# SAFETY DATA SHEET

**MAQUAT® MQ624M**

## Section 1. Identification

**Product identifier** : **MAQUAT® MQ624M**
**Product code** : 862101
**EPA Registration Number** : 10324.52
**Product type** : Liquid.

**Relevant identified uses of the substance or mixture and uses advised against**

| Identified uses |
| --- |
| Quat Active (MUP) |

**Uses advised against**
Not applicable.

**Manufacturer**

**Company name** : **Mason Chemical Company**
**Address** : 9075 Centre Pointe Dr. Suite 400
West Chester, OH
45069, USA
**Telephone number** : 513-326-0600, 1-800-707-4568
**Email** : sdsinfo@pilotchemical.com
**Emergency telephone number INTL** : 1-800-424-9300, 1-703-527-3887
**Chemtrec US** : +1 703-741-5970

## Section 2. Hazards identification

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Classification of the substance or mixture** : FLAMMABLE LIQUIDS - Category 3
ACUTE TOXICITY (oral) - Category 3
ACUTE TOXICITY (dermal) - Category 4
SKIN CORROSION - Category 1B
SERIOUS EYE DAMAGE - Category 1
AQUATIC HAZARD (ACUTE) - Category 1
AQUATIC HAZARD (LONG-TERM) - Category 1

**GHS label elements**

**Hazard pictograms** :

**Signal word** : Danger

**Hazard statements** : Flammable liquid and vapor.
Toxic if swallowed.
Harmful in contact with skin.
Causes severe skin burns and eye damage.
Very toxic to aquatic life with long lasting effects.

**Precautionary statements**

## Section 2. Hazards identification

**Prevention** : Wear protective gloves, protective clothing and eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating or lighting equipment. Take action to prevent static discharges. Ground and bond container and receiving equipment. Keep container tightly closed. Avoid release to the environment. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.

**Response** : Collect spillage. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor. IF SWALLOWED: Immediately call a POISON CENTER or doctor. Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or doctor. Wash contaminated clothing before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.

**Storage** : Store locked up. Store in a well-ventilated place. Keep cool.

**Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Hazards not otherwise classified** : None known.

**Hazards identified when used** : No known significant effects or critical hazards.

## Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture

| Ingredient name | Synonyms | % | Identifiers |
|---|---|---|---|
| Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides | | >30 - <40 | CAS: 68424-85-1 |
| decyldimethyloctylammonium chloride | N,N-Dimethyl-N-octyldecan-1-aminium chloride | >20 - <30 | CAS: 32426-11-2 |
| dimethyldioctylammonium chloride | N,N-Dimethyl-N-octyloctan-1-aminium chloride | ≥10 - ≤20 | CAS: 5538-94-3 |
| didecyldimethylammonium chloride | N-Decyl-N,N-dimethyldecan-1-aminium chloride | ≥10 - ≤20 | CAS: 7173-51-5 |
| ethanol | Ethanol | >8 - <15 | CAS: 64-17-5 |

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.**

**Occupational exposure limits, if available, are listed in Section 8.**

## Section 4. First aid measures

**Description of necessary first aid measures**

**Eye contact** : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

**Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of

# Section 4. First aid measures

inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

**Skin contact** : Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

**Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**Most important symptoms/effects, acute and delayed**

**Potential acute health effects**

**Eye contact** : Causes serious eye damage.

**Inhalation** : No known significant effects or critical hazards.

**Skin contact** : Causes severe burns. Harmful in contact with skin.

**Ingestion** : Toxic if swallowed.

**Over-exposure signs/symptoms**

**Eye contact** : Adverse symptoms may include the following:
pain
watering
redness

**Inhalation** : No specific data.

**Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

**Ingestion** : Adverse symptoms may include the following:
stomach pains

**Indication of immediate medical attention and special treatment needed, if necessary**

**Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

**Specific treatments** : No specific treatment.

**For emergency responders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

**See toxicological information (Section 11)**

# Section 5. Fire-fighting measures

**Extinguishing media**

**Suitable extinguishing media** : Use dry chemical, $CO_2$, water spray (fog) or foam.

**Unsuitable extinguishing media** : Do not use water jet.

## Section 5. Fire-fighting measures

**Specific hazards arising from the chemical** : Flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
halogenated compounds

**Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**

**For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

**Methods and materials for containment and cleaning up**

**Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

## Section 7. Handling and storage

**Precautions for safe handling**

**Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or

# Section 7. Handling and storage

explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**Conditions for safe storage, including any incompatibilities**

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

# Section 8. Exposure controls/personal protection

**Control parameters**

**Occupational exposure limits**

| Ingredient name | Exposure limits |
|---|---|
| Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides | None. |
| decyldimethyloctylammonium chloride | None. |
| dimethyldioctylammonium chloride | None. |
| didecyldimethylammonium chloride | None. |
| ethanol | **NIOSH REL (United States, 10/2020)**<br>TWA 10 hours: 1000 ppm.<br>TWA 10 hours: 1900 mg/m³.<br>**CAL OSHA PEL (United States, 1/2025)**<br>TWA 8 hours: 1900 mg/m³.<br>TWA 8 hours: 1000 ppm.<br>**OSHA PEL (United States, 5/2018)**<br>TWA 8 hours: 1000 ppm.<br>TWA 8 hours: 1900 mg/m³.<br>**OSHA PEL 1989 (United States, 3/1989)**<br>TWA 8 hours: 1000 ppm.<br>TWA 8 hours: 1900 mg/m³.<br>**ACGIH TLV (United States, 1/2024)** A3.<br>STEL 15 minutes: 1000 ppm. |

**Biological exposure indices**

No exposure indices known.

**Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**Individual protection measures**

## Section 8. Exposure controls/personal protection

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

**Skin protection**

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection** : In case of insufficient ventilation, wear suitable respiratory equipment.

## Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

**Appearance**

**Physical state** : Liquid. [Clear.]

**Color** : Colorless to light yellow.

**Odor** : Organic. [Slight]

**Odor threshold** : Not available.

**pH** : 8 to 10 [Conc. (% w/w): 1%]

**Melting point/freezing point** : Not available.

**Boiling point or initial boiling point and boiling range** : 117°C (242.6°F)

**Flash point** : Closed cup: 47°C (116.6°F)

**Evaporation rate** : Not available.

**Flammability** : Not available.

**Lower and upper explosion limit/flammability limit** : Not available.

**Vapor pressure** : 3.1 kPa (23.6 mm Hg)

**Relative vapor density** : Not available.

**Relative density** : 0.922

**Solubility in water** : Not available.

**Miscible with water** : Yes.

**Partition coefficient: n-octanol/water** : Not applicable.

**Auto-ignition temperature** :

# Section 9. Physical and chemical properties

| Ingredient name | °C | °F | Method |
|---|---|---|---|
| ethanol | 455 | 851 | DIN 51794 |

**Decomposition temperature** : Not available.

**Viscosity** : Dynamic (room temperature): Not available.
Kinematic (room temperature): Not available.
Kinematic (40°C (104°F)): Not available.

**Particle characteristics**

**Median particle size** : Not applicable.

# Section 10. Stability and reactivity

**Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**Chemical stability** : The product is stable.

**Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

**Conditions to avoid** : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

**Incompatible materials** : Reactive or incompatible with the following materials:
oxidizing materials

**Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

# Section 11. Toxicological information

**Information on toxicological effects**

**Acute toxicity**

| Product/ingredient name | Result |
|---|---|
| MAQUAT® MQ624M | **Rat - Oral - LD50**<br>0.233 g/kg |
| Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides | **Rat - Dermal - LD50**<br>930 mg/kg<br>**Rat - Oral - LD50**<br>304.5 mg/kg |
| decyldimethyloctylammonium chloride | **Rabbit - Dermal - LD50**<br>2930 mg/kg<br>**Rat - Oral - LD50**<br>238 mg/kg |
| dimethyldioctylammonium chloride | **Rabbit - Dermal - LD50**<br>2930 mg/kg<br>**Rat - Oral - LD50**<br>238 mg/kg |
| didecyldimethylammonium chloride | **Rabbit - Dermal - LD50**<br>2930 mg/kg<br>**Rat - Oral - LD50**<br>238 mg/kg |
| ethanol | **Rabbit - Dermal - LD50**<br>>15800 mg/kg<br>**Rat - Oral - LD50**<br>6.2 g/kg<br>**Rat - Inhalation - LC50 Vapor**<br>124700 mg/m³ [4 hours] |

