1. PRODUCT AND COMPANY IDENTIFICATION

Product Name STABROM® 909 Biocide
Chemical Name Proprietary.
Chemical Family Stabilized bromine biocide, aqueous solution
CAS-No Mixture
Recommended use Water treatment chemical

Company Albemarle Corporation
451 Florida Street
Baton Rouge, LA 70801

Emergency Telephone Numbers 225-344-7147
For Non-Emergency 800-535-3030

2. HAZARDS IDENTIFICATION

Emergency Overview
Corrosive - causes irreversible eye damage
Causes skin burns
Harmful if swallowed
Harmful in contact with skin
Can decompose exothermically at elevated temperatures (see Environmental Protection, Storage Requirement Section for details)

Potential Health Effects

- Eyes: Possible risks of irreversible effects.
- Skin: Causes burns. Harmful in contact with skin.
- Inhalation: In the event of fire and/or explosion do not breathe fumes. Not expected to be acutely toxic.
- Ingestion: Harmful if swallowed.

See Section 11 for additional Toxicological information.

Occupational Exposure Limit See Section 8

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Halogenated complex</td>
<td></td>
<td>18</td>
</tr>
<tr>
<td>Sodium hydroxide</td>
<td>1310-73-2</td>
<td>&lt;10</td>
</tr>
</tbody>
</table>
4. FIRST AID MEASURES

**Ad Lib**
If medical advice is needed: Have product container or label at hand.

**Eye contact**
If in eyes, hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**Skin Contact**
If on skin or clothing, take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**Inhalation**
Move to fresh air.

**Ingestion**
If swallowed, Call a physician or Poison Control Centre immediately. Have person sip a glass of water if able to swallow. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

**Notes to Physician**
Probable mucosal damage may contraindicate the use of gastric lavage.

5. FIRE-FIGHTING MEASURES

**Combustion/explosion hazards**
Not available.

**Suitable Extinguishing Media**
Not required

**Hazardous Combustion Products**
Bromine. Chlorine

**Protective Equipment and Precautions for Firefighters**
In the event of fire and/or explosion do not breathe fumes.

6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions**
Ensure adequate ventilation.

**Environmental precautions**
Contain any spill with dikes or absorbents to prevent migration and entry into sewers or streams. Large spills should be collected mechanically (remove by pumping) for disposal. May require excavation of contaminated soil. Take up small spills by first diluting with water and then using a dehalogenating agent such as sodium thiosulfate solution.

**Methods for Clean-up**
Soak up with inert absorbent material (e.g. sand, silica gel, universal binder, sawdust).

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7. HANDLING AND STORAGE

Handling
Avoid contact with skin, eyes and clothing.

Storage
Avoid freezing, excessive heat or exposure to light, especially direct sunlight. If heating is necessary to prevent freezing, care must be taken to prevent overheating. Precautions should be taken to ensure that the average product temperature is maintained below 110°F. Temperature monitoring is recommended. At elevated temperatures, self-heating can lead to vigorous gas generation and over-pressurization of storage containers if appropriate controls are not in place. Avoid exposure of this product to incompatible materials/chemicals (see Reactivity Data section). Use of incompatible materials can promote the exothermic decomposition of the product. In extreme cases, this could result in vigorous gas formation and over-pressurization of the storage container.

STORAGE CONTAINER: Vented and opaque containers: As the product ages, activity is gradually lost and pressure can build-up in the headspace (nitrogen); therefore, the product should be stored in vented containers. Product should also be stored in opaque containers to prevent exposure to light. To maximize product shelf life, store the product in an opaque container, in a cool, dry, well-ventilated area.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>ACGIH TLV (TWA)</th>
<th>ACGIH (STEL or Ceiling)</th>
<th>OSHA PEL (TWA)</th>
<th>OSHA (STEL or Ceiling)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hydroxide</td>
<td>1310-73-2</td>
<td>&lt;10</td>
<td>2mg/m³ (TWA)</td>
<td>2mg/m³ (STEL or Ceiling)</td>
<td>2mg/m³ (TWA)</td>
<td>2mg/m³ (STEL or Ceiling)</td>
</tr>
</tbody>
</table>

Engineering Controls
Use only in well-ventilated areas.

Personal Protective Equipment

Eye/face Protection
Chemical goggles or face shield with safety glasses.

Skin Protection
Wear protective gloves/clothing.

Hand protection
Gloves resistant to chemical permeation.

