Revision Date: 10/22/2015

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

1.1 Product Identifiers

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Product Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>BP610</td>
<td>Pyridine Wash Buffer - Component HBM56008</td>
</tr>
</tbody>
</table>

1.2 Relevant identified uses of substance or mixture and uses advised against

Identified uses: Lab use

1.3 Details of the supplier of the safety data sheet

Company: Bangs Laboratories / A Division of Polysciences
9025 Technology Drive
Fishers, Indiana 46038
USA
Telephone: 800-387-0672

1.4 Emergency telephone number

Emergency Phone: 317-348-1673

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification:
- Flammable liquids (Category 2) H225
- Acute toxicity, Oral (Category 4) H302
- Acute toxicity, Inhalation (Category 4) H332
- Acute toxicity, Dermal (Category 4) H312
- Skin irritation (Category 2) H315
- Eye irritation (Category 2A) H319
- Acute aquatic toxicity (Category 3) H402

Signal word: Danger

Pictogram:

Hazard Statement(s)

- H225: Highly flammable liquid and vapour.
- H302 + H312 + H332: Harmful if swallowed, in contact with skin or if inhaled
- H315: Causes skin irritation.
- H319: Causes serious eye irritation.
- H402: Harmful to aquatic life.
- P210: Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- P233: Keep container tightly closed.
- P240: Ground/bond container and receiving equipment.
- P241: Use explosion-proof electrical/ ventilating/ lighting/ equipment.
- P242: Use only non-sparking tools.
- P243: Take precautionary measures against static discharge.
- P261: Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
- P264: Wash skin thoroughly after handling.
- P270: Do not eat, drink or smoke when using this product.
- P271: Use only outdoors or in a well-ventilated area.
- P273: Avoid release to the environment.
- P280: Wear protective gloves/ eye protection/ face protection.
P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332 + P313 If skin irritation occurs: Get medical advice/attention.
P337 + P313 If eye irritation persists: Get medical advice/attention.
P362 Take off contaminated clothing and wash before reuse.
P403 + P235 Store in a well-ventilated place. Keep cool.
P501 Dispose of contents/container to an approved waste disposal plant.

2.2 Hazard Ratings: These ratings are Bangs Laboratories, Inc.'s own assessments of the properties of the material using the ANSI/NFPA 704 Standard. Additional information can be found by consulting in the NFPA published ratings lists (List 325 and List 49). If no data is listed, the information is not available.

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Reactivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Item#</th>
<th>Name</th>
<th>CAS #</th>
<th>% in Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Water</td>
<td>007732185</td>
<td>99.2</td>
</tr>
<tr>
<td>2</td>
<td>Pyridine</td>
<td>000110861</td>
<td>.80</td>
</tr>
</tbody>
</table>

SECTION 4: FIRST AID MEASURES

Eyes: In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

Skin: In case of contact, immediately wash skin with copious amounts of water for at least 15 minutes.

Ingestion: Contact physician immediately. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Inhalation: Remove to fresh air if effects occur. Consult medical personnel.

Systemic: Human effects not established. No specific antidote. Treatment based on sound judgment of physician and the individual reactions of the patient.

SECTION 5: FIRE FIGHTING MEASURES

5.1 Extinguishing Media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture: Carbon oxides, Nitrogen oxides (NOx)

5.3 Advice for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further Information: Use water spray to cool unopened containers.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Any information given below is considered to be in addition to internal guidelines for isolation of spill, containment of spill, removal of ignition source from immediate area, and collection for disposal of spill by trained, properly protected clean up personnel. Wear vinyl gloves, soak up spill in paper toweling, and rinse area with water. Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. Put all generated waste into an approved container and dispose of as waste. Observe all applicable federal, state, and local disposal laws.

6.2 Environmental Precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up: Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

6.4 Reference to other sections: For disposal see section 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Use explosion-proof equipment. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.
7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Storage class (TRGS 510): Flammable liquids
Storage: Store at 2-8˚C. Keep refrigerated. Do not freeze. Keep container tightly closed.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1 Control parameters

<table>
<thead>
<tr>
<th>Value</th>
<th>Control</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>TWA</td>
<td>1.000000 ppm</td>
<td>USA. ACGIH Threshold Limit Values (TLV)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Remarks: Liver damage Kidney damage Skin irritation Confirmed animal carcinogen with unknown relevance to humans</td>
</tr>
<tr>
<td>TWA</td>
<td>5.000000 ppm</td>
<td>USA. NIOSH Recommended Exposure Limits</td>
</tr>
<tr>
<td>TWA</td>
<td>5.000000 ppm</td>
<td>USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants</td>
</tr>
<tr>
<td></td>
<td>15.000000mg/m3</td>
<td>The value in mg/m3 is approximate.</td>
</tr>
</tbody>
</table>