# Section 11. Toxicological information

**Skin corrosion/irritation**

| Product/ingredient name | Result |
|---|---|
| Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides | **Rabbit - Skin - Severe irritant**<br>Amount/concentration applied: 25 mg |
| didecyldimethylammonium chloride | **Rabbit - Skin - Severe irritant**<br>Amount/concentration applied: 500 mg |

**Serious eye damage/eye irritation**

| Product/ingredient name | Result |
|---|---|
| ethanol | **Rabbit - Eyes - Mild irritant**<br>Duration of treatment/exposure: 24 hours<br>Amount/concentration applied: 500 mg<br>**Rabbit - Eyes - Moderate irritant**<br>Duration of treatment/exposure: 0.066666667 minutes<br>Amount/concentration applied: 100 mg<br>**Rabbit - Eyes - Moderate irritant**<br>Amount/concentration applied: 100 uL<br>**Rabbit - Eyes - Severe irritant**<br>Amount/concentration applied: 500 mg<br>**Rabbit - Eyes - Mild irritant**<br>Duration of treatment/exposure: 1 hours<br>Amount/concentration applied: 50 pph |

**Respiratory corrosion/irritation**

Not available.

**Respiratory or skin sensitization**

Not available.

**Germ cell mutagenicity**

Not available.

**Carcinogenicity**

**Classification**

| Product/ingredient name | OSHA | IARC | NTP |
|---|---|---|---|
| ethanol | - | 1 | - |

**Reproductive toxicity**

Not available.

**Specific target organ toxicity (single exposure)**

Not available.

**Specific target organ toxicity (repeated exposure)**

Not available.

**Aspiration hazard**

Not available.

**Information on the likely routes of exposure**

Not available.

# Section 11. Toxicological information

## Potential acute health effects

**Eye contact** : Causes serious eye damage.

**Inhalation** : No known significant effects or critical hazards.

**Skin contact** : Causes severe burns. Harmful in contact with skin.

**Ingestion** : Toxic if swallowed.

## Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : Adverse symptoms may include the following:
pain
watering
redness

**Inhalation** : No specific data.

**Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

**Ingestion** : Adverse symptoms may include the following:
stomach pains

## Delayed and immediate effects and also chronic effects from short and long term exposure

**Short term exposure**

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

**Long term exposure**

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

## Potential chronic health effects

Not available.

**General** : No known significant effects or critical hazards.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Reproductive toxicity** : No known significant effects or critical hazards.

## Numerical measures of toxicity

**Acute toxicity estimates**

| Product/ingredient name | Oral (mg/kg) | Dermal (mg/kg) | Inhalation (gases) (ppm) | Inhalation (vapors) (mg/l) | Inhalation (dusts and mists) (mg/l) |
|---|---|---|---|---|---|
| MAQUAT® MQ624M | 233 | 1969.0 | N/A | N/A | N/A |
| Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides | 304.5 | 930 | N/A | N/A | N/A |
| decyldimethyloctylammonium chloride | 238 | 2930 | N/A | N/A | N/A |
| dimethyldioctylammonium chloride | 238 | 2930 | N/A | N/A | N/A |
| didecyldimethylammonium chloride | 238 | 2930 | N/A | N/A | N/A |
| ethanol | 6200 | N/A | N/A | 124.7 | N/A |

