



# SAFETY DATA SHEET

## 1. Identification

|                                                        |                                                                           |                 |
|--------------------------------------------------------|---------------------------------------------------------------------------|-----------------|
| Product identifier                                     | Pindolol                                                                  |                 |
| Other means of identification                          |                                                                           |                 |
| Catalog number                                         | 1539701                                                                   |                 |
| CAS number                                             | 13523-86-9                                                                |                 |
| Chemical name                                          | 2-Propanol, 1-(1H-indol-4-yloxy)-3-[(1-methylethyl)amino]-                |                 |
| Recommended use                                        | Specified quality tests and assay use only.                               |                 |
| Recommended restrictions                               | Not for use as a drug. Not for administration to humans or animals.       |                 |
| Manufacturer/Importer/Supplier/Distributor information |                                                                           |                 |
| Manufacturer                                           |                                                                           |                 |
| Company name                                           | U. S. Pharmacopeia                                                        |                 |
| Address                                                | 12601 Twinbrook Parkway<br>Rockville<br>MD<br>20852-1790<br>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

|                              |                                                 |                                    |
|------------------------------|-------------------------------------------------|------------------------------------|
| <b>Physical hazards</b>      | Not classified.                                 |                                    |
| <b>Health hazards</b>        | Acute toxicity, oral                            | Category 3                         |
|                              | Specific target organ toxicity, single exposure | Category 1 (cardiovascular system) |
| <b>Environmental hazards</b> | Not classified.                                 |                                    |
| <b>OSHA defined hazards</b>  | Not classified.                                 |                                    |
| <b>Label elements</b>        |                                                 |                                    |



|                                                  |                                                                                                              |  |
|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------|--|
| <b>Signal word</b>                               | Danger                                                                                                       |  |
| <b>Hazard statement</b>                          | Toxic if swallowed. Causes damage to organs (cardiovascular system).                                         |  |
| <b>Precautionary statement</b>                   |                                                                                                              |  |
| <b>Prevention</b>                                | Do not breathe dust. Wash thoroughly after handling.                                                         |  |
| <b>Response</b>                                  | If swallowed: Immediately call a poison center/doctor. Rinse mouth. If exposed: Call a poison center/doctor. |  |
| <b>Storage</b>                                   | Store locked up.                                                                                             |  |
| <b>Disposal</b>                                  | Dispose of contents/container in accordance with local/regional/national/international regulations.          |  |
| <b>Hazard(s) not otherwise classified (HNOC)</b> | None known.                                                                                                  |  |
| <b>Supplemental information</b>                  | Pharmacologically active material.                                                                           |  |

## 3. Composition/information on ingredients

### Substance

| Chemical name | Common name and synonyms | CAS number | %   |
|---------------|--------------------------|------------|-----|
| Pindolol      |                          | 13523-86-9 | 100 |

#### 4. First-aid measures

|                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Inhalation</b>                                                             | Move to fresh air. Call a physician if symptoms develop or persist.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Skin contact</b>                                                           | Rinse skin with water/shower. Get medical attention if irritation develops and persists.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Eye contact</b>                                                            | Rinse with water. Get medical attention if irritation develops and persists.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Ingestion</b>                                                              | Call a physician or poison control center immediately. Rinse mouth. Do not use mouth-to-mouth method if substance is ingested. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Most important symptoms/effects, acute and delayed</b>                     | Cardiovascular effects. Pharmacologically active material. Occupational exposure may cause physiological effects.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Indication of immediate medical attention and special treatment needed</b> | Treat symptomatically. For beta-adrenergic blockers: Treatment may include the following: Do NOT induce vomiting. Administer activated charcoal as a slurry and perform gastric lavage to decrease absorption. Gastric lavage may increase vagal tone. Maintain an open airway and assist ventilation if necessary. Perform an early echocardiographic evaluation. For mild hypotension, administer IV fluids. If severe, administer IV glucagon, calcium, or catecholamines (dopamine, norepinephrine, epinephrine). Concurrent high-dose insulin euglycemia therapy may allow for a decrease in the dose of catecholamine. For bradycardia, administer IV atropine, glucagon, and isoproterenol. Cardiac pacing may also be needed. Sodium bicarbonate may be helpful for dysrhythmias and conduction defects. For bronchospasm, administer nebulized bronchodilators. Systemic corticosteroids may also be beneficial. For seizures, administer a benzodiazepine (diazepam or lorazepam) intravenously. Muscle relaxants and artificial ventilation may also be required. For hypoglycemia, administer glucose or glucagon. |
| <b>General information</b>                                                    | 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

