Material Safety Data Sheet
Linear Alkylbenzene Sulfonate, 1 mL = 1 mg

Section 1 - Chemical Product and Company Identification

MSDS Name:
Linear Alkylbenzene Sulfonate Standard, 1 mL = 1 mg
Catalog Numbers:
Q05161
Synonyms:

Company Identification:
Qorpak
1195 Washington Pike
Bridgeville, PA 15017
Company Phone Number:
(412) 257-3100
Emergency Phone Number:
(800) 424-9300
CHEMTREC Phone Number:
(800) 424-9300

Section 2 - Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name:</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>25155-30-0</td>
<td>Sodium dodecylbenzene sulfonate</td>
<td>0.107</td>
</tr>
<tr>
<td>7664-93-9</td>
<td>Sulfuric acid</td>
<td>&lt;1</td>
</tr>
<tr>
<td>7732-18-5</td>
<td>Water</td>
<td>Balance</td>
</tr>
</tbody>
</table>

Section 3 - Hazards Identification

Emergency Overview

**Appearance:** clear, colorless solution

**Caution! Corrosive.** Causes irritation or burns to eyes, skin, digestive and respiratory tracts. Risk of serious eye damage. Toxic. Harmful if swallowed.

**Target Organs:** Eyes, skin, respiratory system, teeth

Potential Health Effects

**Eye:**
Causes eye irritation and burns. Eye contact can result in blindness; exposure to mist leads to watering, irritation.

**Skin:**
Skin contact may result in severe burns, blistering and pain.

**Ingestion:**
May cause severe and permanent damage to the digestive tract. Causes gastrointestinal tract burns. Vomiting and diarrhea of dark blood may occur; asphyxia from throat swelling. Stomach and esophagus may become perforated.
Inhalation:
May cause severe irritation of the respiratory tract with sore throat, coughing, shortness of breath, and delayed lung edema. Causes chemical burns to the respiratory tract. At 5 mg/m³ concentrations, nose and throat irritation occurs, with headache, cough, increased respiratory rate, impairment of lung to ventilate.

Chronic:
Delayed symptoms include tight chest, fluid in lungs, cyanosis (blue color), hypotension, bronchitis or emphysema, tracheobronchitis, dental erosion/discoloration, pneumonia, gastrointestinal disturbances may occur. Skin irritation/dermatitis, conjunctivitis, and lacrimation of the eye may occur.

Section 4 - First Aid Measures

Eyes:
Immediately flush eyes with copious amounts of water for at least 15 minutes, lifting the upper and lower lids until chemical is gone. Get medical aid immediately.

Skin:
Flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical aid.

Ingestion:
Do NOT induce vomiting. Give conscious victim 30 mL (1 ounce) milk of magnesia and large quantities of water to dilute acid. Get medical aid at once. Never give anything by mouth to an unconscious person.

Inhalation:
Remove to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid at once.

Notes to Physician:
Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information:
As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Contact with metals may evolve flammable hydrogen gas. Avoid breathing toxic and corrosive vapors. Emits toxic fumes under fire conditions.

Extinguishing Media:
Use extinguishing media most appropriate for the surrounding fire.

Autoignition Temperature:
No information found.

Flash Point:
No information found.

NFPA Rating:
CAS# 7732-18-5: Not published.
CAS# 7664-93-9: Health- 3, Flammability- 0, Reactivity- 2
CAS# 25155-30-0: Health- 2, Flammability- 0, Reactivity-0

Explosion Limits:
Lower: N/A  Upper: N/A
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Section 6 - Accidental Release Measures

General Information:
Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:
May be neutralized with slaked lime, limestone, or sodium bicarbonate to pH 7. Place in labeled plastic containers for disposal; wash down area with water.

Section 7 - Handling and Storage

Handling:
Wash thoroughly after handling. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale. Use with adequate ventilation. Avoid prolonged or repeated exposure.

Storage:
Do not store near alkaline substances. Store in tightly closed, labeled, non-reactive containers (glass, plastic) protected from heat and incompatible substances.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:
Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>Not included on this list</td>
<td>Not included on this list</td>
<td>Not included on this list</td>
</tr>
<tr>
<td>Sulfuric acid</td>
<td>1 mg/m³ TWA; 3 mg/mL STEL</td>
<td>1 mg/m³ TWA</td>
<td>1 mg/m³ TWA</td>
</tr>
<tr>
<td>Sodium dodecylbenzene sulfonate</td>
<td>Not included on this list</td>
<td>Not included on this list</td>
<td>Not included on this list</td>
</tr>
</tbody>
</table>

OSHA Vacated PELs:
Sulfuric acid: 1 mg/m³ TWA

Personal Protective Equipment

Eyes:
Wear appropriate protective eyeglasses or chemical safety goggles as descibed by OSHA’s eye and face protection regulations in 29 CFR 1910.133. Provide an eye-wash fountain in the immediate work area. Do not wear contact lenses when working with chemicals.

Skin:
Wear appropriate protective gloves to prevent skin exposure.

Clothing:
Wear acid-protective clothing and gloves.