# Section 12. Ecological information

**Toxicity**

| Product/ingredient name | Result |
|---|---|
| Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides | **Acute - LC50 - Fresh water**<br>US EPA<br>Fish - Bluegill - *Lepomis macrochirus*<br>0.32 ppm [96 hours]<br>Effect: Mortality<br>**Chronic - NOEC - Fresh water**<br>US EPA<br>Daphnia - Water flea - *Daphnia magna*<br>4.15 ppb [21 days]<br>Effect: No Effect Coded<br>**Acute - LC50**<br>Fish<br>0.515 mg/l [96 hours] |
| decyldimethyloctylammonium chloride | **Acute - LC50 - Fresh water**<br>Fish - Bluegill - *Lepomis macrochirus*<br>0.032 mg/l [96 hours]<br>**Acute - EC50 - Fresh water**<br>OECD<br>Daphnia - Water flea - *Daphnia magna* - Neonate<br>Age: <24 hours<br>0.0285 mg/l [48 hours]<br>Effect: Intoxication<br>**Chronic - NOEC**<br>Daphnia<br>0.01 mg/l |
| dimethyldioctylammonium chloride | **Acute - EC50 - Fresh water**<br>US EPA<br>Daphnia - Water flea - *Daphnia magna*<br>Age: 1<br>0.1 ppm [48 hours]<br>Effect: Intoxication<br>**Chronic - NOEC**<br>Daphnia<br>0.027 mg/l [21 days]<br>**Acute - EC50**<br>Fish - *Oncorhynchus mykiss*<br>0.32 mg/l [96 hours]<br>**Chronic - NOEC**<br>Fish<br>0.018 mg/l [34 days]<br>**Acute - EC50**<br>Algae - *Pseudokirchneriella subcapitata*<br>0.122 mg/l [72 hours]<br>**Chronic - NOEC**<br>Algae - *Scenedesmus subspicatus*<br>0.01 mg/l [72 hours] |
| didecyldimethylammonium chloride | **Acute - LC50 - Fresh water**<br>Fish - Bluegill - *Lepomis macrochirus*<br>0.032 mg/l [96 hours]<br>**Chronic - NOEC - Fresh water**<br>Algae - Green algae - *Raphidocelis subcapitata* - Exponential growth phase<br>25 µg/l [72 hours]<br>Effect: Population<br>**Acute - EC50 - Fresh water**<br>US EPA<br>Daphnia - Water flea - *Daphnia magna*<br>Age: <20 hours<br>18 ppb [48 hours] |

# Section 12. Ecological information

| | |
|---|---|
| ethanol | Effect: Intoxication<br>**Acute - EC50 - Fresh water**<br>US EPA<br>Algae - Green algae - *Raphidocelis subcapitata*<br>14.22 ppb [96 hours]<br>Effect: Population<br>**Chronic - NOEC**<br>Daphnia<br>0.021 mg/l [21 days]<br>**Acute - LC50 - Fresh water**<br>Fish - Rainbow trout,donaldson trout - *Oncorhynchus mykiss*<br>42 mg/l [4 days]<br>Effect: Mortality<br>**Acute - EC50 - Marine water**<br>Algae - Green algae - *Ulva pertusa*<br>17.921 mg/l [96 hours]<br>Effect: Reproduction<br>**Chronic - NOEC - Marine water**<br>Algae - Green algae - *Ulva pertusa*<br>4.995 mg/l [96 hours]<br>Effect: Reproduction<br>**Acute - EC50 - Fresh water**<br>Daphnia - Water flea - *Daphnia magna*<br>2 mg/l [48 hours]<br>Effect: Intoxication<br>**Chronic - NOEC**<br>Daphnia<br>9.6 mg/l [9 days] |

**Persistence and degradability**

Expected to be readily biodegradable

**Bioaccumulative potential**

| Product/ingredient name | $LogP_{ow}$ | BCF | Potential |
|---|---|---|---|
| ethanol | -0.35 | - | Low |

**Mobility in soil**

**Soil/Water partition coefficient** : Not available.

**Other adverse effects**

No known significant effects or critical hazards.