|                                                                      |                                                                                                                                                                                        |
|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Suitable extinguishing media</b>                                  | Water. Foam. Dry chemical or CO2. Use fire-extinguishing media appropriate for surrounding materials.                                                                                  |
| <b>Unsuitable extinguishing media</b>                                | None known.                                                                                                                                                                            |
| <b>Specific hazards arising from the chemical</b>                    | No unusual fire or explosion hazards noted.                                                                                                                                            |
| <b>Special protective equipment and precautions for firefighters</b> | Wear suitable protective equipment.                                                                                                                                                    |
| <b>Fire fighting equipment/instructions</b>                          | Use water spray to cool unopened containers. As with all fires, evacuate personnel to a safe area. Firefighters should use self-contained breathing equipment and protective clothing. |
| <b>Specific methods</b>                                              | Cool containers exposed to flames with water until well after the fire is out.                                                                                                         |
| <b>General fire hazards</b>                                          | No unusual fire or explosion hazards noted.                                                                                                                                            |

#### 6. Accidental release measures

|                                                                            |                                                                                                                                                                                                                                                                                                                          |
|----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Personal precautions, protective equipment and emergency procedures</b> | Keep unnecessary personnel away. Wear appropriate personal protective equipment. Avoid inhalation of dust from the spilled material. 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. |
| <b>Methods and materials for containment and cleaning up</b>               | Avoid the generation of dusts during clean-up. Sweep up or vacuum up spillage and collect in suitable container for disposal. Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS.                                                                                  |
| <b>Environmental precautions</b>                                           | Avoid discharge into drains, water courses or onto the ground.                                                                                                                                                                                                                                                           |

## 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. Select and use containment devices and personal protective equipment based on a risk assessment of material potency and exposure potential.

### 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

### Occupational exposure limits

#### Exposure limit values

##### Industrial Use Material

##### Type

##### Value

Pindolol (CAS 13523-86-9)

TWA

0.05 mg/m<sup>3</sup>

### Biological limit values

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

### Appropriate engineering controls

For laboratory operations, use local exhaust ventilation or a ventilated enclosure for high energy operations such as particle sizing. Control exposures to below the occupational exposure level (if available). Select and use containment devices and personal protective equipment based on a risk assessment of exposure potential. Cover all containers for solutions and slurries while being transferred.

### Individual protection measures, such as personal protective equipment

#### Eye/face protection

Wear safety glasses with side shields, chemical splash goggles, or full face shield, if necessary. Base the choice of protection on the job activity and potential for contact with eyes or face. An emergency eye wash station should be available.

#### Skin protection

##### Hand protection

Wear nitrile or other impervious gloves if skin contact is possible. When the material is dissolved or suspended in an organic solvent, wear gloves that provide protection against the solvent.

##### Other

Train employees in proper gowning and degowning practices. Wear lab coat. Base the choice of skin protection on the job activity, potential for skin contact and solvents and reagents in use. Do not wear protective garments in common areas (e.g., cafeterias) or out-of-doors.

#### Respiratory protection

Respirators are generally not required for laboratory operations. Use a tight-fitting full-face respirator with HEPA filters for spill cleanup. Choose respiratory protection appropriate to the task and the level of existing engineering controls.

#### Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

### General hygiene considerations

Handling practices in this SDS are recommendations for laboratory use of reference standards. Procedures for any other uses or quantities should be determined after an appropriate assessment.

## 9. Physical and chemical properties

### Appearance

Appearance descriptions are general information and not specific to any USP lot.

#### Physical state

Solid.

#### Form

Powder.

#### Color

White. Off-white.

### Odor

Faint odor.

### Odor threshold

Not available.

### pH

Not available.

### Melting point/freezing point

336.2 - 343.4 °F (169 - 173 °C)

### Initial boiling point and boiling range

Not available.

### Flash point

Not available.

### Evaporation rate

Not available.

### Flammability (solid, gas)

Not available.