8.2 Exposure Controls: Eye/face protection: Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU). Skin protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario. Body Protection: Complete suit protecting against chemicals, Flame retardant antistatic protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Control of environmental exposure: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

- Boiling Point: >200˚F
- Solubility: soluble
- Appearance: clear, colorless liquid with pyridine odor

9.2 Other safety information: None

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity: No data available
10.2 Chemical Stability: Stable under recommended storage conditions
10.3 Possibility of hazardous reactions: Vapours may form explosive mixture with air.
10.4 Conditions to avoid: Heat, flames and sparks.
10.5 Incompatible materials: Strong oxidizing agents, Strong acids

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects: Acute toxicity LD50 Oral - Rat - 891.0 mg/kg Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste): Eye: Ptosis. Behavioral: Somnolence (general depressed activity). Behavioral: Coma. LC50 Inhalation - Rat - 1 h - 28,500 mg/m3 Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste): Eye: Lacrimation. Behavioral: Somnolence (general depressed activity). Lungs, Thorax, or Respiration: Dyspnea. LD50 Dermal - Rabbit - 1,121 mg/kg Remarks: Behavioral: Ataxia. Gastrointestinal: Changes in structure or function of salivary glands. Liver: Other changes. Skin corrosion/irritation Skin - Rabbit Result: Mild skin irritation - 24 h (Draize Test) Carcinogenicity IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Pyridine) NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity: To fish LC50 - Pimephales promelas (fathead minnow) - 93.80 mg/l - 96 h LC50 - Cyprinus carpio (Carp) - 26.00 mg/l - 96 h
- Toxicity to daphnia and other aquatic invertebrates
  - EC50 - Daphnia magna (Water flea) - 940.00 mg/l - 48 h
  - EC50 - Daphnia magna (Water flea) - 1,140.00 mg/l - 48 h
  - EC50 - Daphnia pulex (Water flea) - 520.00 mg/l - 48 h
- Toxicity to algae EC50 - SELENASTRUM - 100.00 - 180.00 mg/l - 72 h
12.2 Persistence and degradability: Biodegradability aerobic - Exposure time 28 d Result: 97 % - Readily biodegradable
12.3 Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Harmful to aquatic life.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods: The following chart lists the status of the chemical and its components in reference to 40 CFR Part 261.33. If the product is listed by code number, the substance may be subject to special federal and state disposal regulations. If no codes are listed, the material must be disposed of in compliance with all Federal, State, and Local Regulations.

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Waste Code</th>
<th>Regulated Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>007732185</td>
<td>not listed</td>
<td>not listed</td>
</tr>
<tr>
<td>000110861</td>
<td>not listed</td>
<td>not listed</td>
</tr>
</tbody>
</table>

SECTION 14: TRANSPORT INFORMATION

Refer to bill of lading or container label for DOT or other transportation hazard classification, if any.

SECTION 15: REGULATORY INFORMATION

All components of this product are on the TSCA public inventory.

Prop 65: Column A identifies those items which are known to the State of California to cause cancer. Column B identifies those which are known to the State of California to cause reproductive toxicity.

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Column A</th>
<th>Column B</th>
</tr>
</thead>
<tbody>
<tr>
<td>007732185</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>000110861</td>
<td>no</td>
<td>no</td>
</tr>
</tbody>
</table>

SARA Toxic Release Chemicals (as defined in Section 313 of SARA Title III): This list identifies the toxic chemicals, including their de minimis concentrations for which reporting is required under Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA). This list is also referred to as the Toxic Release Inventory (TRI) List.

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Regulated Name</th>
<th>de minimis conc %</th>
<th>Rep. Thres.</th>
</tr>
</thead>
<tbody>
<tr>
<td>007732185</td>
<td>not listed</td>
<td>not listed</td>
<td>not listed</td>
</tr>
<tr>
<td>000110861</td>
<td>not listed</td>
<td>not listed</td>
<td>not listed</td>
</tr>
</tbody>
</table>

SARA Extremely Hazardous Substances and TPQs: This list identifies hazardous substances regulated under Section 302 of SARA Title III with their TPQs (in pounds), as listed in 40 CFR 355, Appendices A and B.

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Regulated Name</th>
<th>TPQ (pounds)</th>
<th>EHS-RQ (pounds)</th>
</tr>
</thead>
<tbody>
<tr>
<td>007732185</td>
<td>not listed</td>
<td>not listed</td>
<td>not listed</td>
</tr>
<tr>
<td>000110861</td>
<td>not listed</td>
<td>not listed</td>
<td>not listed</td>
</tr>
</tbody>
</table>

SECTION 16: OTHER INFORMATION

BANGS LABORATORIES, INC. provides the information contained herein in good faith, but makes no representation as to its comprehensiveness or accuracy. Individuals receiving this information must exercise their independent judgment in determining its appropriateness for a particular purpose.

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Preparation Information:
Bangs Laboratories, Inc.
1-800-387-0672

END OF SDS