# Section 13. Disposal considerations

**Disposal methods** : Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

# Section 14. Transport information

| | DOT Classification | IMDG | IATA |
|---|---|---|---|
| **UN number** | UN2920 | UN2920 | UN2920 |
| **UN proper shipping name** | Corrosive liquids, flammable, n.o.s. (Quaternary ammonium compounds, ethanol) | CORROSIVE LIQUID, FLAMMABLE, N.O.S. (Quaternary ammonium compounds, ethanol). Marine pollutant | Corrosive liquid, flammable, n. o.s. (Quaternary ammonium compounds, ethanol) |

# Section 14. Transport information

| | | | |
|---|---|---|---|
| **Transport hazard class(es)** | 8 (3)<br> | 8 (3)<br> | 8 (3)<br> |
| **Packing group** | II | II | II |
| **Environmental hazards** | No. | Yes. | Yes. The environmentally hazardous substance mark is not required. |

**Additional information**

**Reportable quantity substance (Products)** : Not applicable.

**DOT Classification** : **Limited quantity** Yes.
**Packaging instruction** Exceptions: 154. Non-bulk: 202. Bulk: 243.
**Quantity limitation** Passenger aircraft/rail: 1 L. Cargo aircraft: 30 L.
**Special provisions** B2, IB2, T11, TP2, TP27

**IMDG** : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.
**Emergency schedules** F-E, S-C
**Special provisions** 274

**IATA** : The environmentally hazardous substance mark may appear if required by other transportation regulations.
**Quantity limitation** Passenger and Cargo Aircraft: 1 L. Packaging instructions: 851. Cargo Aircraft Only: 30 L. Packaging instructions: 855. Limited Quantities - Passenger Aircraft: 0.5 L. Packaging instructions: Y840.

**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Transport in bulk according to IMO instruments** : Not available.

# Section 15. Regulatory information

**U.S. Federal regulations**

**TSCA 4(a) proposed test rules**: Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides

**TSCA 8(a) PAIR**: 2-methylpropan-2-ol

**TSCA 8(a) CDR Exempt/Partial exemption**: Not determined

**Clean Water Act (CWA) 307**: toluene

**Clean Water Act (CWA) 311**: toluene

**TSCA 12(b) - Chemical export notification**

Not applicable.

**EPA**

**FIFRA Information** : This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Listed below is the hazard information as required on the pesticide label.

**EPA Signal word** : DANGER Keep out of reach of children.

# Section 15. Regulatory information

**EPA Hazard statements** : DANGER Corrosive. Causes irreversible eye damage and skin burns. May be fatal if swallowed, absorbed through the skin or inhaled. Do not breathe vapor or spray mist. Wear a NIOSH approved respirator with an organic vapor (OV) cartridge with a combination N, R,or P filter (NIOSH approval number prefix TC-84A). Wear goggles or face shield, chemical-resistant gloves and protective clothing when handling. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco or using the toilet. Remove contaminated clothing and wash before reuse.

**Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : Listed

**Clean Air Act Section 602 Class I Substances** : Not listed

**Clean Air Act Section 602 Class II Substances** : Not listed

**DEA List I Chemicals (Precursor Chemicals)** : Not listed

**DEA List II Chemicals (Essential Chemicals)** : Not listed

**SARA 302/304**

**Composition/information on ingredients**

No products were found.

**SARA 304 RQ** : Not applicable.

**SARA 311/312**

**Classification** : FLAMMABLE LIQUIDS - Category 3
ACUTE TOXICITY (oral) - Category 3
ACUTE TOXICITY (dermal) - Category 4
SKIN CORROSION - Category 1B
SERIOUS EYE DAMAGE - Category 1

