SAFETY DATA SHEET

1. Identification

Product identifier: Ethyl Acrylate and Methyl Methacrylate Copolymer Dispersion

Other means of identification:

- Catalog number: 1265424
- Recommended use: Specified quality tests and assay use only.
- Recommended restrictions: Take precautionary measures against static discharge.

Manufacturer/Importer/Supplier/Distributor information:

Manufacturer:
- Company name: U. S. Pharmacopeia
- Address: 12601 Twinbrook Parkway, Rockville, MD 20852-1790, United States
- Telephone: RS Technical Services 301-816-8129
- Website: www.usp.org
- E-mail: RSTECH@usp.org
- Emergency phone number: CHEMTREC within US & Canada 1-800-424-9300, CHEMTREC outside US & Canada +1 703-527-3887

2. Hazard(s) identification

Physical hazards: Not classified.

Health hazards: Not classified.

Environmental hazards: Not classified.

OSHA defined hazards: Not classified.

Label elements:
- Hazard symbol: None.
- Signal word: None.
- Hazard statement: Not available.
- Precautionary statement:
  - Prevention: Not available.
  - Response: Not available.
  - Storage: Not available.
  - Disposal: Not available.
- Hazard(s) not otherwise classified (HNOC): Not classified.

Other hazards which do not result in classification: None known.

3. Composition/information on ingredients

Mixture:

Hazardous components:

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethoxylated nonyl phenol</td>
<td></td>
<td>26027-38-3</td>
<td>1-5</td>
</tr>
</tbody>
</table>

Non-hazardous components:

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Ethyl Acrylate, Methyl Methacrylate) Copolymer</td>
<td></td>
<td>9010-88-2</td>
<td>40 - 70</td>
</tr>
<tr>
<td>Water</td>
<td></td>
<td>7732-18-5</td>
<td>30-60</td>
</tr>
</tbody>
</table>

Material name: Ethyl Acrylate and Methyl Methacrylate Copolymer Dispersion

1265424 Version #: 02 Revision date: 03-18-2016 Issue date: 11-08-2006
4. First-aid measures

Inhalation
If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.

Skin contact
Do not peel polymer from the skin. Rinse skin with water/shower. Get medical attention if irritation develops and persists.

Eye contact
Rinse with water. Get medical attention if irritation develops and persists.

Ingestion
Rinse mouth. If ingestion of a large amount does occur, call a poison control center immediately.

Most important symptoms/effects, acute and delayed
Not available.

Indication of immediate medical attention and special treatment needed
Provide general supportive measures and treat symptomatically.

General information
Remove from exposure. Remove contaminated clothing. For treatment advice, seek guidance from an occupational health physician or other licensed health-care provider familiar with workplace chemical exposures. In the United States, the national poison control center phone number is 1-800-222-1222. If person is not breathing, give artificial respiration. If breathing is difficult, give oxygen if available. Persons developing serious hypersensitivity (anaphylactic) reactions must receive immediate medical attention.

5. Fire-fighting measures

Suitable extinguishing media
Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media
Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical
No unusual fire or explosion hazards noted.

Special protective equipment and precautions for firefighters
Wear suitable protective equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Keep unnecessary personnel away. Wear appropriate personal protective equipment. Avoid inhalation of vapors. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up
Absorb spillage with suitable absorbent material. For waste disposal, see section 13 of the SDS. Clean surface thoroughly to remove residual contamination.

7. Handling and storage

Precautions for safe handling
As a general rule, when handling USP Reference Standards, avoid all contact and inhalation of dust, mists, and/or vapors associated with the material. Clean equipment and work surfaces with suitable detergent or solvent after use. After removing gloves, wash hands and other exposed skin thoroughly.

Conditions for safe storage, including any incompatibilities
Store in tight container as defined in the USP-NF. This material should be handled and stored per label instructions to ensure product integrity.

8. Exposure controls/personal protection

Biological limit values
No biological exposure limits noted for the ingredient(s).

Exposure guidelines
No exposure standards allocated.

Appropriate engineering controls
Airborne exposure should be controlled primarily by engineering controls such as general dilution ventilation, local exhaust ventilation, or process enclosure. Local exhaust ventilation is generally preferred to general exhaust because it can control the contaminant at its source, preventing dispersion into the work area. An industrial hygiene survey involving air monitoring may be used to determine the effectiveness of engineering controls.

Individual protection measures, such as personal protective equipment

Eye/face protection
Safety glasses with sideshields are recommended. Face shields or goggles may be required if splash potential exists or if corrosive materials are present. Approved eye protection (e.g., bearing the ANSI Z87 or CSA stamp) is preferred. Maintain eyewash facilities in the work area.

