Section 1 - Product and Company Information

Product Name: Alquat 336
Product Number: 205613
Brand: Aldrich Chemical
Company: Sigma-Aldrich
Street Address: 3650 Grace Street
City, State, Zip, Country: SAINT LOUIS, MO 63103 US
Technical Phone: 800-335-9332
Fax: 800-335-9252
Emergency Phone: 314-776-6555

Section 2 - Composition/Information on Ingredient

<table>
<thead>
<tr>
<th>Substance Name</th>
<th>CAS #</th>
<th>SARA 313</th>
<th>EC no</th>
<th>Annex I Index</th>
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<tbody>
<tr>
<td>METHYLTRIOCTYLAMMONIUM CHLORIDE</td>
<td>63599-96-4</td>
<td>No</td>
<td>264-120-7</td>
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<tr>
<td>METHYLTRIOCTYLAMMONIUM CHLORIDE</td>
<td>63599-96-4</td>
<td>&lt;= 90.000 %</td>
<td>SARA 313</td>
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<td>IMPURITIES:</td>
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<tr>
<td>1-DECANOL</td>
<td>112-30-1</td>
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<tr>
<td>1-OCTANOL</td>
<td>111-87-6</td>
<td>&lt;= 5.000 %</td>
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</tbody>
</table>

| Formula | C25H54ClN |
| Synonyms | Aldgen 464, Alquat 7402, Alquat N 263, Alquat 336, Alquat 3365, dispersant A, dispersant W |

Section 3 - Hazards Identification

Emergency Overview
Toxic (USA) Harmful (EU). Dangerous for the environment. Harmful if swallowed. Irritating to respiratory system and skin. Risk of serious damage to eyes. Very toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment. Target organ(s): Liver, Nerves.

HMIS Rating
Health: 2 Flammability: 1 Reactivity: 1

NFPA Rating
Health: 2 Flammability: 1 Reactivity: 1

*additional chronic hazards present.
For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

Oral Exposure
If swallowed, wash out mouth with water provided person is conscious. Call a physician.

Inhalation Exposure
If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

Dermal Exposure
In case of contact, immediately wash skin with soap and copious amounts of water.

Eye Exposure
In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

Flash Point: 226 °F 113 °C
Autoignition Temp: N/A

Extinguishing Media
Suitable Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

Firefighting Protective Equipment
Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Specific Hazard(s)
Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

Procedure to be Followed in Case of Leak or Spill
Evacuate area.

Procedure(s) of Personal Precaution(s)
Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

Methods for Cleaning Up
Absorb on sand or vermiculite and place in closed containers for disposal. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

Handling
User Exposure
Do not breathe vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

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Section 8 - Exposure Controls / PPE

Engineering Controls
Safety shower and eye bath. Mechanical exhaust required.

Personal Protective Equipment
Respiratory
Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose 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.

Hand
Compatible chemical-resistant gloves.

Eye
Chemical safety goggles.

General Hygiene Measures
Wash thoroughly after handling.

Section 9 - Physical/Chemical Properties

Appearance
Physical State: Liquid

Molecular Weight: 404.17 AMU

pH: N/A
BP/BP Range: N/A
MF/MF Range: N/A
Freezing Point: N/A
Vapor Pressure: N/A
Vapor Density: N/A
Saturated Vapor Conc.: N/A
SG/Density: 0.884 g/cm³
Bulk Density: N/A
Odor Threshold: N/A
Volatiles%: N/A
VOC Content: N/A
Water Content: <= 5%
Solvent Content: N/A
Evaporation Rate: N/A
Viscosity: N/A
Partition Coefficient: N/A
Decomposition Temp.: N/A
Flash Point °F: 203 °F Method: closed cup
Flash Point °C: 113 °C Method: closed cup
Explosion Limits: N/A

Flammability: N/A
Autoignition Temp: N/A
Refractive Index: 1.4665

Solubility
N/A

N/A = not available

Section 10 - Stability and Reactivity

Stability
Stable

Conditions to Avoid
Moisture

Materials to Avoid
Strong oxidizing agents.

Hazardous Decomposition Products
Carbon monoxide, Carbon dioxide, Nitrogen oxides, Hydrogen chloride gas.

Hazardous Polymerization
Will not occur.

Section 11 - Toxicological Information

Route of Exposure
Skin Contact
Causes skin irritation.

Skin Absorption
May be harmful if absorbed through the skin.

Eye Contact
Causes severe eye irritation.

Inhalation
Material is irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.

Ingestion
Harmful if swallowed.

Target Organ(s) or System(s)
Kitchens, Liver, Nerves.

Signs and Symptoms of Exposure
Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting. Exposure can cause: Nausea, vomiting, epigastric pain, dyspnea, and excessive salivation. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

RTECS Number:
UZ2997500

Toxicity Data
Oral - Rat: 223 mg/kg (LD50)

Section 12 - Ecological Information

Acute Ecotoxicity Tests
Test Type
EC50 Daphnia

Species
Ephemera magna

Time:
48 h

Value:
0.61 - 0.04 mg/l

Test Type
LC50 Fish

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Aldrich Chemical - 205613
SIGMA-ALDRICH CORPORATION www.sigma-aldrich.com SIGMA-ALDRICH CORPORATION www.sigma-aldrich.com
Species
Oncorhyncus mykiss (Rainbow trout)

Time: Value:
96 h 0.18 - 0.32 mg/l

Elimination

Section 13 - Disposal Considerations
Appropriate Method of Disposal of Substance or Preparation
Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information
DOT
Proper Shipping Name: Toxic, liquids, organic, n.o.s.
UN No.: 2810
Class: 6.1
Packing Group: Packing Group III
Hazard Label: Toxic substances.
PHI: Not PHI

IATA
Proper Shipping Name: Toxic liquid, organic, n.o.s.
IATA UN Number: 2810
Hazard Class: 6.1
Packing Group: III

Section 15 - Regulatory Information
EU Additional Classification
Symbol of Danger: Xn N
Indication of Danger: Harmful. Dangerous for the environment.
Risk Statements: R: 22 38 41 50/53 Harmful if swallowed. Irritating to skin. Risk of serious damage to eyes. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Safety Statements: S: 26 39 60 61 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear eye/face protection. This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/safety data sheets.

US Classification and Label Text
Indication of Danger: Toxic (USA) Harmful (EU). Dangerous for the environment.
Risk Statements: Harmful if swallowed. Irritating to respiratory system and skin. Risk of serious damage to eyes. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear eye/face protection. This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/safety data sheets.
US Statements: Target organ(s): Liver, Nervous

United States Regulatory Information
SARA Listed: No