**Composition/information on ingredients**

| Name | % | Classification |
|---|---|---|
| Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides | >30 - <40 | ACUTE TOXICITY (oral) - Category 4<br>ACUTE TOXICITY (dermal) - Category 3<br>SKIN CORROSION - Category 1B<br>SERIOUS EYE DAMAGE - Category 1 |
| decyldimethyloctylammonium chloride | >20 - <30 | ACUTE TOXICITY (oral) - Category 3<br>SKIN CORROSION - Category 1B<br>SERIOUS EYE DAMAGE - Category 1 |
| dimethyldioctylammonium chloride | ≥10 - ≤20 | ACUTE TOXICITY (oral) - Category 3<br>SKIN CORROSION - Category 1B<br>SERIOUS EYE DAMAGE - Category 1 |
| didecyldimethylammonium chloride | ≥10 - ≤20 | ACUTE TOXICITY (oral) - Category 3<br>SKIN CORROSION - Category 1B<br>SERIOUS EYE DAMAGE - Category 1 |
| ethanol | >8 - <15 | FLAMMABLE LIQUIDS - Category 2<br>EYE IRRITATION - Category 2A |

**State regulations**

**Massachusetts** : The following components are listed: ETHYL ALCOHOL

**New York** : None of the components are listed.

**New Jersey** : The following components are listed: ETHYL ALCOHOL

**Pennsylvania** : The following components are listed: ETHANOL

Pilot Chemical does not provide Proposition 65 information on our safety data sheets. Proposition 65 statements are available upon request by contacting reginfo@pilotchemical.com

**International regulations**

**Chemical Weapon Convention List Schedules I, II & III Chemicals**

# Section 15. Regulatory information

Not listed.

**Montreal Protocol**

Not listed.

**Stockholm Convention on Persistent Organic Pollutants**

Not listed.

**Rotterdam Convention on Prior Informed Consent (PIC)**

Not listed.

**UNECE Aarhus Protocol on POPs and Heavy Metals**

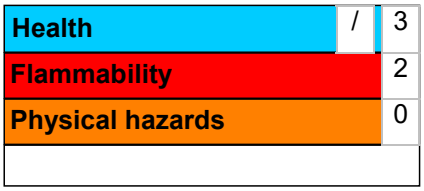
Not listed.

**Inventory list**

| | | |
|---|---|---|
| **Australia** | : | Not listed. |
| **Canada DSL** | : | All components are listed or exempted. |
| **China** | : | All components are listed or exempted. |
| **Eurasian Economic Union** | : | **Russian Federation inventory**: All components are listed or exempted. |
| **Japan** | : | **Japan inventory (CSCL)**: All components are listed or exempted.<br>**Japan inventory (ISHL)**: Not listed. |
| **New Zealand** | : | All components are listed or exempted. |
| **Philippines** | : | All components are listed or exempted. |
| **Republic of Korea** | : | All components are listed or exempted. |
| **Taiwan** | : | All components are listed or exempted. |
| **Thailand** | : | Not listed. |
| **Turkey** | : | Not listed. |
| **United States** | : | All components are active or exempted. |
| **Viet Nam** | : | All components are listed or exempted. |

# Section 16. Other information

**Hazardous Material Information System (U.S.A.)**




**Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.**

**The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.**

**National Fire Protection Association (U.S.A.)**

**Procedure used to derive the classification**

# Section 16. Other information

| Classification | Justification |
|---|---|
| FLAMMABLE LIQUIDS - Category 3 | On basis of test data |
| ACUTE TOXICITY (oral) - Category 3 | On basis of test data |
| ACUTE TOXICITY (dermal) - Category 4 | Calculation method |
| SKIN CORROSION - Category 1B | Calculation method |
| SERIOUS EYE DAMAGE - Category 1 | Calculation method |
| AQUATIC HAZARD (ACUTE) - Category 1 | Calculation method |
| AQUATIC HAZARD (LONG-TERM) - Category 1 | Calculation method |

**History**

**Date of revision** : 10/27/2025

**Date of issue** : No previous validation

**Version** : 7

**Prepared by** : Product Safety & Regulatory Specialist

**Key to abbreviations** : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
SGG = Segregation Group
UN = United Nations

**References** : OSHA Hazard Communication Standard

**Indicates information that has changed from previously issued version.**

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