### Upper/lower flammability or explosive limits

#### Flammability limit - lower (%)

Not available.

|                                                |                                                                                                                                |
|------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| <b>Flammability limit - upper (%)</b>          | Not available.                                                                                                                 |
| <b>Explosive limit - lower (%)</b>             | Not available.                                                                                                                 |
| <b>Explosive limit - upper (%)</b>             | Not available.                                                                                                                 |
| <b>Vapor pressure</b>                          | < 0.0000001 kPa at 25 °C                                                                                                       |
| <b>Vapor density</b>                           | Not available.                                                                                                                 |
| <b>Relative density</b>                        | Not available.                                                                                                                 |
| <b>Solubility(ies)</b>                         |                                                                                                                                |
| <b>Solubility (water)</b>                      | Practically insoluble.                                                                                                         |
| <b>Solubility (other)</b>                      | Acetone: Slightly soluble.<br>Methanol: Slightly soluble.<br>Chloroform: Very slightly soluble.<br>Ethanol: Sparingly soluble. |
| <b>Partition coefficient (n-octanol/water)</b> | 1.75                                                                                                                           |
| <b>Auto-ignition temperature</b>               | Not available.                                                                                                                 |
| <b>Decomposition temperature</b>               | Not available.                                                                                                                 |
| <b>Viscosity</b>                               | Not available.                                                                                                                 |
| <b>Other information</b>                       |                                                                                                                                |
| <b>Chemical family</b>                         | Indole derivative; propanolamine.                                                                                              |
| <b>Molecular formula</b>                       | C <sub>14</sub> H <sub>20</sub> N <sub>2</sub> O <sub>2</sub>                                                                  |
| <b>Molecular weight</b>                        | 248.32                                                                                                                         |
| <b>pH in aqueous solution</b>                  | 9.5                                                                                                                            |

## 10. Stability and reactivity

|                                           |                                                                                                    |
|-------------------------------------------|----------------------------------------------------------------------------------------------------|
| <b>Reactivity</b>                         | The product is stable and non-reactive under normal conditions of use, storage and transport.      |
| <b>Chemical stability</b>                 | Material is stable under normal conditions.                                                        |
| <b>Possibility of hazardous reactions</b> | No dangerous reaction known under conditions of normal use.                                        |
| <b>Conditions to avoid</b>                | Contact with incompatible materials.                                                               |
| <b>Incompatible materials</b>             | None known.                                                                                        |
| <b>Hazardous decomposition products</b>   | NO <sub>x</sub> . Irritating and/or toxic fumes or gases. Emits toxic fumes under fire conditions. |

## 11. Toxicological information

### Information on likely routes of exposure

|                                                                                      |                                                                                                                                                                                                                                                                                      |
|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Inhalation</b>                                                                    | Knowledge about health hazard is incomplete.                                                                                                                                                                                                                                         |
| <b>Skin contact</b>                                                                  | Knowledge about health hazard is incomplete.                                                                                                                                                                                                                                         |
| <b>Eye contact</b>                                                                   | Knowledge about health hazard is incomplete.                                                                                                                                                                                                                                         |
| <b>Ingestion</b>                                                                     | Toxic if swallowed. Based on information from therapeutic use, this material may cause: Cardiovascular effects.                                                                                                                                                                      |
| <b>Symptoms related to the physical, chemical, and toxicological characteristics</b> | Beta-adrenergic blockers: Gastrointestinal disturbances. Headache. Mood or mental changes. Drowsiness. Weakness. Insomnia. Nervousness. Visual disturbances. Swelling of feet or legs. Muscle, joint, or chest pain. Seizures. Coma. Cardiovascular effects. Respiratory depression. |

### Information on toxicological effects

|                       |                     |
|-----------------------|---------------------|
| <b>Acute toxicity</b> | Toxic if swallowed. |
|-----------------------|---------------------|

| <b>Product</b>                   | <b>Species</b>                               | <b>Test Results</b> |
|----------------------------------|----------------------------------------------|---------------------|
| Pindolol (CAS 13523-86-9)        |                                              |                     |
|                                  | <b>Oral</b>                                  |                     |
|                                  | LD50                                         |                     |
|                                  | Mouse                                        | 235 mg/kg           |
|                                  | Rat                                          | 263 mg/kg           |
| <b>Skin corrosion/irritation</b> | Knowledge about health hazard is incomplete. |                     |

