of hands:
Protective gloves.
Synthetic gloves

Eye protection: Tightly sealed goggles.

9 Physical and chemical properties:

Form: Solid material.
Color: White
Odor: Odorless

<table>
<thead>
<tr>
<th>Value/Range</th>
<th>Unit</th>
<th>Method</th>
</tr>
</thead>
</table>

Change in condition

Melting point/Melting range: undetermined
Boiling point/Boiling range: undetermined

Flash point: > 100 °C

Flammability (solid, gaseous) Highly flammable.

Danger of explosion:
Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

Density: Not determined

Solubility in / Miscibility with
Water: Insoluble

Organic solvents: 0.0 %

Solids content: 100.0 %
10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**
  - Visible decomposition with spontaneous ignition on heating

- **Dangerous reactions** Reacts with acids, alkalis and oxidizing agents

- **Dangerous products of decomposition:**
  - No dangerous decomposition products known

11 Toxicological information

- **Acute toxicity:**
  - **LD/Lc50 values for hazardous components per OSHA criteria:**
    - Nitrocellulose membrane
      - Oral: LD50: 2000 mg/kg (rat)
      - Dermal: LD50: 2000 mg/kg (rat)
      - Inhalative: LC50/4 h: 200 mg/l (rat)

- **Primary irritant effect:**
  - **on the skin:** No irritant effect.
  - **on the eye:** No irritant effect.
  - **Sensitization:** No sensitizing effects known.

12 Ecological information:

- **General notes:** Generally not hazardous for water.

13 Disposal considerations

- **Product:**
  - **Recommendation**
    - Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
    - Hand over to hazardous waste disposers.

- **Uncleaned packagings:**
  - **Recommendation:**
    - Disposal must be made according to official regulations.
14 Transport information

- DOT regulations:
  - Hazard class: 4.1
  - Identification number: UN3270
  - Packing group: II
  - Proper shipping name (technical name):
    - Nitrocellulose membrane filter

- Land transport ADR/RID (cross-border)
  - ADR/RID class: 4.1 Flammable solids
  - Item: 7a
  - UN-Number: 3270
  - Label 4.1
  - Description of goods:
    - Nitrocellulose membrane filter

- Maritime transport IMDG:
  - IMDG Class: 4.1
  - UN Number: 3270
  - Packing group: II
  - EMS Number: 4.1-01
  - Marine pollutant: No
  - Proper shipping name:
    - Nitrocellulose membrane filter

- Air transport ICAO-TI and IATA-DGR:
  - ICAO/IATA Class: 4.1
  - UN/ID Number: 3270
  - Packing group: II
  - Proper shipping name:
    - Nitrocellulose membrane filter
15 Regulations

- **SARA (Superfund Amendments and Reauthorization Act of 1986 - USA)**
  
  **Section 302/304 (40CFR35.30 / 40CFR355.40):**
  
  Substance not listed.

- **California Proposition 65:**
  
  **Chemicals known to cause cancer:**
  
  Substance is not listed.
  
  **Chemicals known to cause reproductive toxicity:**
  
  Substance is not listed.

- **Markings according to EU guidelines:**
  
  The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials

- **Risk phrases:** 10 Flammable.

- **Safety phrases:** 16 Keep away from sources of ignition - No smoking.

- **National regulations**

  - **Classification according to VbF:** Void

  - **Water hazard class:** Generally not hazardous for water.

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 MSDS:** Environmental Health and Safety.

- **Contact:**
  
  Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000

  Diagnostic Group, Juliet Carrara, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000