Skin protection
Hand protection
Chemically compatible gloves. For handling solutions, ensure that the glove material is protective against the solvent being used. Use handling practices that minimize direct hand contact. Employees who are sensitive to natural rubber (latex) should use nitrile or other synthetic nonlatex gloves. Use of powdered latex gloves should be avoided due to the risk of latex allergy.

Other
For handling of laboratory scale quantities, a cloth lab coat is recommended. Where significant quantities are handled, work clothing may be necessary to prevent take-home contamination.
Respiratory protection
Where respirators are deemed necessary to reduce or control occupational exposures, use NIOSH-approved respiratory protection and have an effective respirator program in place (applicable U.S. regulation OSHA 29 CFR 1910.134).

General hygiene considerations
Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Appearance
White, opaque, slightly viscous liquid.

Physical state
Liquid.

Form
Liquid.

Odor
Faint characteristic odor.

Odor threshold
Not available.

pH
Approximately 7 at 20 °C

Melting point/freezing point
Not available.

Initial boiling point and boiling range
212 °F (100 °C)

Flash point
Not available.

Evaporation rate
Not available.

Flammability (solid, gas)
Not applicable.

Upper/lower flammability or explosive limits
Flammability limit - lower (%)
Not available.

Flammability limit - upper (%)
Not available.

Explosive limit - lower (%)
Not available.

Explosive limit - upper (%)
Not available.

Vapor pressure
Not available.

Vapor density
< 1 at 20 °C

Relative density
Not available.

Solubility in water
Soluble.

Auto-ignition temperature
Not available.

Decomposition temperature
Not available.

Viscosity
Not available.

Other information
Solubility (other)
Soluble in acetone, in ethanol, and in 2-propanol.

10. Stability and reactivity

Reactivity
None known.

Chemical stability
Material is stable under normal conditions.

Possibility of hazardous reactions
No dangerous reaction known under conditions of normal use.

Conditions to avoid
None known.

Incompatible materials
None known.

Hazardous decomposition products
Irritating and/or toxic fumes or gases. Emits toxic fumes under fire conditions.

11. Toxicological information

Information on likely routes of exposure
Ingestion
Not classified.

Inhalation
Not classified.

Skin contact
Not classified.

Eye contact
Not classified.

Symptoms related to the physical, chemical, and toxicological characteristics
Not available.

Acute toxicity
<table>
<thead>
<tr>
<th>Test Results</th>
<th>Species</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td>Ethyl Acrylate and Methyl Methacrylate Copolymer Dispersion</td>
</tr>
<tr>
<td>Inhalation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC50</td>
<td>Rat</td>
<td>3.9 mg/l</td>
</tr>
<tr>
<td>Oral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Dog</td>
<td>&gt; 7950 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Rat</td>
<td>&gt; 25200 mg/kg</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Not classified.</td>
<td></td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Not classified.</td>
<td></td>
</tr>
<tr>
<td><strong>Local effects</strong></td>
<td></td>
<td>Ethyl Acrylate and Methyl Methacrylate Copolymer Dispersion</td>
</tr>
<tr>
<td>Irritation test</td>
<td></td>
<td>Result: Non-irritating.</td>
</tr>
<tr>
<td>Species: Rabbit</td>
<td></td>
<td>Organ: Eye.</td>
</tr>
<tr>
<td>Irritation test</td>
<td></td>
<td>Result: Non-irritating.</td>
</tr>
<tr>
<td>Species: Rabbit</td>
<td></td>
<td>Organ: Skin.</td>
</tr>
<tr>
<td><strong>Respiratory or skin sensitization</strong></td>
<td></td>
<td>Ethyl Acrylate and Methyl Methacrylate Copolymer Dispersion</td>
</tr>
<tr>
<td>Respiratory sensitization</td>
<td>Classification not possible.</td>
<td></td>
</tr>
<tr>
<td>Skin sensitization</td>
<td>Not classified.</td>
<td></td>
</tr>
<tr>
<td><strong>Skin sensitization</strong></td>
<td></td>
<td>Ethyl Acrylate and Methyl Methacrylate Copolymer Dispersion</td>
</tr>
<tr>
<td>Guinea pig maximazation test</td>
<td>Result: Non-sensitizing.</td>
<td></td>
</tr>
<tr>
<td><strong>Germ cell mutagenicity</strong></td>
<td></td>
<td>Ethyl Acrylate and Methyl Methacrylate Copolymer Dispersion</td>
</tr>
<tr>
<td>Classification not possible.</td>
<td>Data from germ cell mutagenicity tests were not found.</td>
<td></td>
</tr>
<tr>
<td><strong>Mutagenicity</strong></td>
<td></td>
<td>Ethyl Acrylate and Methyl Methacrylate Copolymer Dispersion</td>
</tr>
<tr>
<td>Ames test</td>
<td>Result: Negative.</td>
<td></td>
</tr>
<tr>
<td>Mouse lymphoma assay</td>
<td>Result: Negative.</td>
<td></td>
</tr>
<tr>
<td><strong>Carcinogenicity</strong></td>
<td></td>
<td>Ethyl Acrylate and Methyl Methacrylate Copolymer Dispersion</td>
</tr>
<tr>
<td>This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Reproductive toxicity</strong></td>
<td></td>
<td>Ethyl Acrylate and Methyl Methacrylate Copolymer Dispersion</td>
</tr>
<tr>
<td>Reproduction study</td>
<td>Result: No maternal, fetal, or developmental toxicity observed.</td>
<td></td>
</tr>
<tr>
<td>Species: Rat</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Specific target organ toxicity - single exposure</strong></td>
<td></td>
<td>Ethyl Acrylate and Methyl Methacrylate Copolymer Dispersion</td>
</tr>
<tr>
<td>Not classified.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Specific target organ toxicity - repeated exposure</strong></td>
<td></td>
<td>Ethyl Acrylate and Methyl Methacrylate Copolymer Dispersion</td>
</tr>
<tr>
<td>Not classified.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Aspiration hazard</strong></td>
<td></td>
<td>Ethyl Acrylate and Methyl Methacrylate Copolymer Dispersion</td>
</tr>
<tr>
<td>Classification not possible.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 12. Ecological information