|                                                                                              |                                                                                                                                                                                                                                                                           |
|----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Serious eye damage/eye irritation</b>                                                     | Knowledge about health hazard is incomplete.                                                                                                                                                                                                                              |
| <b>Respiratory or skin sensitization</b>                                                     |                                                                                                                                                                                                                                                                           |
| <b>Respiratory sensitization</b>                                                             | Knowledge about sensitization hazard is incomplete.                                                                                                                                                                                                                       |
| <b>Skin sensitization</b>                                                                    | Knowledge about health hazard is incomplete.                                                                                                                                                                                                                              |
| <b>Germ cell mutagenicity</b>                                                                | Knowledge about mutagenicity is incomplete.                                                                                                                                                                                                                               |
| <b>Mutagenicity</b>                                                                          |                                                                                                                                                                                                                                                                           |
| Ames test (S. typhimurium)                                                                   |                                                                                                                                                                                                                                                                           |
| Result: Negative (+/- activation)                                                            |                                                                                                                                                                                                                                                                           |
| <b>Carcinogenicity</b>                                                                       | Based on available data, the classification criteria are not met.                                                                                                                                                                                                         |
| < 124 mg/kg/day Carcinogenicity                                                              |                                                                                                                                                                                                                                                                           |
| Result: Negative.                                                                            |                                                                                                                                                                                                                                                                           |
| Species: Mouse                                                                               |                                                                                                                                                                                                                                                                           |
| Test Duration: 2 years                                                                       |                                                                                                                                                                                                                                                                           |
| < 59 mg/kg/day Carcinogenicity                                                               |                                                                                                                                                                                                                                                                           |
| Result: Negative.                                                                            |                                                                                                                                                                                                                                                                           |
| Species: Rat                                                                                 |                                                                                                                                                                                                                                                                           |
| Test Duration: 2 years                                                                       |                                                                                                                                                                                                                                                                           |
| <b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>                                |                                                                                                                                                                                                                                                                           |
| Not listed.                                                                                  |                                                                                                                                                                                                                                                                           |
| <b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)</b>                        |                                                                                                                                                                                                                                                                           |
| Not regulated.                                                                               |                                                                                                                                                                                                                                                                           |
| <b>US. National Toxicology Program (NTP) Report on Carcinogens</b>                           |                                                                                                                                                                                                                                                                           |
| Not listed.                                                                                  |                                                                                                                                                                                                                                                                           |
| <b>Reproductive toxicity</b>                                                                 | Knowledge about health hazard is incomplete. Some beta-adrenergic blocking agents have been reported to cause fetal and neonatal bradycardia, hypotension, and hypoglycemia when administered during pregnancy, and may also be associated with fetal growth retardation. |
| <b>Reproductivity</b>                                                                        |                                                                                                                                                                                                                                                                           |
| 10 - 100 mg/kg Gestational study                                                             |                                                                                                                                                                                                                                                                           |
| Result: Increased resorption rate at low dose; increased offspring mortality at higher dose. |                                                                                                                                                                                                                                                                           |
| Species: Rat                                                                                 |                                                                                                                                                                                                                                                                           |
| 10 - 20 mg/kg Developmental study                                                            |                                                                                                                                                                                                                                                                           |
| Result: Maternal toxicity; delayed fetal growth and bone development                         |                                                                                                                                                                                                                                                                           |
| Species: Rabbit                                                                              |                                                                                                                                                                                                                                                                           |
| 30 - 100 mg/kg Gestational study                                                             |                                                                                                                                                                                                                                                                           |
| Result: Increased mortality in offspring.                                                    |                                                                                                                                                                                                                                                                           |
| Species: Rat                                                                                 |                                                                                                                                                                                                                                                                           |
| 400 mg/kg Developmental study                                                                |                                                                                                                                                                                                                                                                           |
| Result: Maternal toxicity; delayed fetal growth and bone development.                        |                                                                                                                                                                                                                                                                           |
| Species: Rat                                                                                 |                                                                                                                                                                                                                                                                           |
| Developmental study (Doses exceeding 100x the maximum human dose)                            |                                                                                                                                                                                                                                                                           |
| Result: No evidence of embryotoxicity or birth defects.                                      |                                                                                                                                                                                                                                                                           |
| Species: Rabbit                                                                              |                                                                                                                                                                                                                                                                           |
| <b>Specific target organ toxicity - single exposure</b>                                      | Causes damage to organs (cardiovascular system).                                                                                                                                                                                                                          |
| <b>Specific target organ toxicity - repeated exposure</b>                                    | Knowledge about health hazard is incomplete.                                                                                                                                                                                                                              |
| <b>Aspiration hazard</b>                                                                     | Based on available data, the classification criteria are not met.                                                                                                                                                                                                         |
| <b>Further information</b>                                                                   | Pharmacologically active material. Occupational exposure may cause physiological effects.                                                                                                                                                                                 |