Other information
Wear suitable protective clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Flash point</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Form</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Yellow</td>
</tr>
<tr>
<td>Odor</td>
<td>Mild. Sweet.</td>
</tr>
<tr>
<td>pH</td>
<td>12.4 (min.)</td>
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<tr>
<td>Boiling Point</td>
<td>106°C</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>~2.7cPs (25°C)</td>
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<tr>
<td>Oxidizing Properties</td>
<td>Oxidizer</td>
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<tr>
<td>Flammable limits (LEL, UEL)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>19 mmHg (25°C)</td>
</tr>
<tr>
<td>Density</td>
<td>1.29-1.37 g/ml (25°C)</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No data available</td>
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<tr>
<td>Water Solubility</td>
<td>Miscible</td>
</tr>
<tr>
<td>Melting/freezing point</td>
<td>0 °C / 32°F</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>~2cSt (25°C)</td>
</tr>
</tbody>
</table>
10. STABILITY AND REACTIVITY

Stability
Stable.

Conditions to Avoid

Materials to avoid
This product is strongly basic and an oxidizing agent. Avoid contact with alcohols, aldehydes, strong reducing agents, strong oxidizers, acids, ammonia-containing products, and common metals such as steel, aluminum, iron and copper. Use of incompatible materials can promote the exothermic decomposition of the product.

Hazardous decomposition products
None under normal use.

Hazardous Polymerization
None under normal processing.

11. TOXICOLOGICAL INFORMATION

Acute Effects
Eye contact
Possible risks of irreversible effects.

Skin contact
Causes burns.

Ingestion
Harmful if swallowed.

LD50 Oral: 2491 mg/kg
LD50 Dermal: >2000 mg/kg
Inhalation LC50 > 20.37mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity
LC50
3.8 mg whole material/L; 96-hour; Bluegill Sunfish Lepomis Macrocirus

Ecotoxicity effects
No information available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method
Dispose in a safe manner in accordance with local/national regulations.
14. TRANSPORT INFORMATION

DOT

- **Proper Shipping Name**: Corrosive Liquids, Basic, Inorganic, N.O.S. (Halogenated Complex, Sodium Hydroxide)
- **Hazard Class**: 8
- **UN No.**: 3266
- **Packing Group**: III
- **Description**: UN 3266 Corrosive liquid, Basic, Inorganic, N.O.S. (Halogenated complex, Sodium hydroxide), 8, III

IMDG/IMO

- **IMO Class**: 8
- **UN-No**: 3266
- **IMO Labelling and Marking**: 8
- **Proper Shipping Name**: Corrosive liquid, Basic, Inorganic, N.O.S. (Halogenated complex, Sodium hydroxide)
- **EmS**: F-A, S-B
- **Marpol - Annex II**: Not determined
- **Marpol - Annex III**: Unregulated
- **Transport Description**: UN 3266 Corrosive liquid, Basic, Inorganic, N.O.S. (Halogenated complex, Sodium hydroxide), 8, III

IATA/ICAO

- **IATA/ICAO Class**: 8
- **Packing Group**: III
- **UN-No**: 3266
- **IATA/ICAO Labelling**: 8
- **Passenger Aircraft**: Forbidden
- **Cargo aircraft only**: Forbidden
- **Proper shipping name**: Corrosive liquid, Basic, Inorganic, N.O.S. (Halogenated complex, Sodium hydroxide)
- **Transport Description**: UN 3266 Corrosive liquid, Basic, Inorganic, N.O.S. (Halogenated complex, Sodium hydroxide), 8, III

15. REGULATORY INFORMATION

<table>
<thead>
<tr>
<th>International Inventories</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>AICS</th>
<th>ENECS</th>
<th>ELINCS</th>
<th>EnCS</th>
<th>KECL</th>
<th>PICCS</th>
<th>CHINA</th>
<th>NZIoC</th>
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<tbody>
<tr>
<td>STABROM® 909 Biocide</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

(X) Complies  (-) Does not Comply

**TSCA Statement**
THIS MATERIAL IS EXEMPT FROM THE TOXIC SUBSTANCES CONTROL ACT (15 USC 2601-2629).

**SARA 313**
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazardous Categorization**
- Chronic Health Hazard: No
- Acute Health Hazard: Yes
- Fire Hazard: No
- Sudden Release of Pressure Hazard: No
- Reactive Hazard: No

**Reportable and Threshold Planning Quantities**
The following components have RQs and/or TPQs under SARA and/or CERCLA
### State Regulations
This product contains the following chemicals regulated in the states listed below.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>California Prop. 65</th>
<th>Massachusetts</th>
<th>New Jersey</th>
<th>Pennsylvania</th>
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</table>

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

**WHMIS Hazards**
- E  Corrosive material
- D2B  Toxic materials

### 16. OTHER INFORMATION

**Prepared By**
Health & Environment Department
Albemarle Corporation

FOR ADDITIONAL NONEMERGENCY PRODUCT INFORMATION, CONTACT:

HEALTH AND ENVIRONMENT DEPARTMENT
ALBEMARLE CORPORATION
451 FLORIDA ST.
BATON ROUGE, LA. 70801
(800) 535-3030

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