1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Material Identity
Product Name: BLEACH, LIQUID 5% HOUSEHOLD TYPE
General or Generic ID: SALTS

Company                             Emergency Telephone Number:
Ashland Chemical Co.               1-800-ASHLAND (1-800-274-5263)
P.O. Box 2219                      24 hours everyday
Columbus, OH 43216
614-790-3333

Regulatory Information Number:
1-800-325-3751

2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient(s)</th>
<th>CAS Number</th>
<th>% (by weight)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WATER</td>
<td>7732-18-5</td>
<td>93.0– 97.0</td>
</tr>
<tr>
<td>SODIUM HYPOCHLORITE</td>
<td>7681-52-9</td>
<td>3.3–  7.0</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

Potential Health Effects

Eye
Can cause permanent eye injury. Symptoms include stinging, tearing, redness, and swelling of eyes. Can injure the cornea and cause blindness.

Skin
Can cause permanent skin damage. Symptoms may include redness, burning, and swelling of skin, burns, and other skin damage. Additional symptoms of skin contact may include: skin blistering, hair loss, Passage of this material into the body through the skin is possible, but it is unlikely that this would result in harmful effects during safe handling and use.

Swallowing
Swallowing this material may be harmful or fatal. Symptoms may include severe stomach and intestinal irritation (nausea, vomiting, diarrhea), abdominal pain, and vomiting of blood. Swallowing this material may cause burns and destroy tissue in the mouth, throat, and digestive tract. Low blood pressure and shock may occur as a result of severe tissue injury.
Inhalation
It is possible to breathe this material under certain conditions of handling and use (for example, during heating, spraying, or stirring). Breathing this material may be harmful or fatal. Symptoms may include severe irritation and burns to the nose, throat, and respiratory tract.

Symptoms of Exposure
Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: stomach or intestinal upset (nausea, vomiting, diarrhea) cough, tight feeling in the chest, difficult breathing, lung edema (fluid buildup in the lung tissue), lung damage, shock, coma, and death.

Target Organ Effects
This material (or a component) has been shown to lower activity of certain immune system cells in experimental animals. The significance of this effect with respect to human health is uncertain.

Developmental Information
There are no data available for assessing risk to the fetus from maternal exposure to this material.

Cancer Information
Based on the available information, this material cannot be classified with regard to carcinogenicity. This material is not listed as a carcinogen by the International Agency for Research on Cancer, the National Toxicology Program, or the Occupational Safety and Health Administration.

Other Health Effects
When combined with an acid or ammonia, sodium hypochlorite may produce chlorine or chloramine gas, respectively. Inhalation of these gases results in coughing, choking, difficult breathing, and other symptoms of respiratory tract irritation. Fluid may collect in the lung tissue following a severe gas exposure.

Primary Route(s) of Entry
Inhalation, Skin contact, Eye contact.

4. FIRST AID MEASURES

Eyes
If material gets into the eyes, immediately flush eyes gently with water for at least 15 minutes while holding eyelids apart. If symptoms develop as a result of vapor exposure, immediately move individual away from exposure and into fresh air before flushing as recommended above. Seek immediate medical attention.

Skin
Immediately flush skin with water for at least 15 minutes while removing contaminated clothing and shoes. Seek immediate medical attention. Wash clothing before reuse and discard contaminated shoes.

Swallowing
Seek immediate medical attention. Do not induce vomiting. Vomiting will cause further damage to the mouth and throat. If
individual is conscious and alert, immediately rinse mouth with water and give milk or water to drink. If possible, do not leave individual unattended.

Inhalation
If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm and quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, administer oxygen.

Note to Physicians
Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: skin, lung (for example, asthma-like conditions), immune system.

5. FIRE FIGHTING MEASURES

Flash Point
Not applicable

Explosive Limit
Not applicable

Autoignition Temperature
No data

Hazardous Products of Combustion
May form: chlorine.

Fire and Explosion Hazards
No special fire hazards are known to be associated with this product.

Extinguishing Media
Use an extinguishing media appropriate for surrounding fire.

Fire Fighting Instructions
Water may be used to keep fire-exposed containers cool until fire is out. Wear a self-contained breathing apparatus with a full facepiece operated in the positive pressure demand mode with appropriate turn-out gear and chemical resistant personal protective equipment. Refer to the personal protective equipment section of this MSDS.