## 12. Ecological information

|                                                    |                                                                                                                                                                                                    |
|----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Ecotoxicity</b>                                 | The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. |
| <b>Persistence and degradability</b>               | No data is available on the degradability of this product.                                                                                                                                         |
| <b>Bioaccumulative potential</b>                   |                                                                                                                                                                                                    |
| <b>Octanol/water partition coefficient log Kow</b> |                                                                                                                                                                                                    |
| 1.75                                               |                                                                                                                                                                                                    |

|                                              |                                                                                                                                                                                                                                                                         |
|----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Mobility in soil</b>                      | No data available.                                                                                                                                                                                                                                                      |
| <b>Other adverse effects</b>                 | No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.                                                                                 |
| <b>13. Disposal considerations</b>           |                                                                                                                                                                                                                                                                         |
| <b>Disposal instructions</b>                 | Dispose of contents/container in accordance with local/regional/national/international 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. |
| <b>Local disposal regulations</b>            | Dispose in accordance with all applicable regulations.                                                                                                                                                                                                                  |
| <b>Hazardous waste code</b>                  | The waste code should be assigned in discussion between the user, the producer and the waste disposal company.                                                                                                                                                          |
| <b>Waste from residues / unused products</b> | 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).                                                        |
| <b>Contaminated packaging</b>                | Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.                                                              |

## 14. Transport information

### DOT

|                                   |                                          |
|-----------------------------------|------------------------------------------|
| <b>UN number</b>                  | UN2811                                   |
| <b>UN proper shipping name</b>    | Toxic solids, organic, n.o.s. (Pindolol) |
| <b>Transport hazard class(es)</b> |                                          |
| <b>Class</b>                      | 6.1                                      |
| <b>Subsidiary risk</b>            | -                                        |
| <b>Packing group</b>              | III                                      |
| <b>Packaging exceptions</b>       | 153                                      |
| <b>Packaging non bulk</b>         | 213                                      |
| <b>Packaging bulk</b>             | 240                                      |

### IATA

|                                     |                                          |
|-------------------------------------|------------------------------------------|
| <b>UN number</b>                    | UN2811                                   |
| <b>UN proper shipping name</b>      | Toxic solids, organic, n.o.s. (Pindolol) |
| <b>Transport hazard class(es)</b>   |                                          |
| <b>Class</b>                        | 6.1                                      |
| <b>Subsidiary risk</b>              | -                                        |
| <b>Packing group</b>                | III                                      |
| <b>Other information</b>            |                                          |
| <b>Passenger and cargo aircraft</b> | Allowed with restrictions.               |
| <b>Cargo aircraft only</b>          | Allowed with restrictions.               |

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable.

**DOT; IATA**



|                            |                                                                                                               |
|----------------------------|---------------------------------------------------------------------------------------------------------------|
| <b>General information</b> | It is the shipper's responsibility to determine the correct transport classification at the time of shipment. |
|----------------------------|---------------------------------------------------------------------------------------------------------------|

## 15. Regulatory information

|                               |                                                                                                                |
|-------------------------------|----------------------------------------------------------------------------------------------------------------|
| <b>US federal regulations</b> | This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. |
|-------------------------------|----------------------------------------------------------------------------------------------------------------|

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Not listed.

**SARA 304 Emergency release notification**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)**

Not regulated.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)****SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical** Yes**Classified hazard categories** Acute toxicity (any route of exposure)  
Specific target organ toxicity (single or repeated exposure)**SARA 313 (TRI reporting)**

Not regulated.

**Other federal regulations****Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.**US state regulations****California Proposition 65**California Safe Drinking Water and Toxic Enforcement Act of 2016 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).**International Inventories**

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

\*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** 03-22-2011

**Revision date** 02-15-2019

**Version #** 06

## Disclaimer

USP Reference Standards are sold for chemical test and assay purposes only, and NOT for human consumption. The information contained herein is applicable solely to the chemical substance when used as a USP Reference Standard and does not necessarily relate to any other use of the substance described, (i.e. at different concentrations, in drug dosage forms, or in bulk quantities). USP Reference Standards are intended for use by persons having technical skill and at their own discretion and risk. This information has been developed by USP staff from sources considered reliable but has not been independently verified by the USP. Therefore, the USP Convention cannot guarantee the accuracy of the information in these sources nor should the statements contained herein be considered an official expression. NO REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE is made with respect to the information contained herein.