Respirators:
50 mg/m³ – GMAGHiEP/HiEPF/SAF/SCBAF
100 mg/m³ – SAF: PD, PP, CF
Escape- GMAGHiEP/SCBA. Firefighting- SCBAF: PD, PP
Section 9 - Physical and Chemical Properties

Physical State: Liquid
Color: Colorless
Odor: Odorless
pH: Acidic
Vapor Pressure: No information found.
Vapor Density: No information found.
Evaporation Rate: < ether
Viscosity: No information found.
Boiling Point: No information found.
Freezing/Melting Point: No information found.
Decomposition Temperature: No information found.
Solubility in water: Soluble
Specific Gravity/Density: 1.0 – 1.1
Molecular Formula: No information found.
Molecular Weight: No information found.

Section 10 - Stability and Reactivity

Chemical Stability:
Stable under normal temperatures and pressures.

Conditions to Avoid:
Excess heat, combustible materials, organic materials, oxidizers, amines, bases.

Incompatibilities with Other Materials:
Explosive or violent reactions with acetone cyanohydrin, acetone and nitric acid or potassium dichromate, acrylonitrile, alcohols, hydrogen peroxide, allyl chloride, bromates and metals, bromine pentafluoride, carbides, all chlorates, chlorine trifluoride, cuprous nitride, ethylene cyanohydrin, fulminates, indane and nitric acid, iron, mercuric nitride, nitric acid and glycerides, p-nitrotoluene, penta-silver trihydroxidaminophosphate, perchlorates, phosphorus isocyanate picrates, silver permanganate, sodium, sodium carbonate, toluene and nitric acid. Dangerous temperatures and pressures occur with other substances, especially organic combinations. Explosive hydrogen gas is evolved from contact with steel, other metals.

Hazardous Decomposition Products:
Oxides of sulfur, hydrogen gas, hydrogen sulfide gas, carbon monoxide, carbon dioxide.

Hazardous Polymerization:
Has not been reported.

Section 11 - Toxicological Information

RTECS:
CAS# 25155-30-0: DB6825000.
CAS# 7664-93-9: WS5600000.
CAS# 7732-18-5: ZC0110000.
LD50/LC50:
    Oral: Mouse – 1330mg/kg – Remark: Convulsions or effect or seizure threshold. Peripheral nerve and sensation: Spastic paralysis with or without sensory change. Gastrointestinal: Hypermotility, diarrhea.
    Intravenous: Mouse – 105mg/kg
CAS# 7664-93-9: Inhalation, Mouse: LC50 = 320 mg/m³ /2H
    Inhalation, rat: LC50 = 510 mg/m³ /2H
    Oral, rat: LD50 = 2140mg/kg
CAS# 7732-18-5:
    Oral, rat: LD50 => 90ml/kg

Carcinogenicity:
CAS# 25155-30-0: Not available
California:
CAS# 7664-93-9: ACGIH-A2 Suspected Human Carcinogen (contained in strong inorganic acid mists)
CAS# 7732-18-5: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA prop.65
California: Not listed.
    NIOSH: Not listed.
    NTP: Not listed.
    OSHA: Select carcinogen.
    IARC: Group 1 carcinogen.

Epidemiology:
No information available

Teratogenicity:
No information available

Reproductive:
No information available

Mutagenicity:
No information available

Neurotoxicity:
No information available

Section 12 - Ecological Information

No information found.

Section 13 - Disposal Considerations

Dispose of in accordance with Federal, State, and local regulations.

Section 14 - Transport Information

US DOT
Shipping Name: Not regulated.
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Hazard Class:
UN Number:
Packing Group:

Section 15 - Regulatory Information

US Federal

TSCA:
- CAS# 25155-30-0: is listed on the TSCA Inventory.
- CAS# 7664-93-9: is listed on the TSCA Inventory.
- CAS# 7732-18-5: is listed on the TSCA Inventory.

SARA Reportable Quantities (RQ):
- CAS# 7664-93-9: Final RQ=1000Pounds (454kg).

CERCLA/SARA Section 313:
This material contains Sulfuric acid (Cas# 7664-93-9-<1%), which is subject to the reporting requirements of section 313 of SARA Title III and 40 CFR part 373.

OSHA - Highly Hazardous:
None of the components are on this list.

US State

State Right to Know:
Sulfuric acid can be found on the following state lists: California, New Jersey, Florida, Pennsylvania, Minnesota, and Massachusetts.
Sodium dodecylbenzene sulfonate can be found on the following state lists: Delaware, Massachusetts, New York, and Pennsylvania.

California Regulations:

European/International Regulations

Canadian DSL/NDSL:
- CAS# 25155-30-0: is listed on Canada’s DSL List.
- CAS# 7664-93-9: is listed on Canada’s DSL List.
- CAS# 7732-18-5: is listed on Canada’s DSL List.

Canada Ingredient Disclosure List:
- CAS# 25155-30-0: is listed on Canada’s Ingredient Disclosure List.
- CAS# 7664-93-9: is listed on Canada’s Ingredient Disclosure List.
- CAS# 7732-18-5: is not listed on Canada’s Ingredient Disclosure List.

Section 16 - Other Information

MSDS Creation Date: June 5, 2006.
Revision Date: June 5, 2006.

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