NFPA Rating
Not determined

6. ACCIDENTAL RELEASE MEASURES

Small Spill
Dilute with water and absorb onto a noncombustible absorbent material.

Large Spill
Prevent run-off to sewers, streams or other bodies of water. If run-off occurs, notify proper authorities as required, that a spill has occurred. Collect and add slowly to large volume of water. Persons not wearing protective equipment should be
excluded from area of spill until clean-up is completed. Stop spill at source. Dike to prevent spreading. Pump to salvage tank.

7. HANDLING AND STORAGE

Handling
Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Emergency eyewash fountains and safety showers should be available in the immediate vicinity of potential exposure.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection
Chemical splash goggles and face shield (8" min.) in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses. (Consult your industrial hygienist.)

Skin Protection
Wear impervious gloves (consult your safety equipment supplier). To prevent skin contact, wear impervious clothing and boots.

Respiratory Protections
If overexposure has been determined or documented, a NIOSH/MSHA jointly approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators under specified conditions. (See your safety equipment supplier.) Engineering or administrative controls should be implemented to reduce exposure.

Engineering Controls
Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below level of overexposure (from known, suspected or apparent adverse effects).

Exposure Guidelines
Component
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WATER (7732-18-5)
No exposure limits established

SODIUM HYPOCHLORITE (7681-52-9)
No exposure limits established

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point
(for product) > 212.0 °F (100.0 °C) @ 760 mmHg

Vapor Pressure
(for component) 17.500 mmHg @ 68.00 °F

Specific Vapor Density
Specific Gravity
1.090 @ 68.00 F

Liquid Density
9.070 lbs/gal @ 68.00 F
1.090 kg/l @ 20.00 C

Percent Volatiles
95.0 %

Evaporation Rate
SLOWER THAN ETHYL ETHER

Appearance
No data

State
LIQUID

Physical Form
HOMOGENEOUS SOLUTION

Color
LIGHT YELLOW, CHLORINE ODOR

Odor
No data

pH
11.4

10. STABILITY AND REACTIVITY

Hazardous Polymerization
Product will not undergo hazardous polymerization.

Hazardous Decomposition
May form: chlorine.

Chemical Stability
Stable.

Incompatibility
Avoid contact with: excessive heat, reducing agents, strong mineral acids.

11. TOXICOLOGICAL INFORMATION

No data

12. ECOLOGICAL INFORMATION

No data
13. DISPOSAL CONSIDERATION

Waste Management Information
Dispose of in accordance with all applicable local, state and federal regulations.

14. TRANSPORT INFORMATION

DOT Information - 49 CFR 172.101
DOT Description:
NON-REGULATED BY D.O.T.

Container/Mode:
55 GAL DRUM/TRUCK PACKAGE

NOS Component:
None

RQ (Reportable Quantity) - 49 CFR 172.101
Product Quantity (lbs) Component

<table>
<thead>
<tr>
<th>Product Quantity (lbs)</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>1905</td>
<td>SODIUM HYPOCHLORITE</td>
</tr>
</tbody>
</table>

15. REGULATORY INFORMATION

US Federal Regulations
TSCA (Toxic Substances Control Act) Status
TSCA (UNITED STATES) The intentional ingredients of this product are listed.

CERCLA RQ - 40 CFR 302.4(a)

<table>
<thead>
<tr>
<th>Component</th>
<th>RQ (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SODIUM HYPOCHLORITE</td>
<td>100</td>
</tr>
</tbody>
</table>

CERCLA RQ - 40 CFR 302.4(b)
Materials without a "listed" RQ may be reportable as an "unlisted hazardous substance". See 40 CFR 302.5 (b).

SARA 302 Components - 40 CFR 355 Appendix A
None

Section 311/312 Hazard Class - 40 CFR 370.2
Immediate (X)  Delayed (X)  Fire ( )  Reactive ( )  Sudden Release of Pressure ( )

SARA 313 Components - 40 CFR 372.65
None

International Regulations
Inventory Status
Not determined

State and Local Regulations
California Proposition 65
None

New Jersey RTK Label Information
16. OTHER INFORMATION

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

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