**Ecotoxicity**

<table>
<thead>
<tr>
<th>Test Results</th>
<th>Species</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Aquatic</strong></td>
<td></td>
<td>Ethyl Acrylate and Methyl Methacrylate Copolymer Dispersion</td>
</tr>
<tr>
<td>Fish</td>
<td>EC50</td>
<td>Fish</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt; 1000 mg/l, 48 hours estimated</td>
</tr>
<tr>
<td><strong>Components</strong></td>
<td></td>
<td>Ethoxylated nonyl phenol (CAS 26027-38-3)</td>
</tr>
<tr>
<td><strong>Aquatic</strong></td>
<td></td>
<td>Ethyl Acrylate and Methyl Methacrylate Copolymer Dispersion</td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>Water flea (Daphnia magna)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12.2 mg/l, 48 hours</td>
</tr>
</tbody>
</table>

**Persistence and degradability** Not available.
13. Disposal considerations

Disposal instructions: Dispose in accordance with all applicable regulations. Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste.

Local disposal regulations: Dispose in accordance with all applicable regulations.

Hazardous waste code: The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products: Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging: Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT: Not regulated as dangerous goods.

IATA: Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not available.

General information: It is the shipper's responsibility to determine the correct transport classification at the time of shipment.

15. Regulatory information

US federal regulations: This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.

Superfund Amendments and Reauthorization Act of 1986 (SARA)
- Hazard categories:
  - Immediate Hazard - No
  - Delayed Hazard - No
  - Fire Hazard - No
  - Pressure Hazard - No
  - Reactivity Hazard - No

SARA 302 Extremely hazardous substance: Not listed.

SARA 311/312 Hazardous chemical: No

SARA 313 (TRI reporting): Not regulated.

Other federal regulations
- Food and Drug Administration (FDA): Not regulated.

US state regulations
- US. California Proposition 65: California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Country(s) or region | Inventory name                                                                 | On inventory (yes/no) |
---------------------|--------------------------------------------------------------------------------|-----------------------|
Europe              | European Inventory of Existing Commercial Chemical Substances (EINECS)          | No                    |
Europe              | European List of Notified Chemical Substances (ELINCS)                         | No                    |
Japan               | Inventory of Existing and New Chemical Substances (ENCS)                       | Yes                   |
Korea               | Existing Chemicals List (ECL)                                                 | Yes                   |
New Zealand         | New Zealand Inventory                                                         | Yes                   |
Philippines         | Philippine Inventory of Chemicals and Chemical Substances (PICCS)              | Yes                   |
United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes                   |

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date          | 11-08-2006            |
Revision date       | 03-18-2016            |
Version #           | 02                   |
Further information | Not available.        |
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Revision Information | This document has undergone significant changes and should be reviewed in its entirety. |