

# Safety Data Sheet

## MULTIQUAT NO. 455

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Issue date: 7/27/2000

Revision date: 5/15/2024

### SECTION 1: Identification

#### Identification

Product Name : MULTIQUAT NO. 455  
Product code : FP0455  
CAS-No. : MIXTURE  
Synonyms : No additional information available  
EPA Registration number : 10324-81-2686  
Recommended use : EPA registered pesticide  
Restrictions on use : No additional information available

#### Supplier

Hydrite Chemical Co.  
17385 Golf Parkway  
Brookfield, WI, 53045  
T 262-792-1450

#### Emergency telephone number

EMERGENCY RESPONSE NUMBERS:

24 Hour Emergency #: (414) 277-1311

CHEMTREC Emergency #: (800) 424-9300

### SECTION 2: Hazard(s) identification

#### Classification of the substance or mixture

##### GHS US classification

Skin corrosion/irritation Category 1B

Serious eye damage/eye irritation Category 1

Hazardous to the aquatic environment – Acute Hazard Category 2

Hazardous to the aquatic environment – Chronic Hazard Category 2

#### GHS Label elements, including precautionary statements

##### GHS US labeling

Hazard pictograms (GHS US)



Signal word (GHS US)

: Danger

Hazard statements (GHS US)

: Causes severe skin burns and eye damage  
Toxic to aquatic life  
Toxic to aquatic life with long lasting effects

##### Precautionary statements (GHS US)

Prevention

: Do not breathe dust/fume/gas/mist/vapors/spray.  
Wash hands, forearms and face thoroughly after handling.

Avoid release to the environment.  
Wear protective gloves/protective clothing/eye protection/face protection.

Response : If swallowed: rinse mouth. Do NOT induce vomiting.  
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
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.  
Specific treatment (see supplemental first aid instruction on the SDS).  
Wash contaminated clothing before reuse.  
Collect spillage.

Storage : Store in a secure manner.

Disposal : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

#### Hazards not otherwise classified

Hazards not otherwise classified : No additional information available

#### Unknown acute toxicity (GHS US)

Unknown acute toxicity (GHS US) : 1.31% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal)  
6.37% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))

### SECTION 3: Composition/Information on ingredients

#### Substances/ Mixtures

| Name  | Product identifier  | %    | GHS US classification   |
|---|---------------------|------|---|
| ALKYL(50%C14,40%C12,10%C16) DIMETHYL BENZYL AMMONIUM CHLORIDE | CAS-No.: 68424-85-1 | 3.00 | Acute Tox. 4 (Oral), H302<br>Skin Corr. 1B, H314<br>Eye Dam. 1, H318<br>Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410                                |
| OCTYL DECYL DIMETHYL AMMONIUM CHLORIDE                        | CAS-No.: 32426-11-2 | 2.30 | Acute Tox. 3 (Oral), H301<br>Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410   |
| ETHYL ALCOHOL   | CAS-No.: 64-17-5    | 1.31 | Flam. Liq. 2, H225<br>Eye Irrit. 2A, H319<br>STOT SE 3, H335  |
| DIDECYL DIMETHYL AMMONIUM CHLORIDE                            | CAS-No.: 7173-51-5  | 1.10 | Acute Tox. 3 (Oral), H301<br>Acute Tox. 4 (Dermal), H312<br>Skin Corr. 1B, H314<br>Eye Dam. 1, H318<br>Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410 |

| Name                               | Product identifier | %    | GHS US classification  |
|------------------------------------|--------------------|------|--|
| DIOCTYL DIMETHYL AMMONIUM CHLORIDE | CAS-No.: 5538-94-3 | 1.10 | Acute Tox. 3 (Oral), H301<br>Acute Tox. 3 (Dermal), H311<br>Acute Tox. 4 (Inhalation:dust,mist), H332<br>Skin Corr. 1B, H314<br>Eye Dam. 1, H318<br>Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410 |

Note: Any chemical identity and/or exact percentage not expressly stated is being withheld as a trade secret or is due to batch variation.

## SECTION 4: First-aid measures

### Description of first aid measures

|                                       |  |
|---------------------------------------|--|
| First-aid measures general            | : IF exposed or concerned: Get medical advice/attention.   |
| First-aid measures after inhalation   | : If inhaled: Remove to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration, preferably mouth-to-mouth. GET MEDICAL ATTENTION IMMEDIATELY.  |
| First-aid measures after skin contact | : If on skin: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Do not reuse clothing and shoes until cleaned.  |
| First-aid measures after eye contact  | : If in eyes: Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Tilt head to avoid contaminating unaffected eye. Get immediate medical attention. Remove contact lenses, if present and easy to do. Continue rinsing.  |
| First-aid measures after ingestion    | : If swallowed: Call a physician immediately. DO NOT induce vomiting unless directed to do so by a physician. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Have person sip a glass of water if able to swallow. |

### Most important symptoms and effects (acute and delayed)

|   |   |
|---|---|
| Symptoms/effects after inhalation                               | : May cause moderate to severe irritation. Vapor, dusts, mists or spray may irritate or burn: respiratory tracts, nose, mouth, and throat. . Vapors or mists may cause: drowsiness. dizziness, headaches, nausea. CNS depression. |
| Symptoms/effects after skin contact                             | : CORROSIVE-CAUSES SEVERE IRRITATION AND BURNS. severe skin irritation, redness, dermatitis. Prolonged or repeated contact may cause dermatitis by loss of natural skin fats.   |
| Symptoms/effects after eye contact                              | : CORROSIVE-CAUSES SEVERE IRRITATION AND BURNS. May cause: Permanent eye damage. Can cause blindness.   |
| Symptoms/effects after ingestion                                | : May cause mild to severe irritation. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.  |
| Immediate medical attention and special treatment, if necessary | : No specific antidote known. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.  |

## SECTION 5: Fire-fighting measures

### Extinguishing media

|                                |  |
|--------------------------------|--|
| Suitable extinguishing media   | : Water spray. Dry powder. Foam. Carbon dioxide. |
| Unsuitable extinguishing media | : No additional information available            |

### Specific hazards arising from the chemical

|                                  |  |
|----------------------------------|--|
| Fire hazard                      | : No fire hazard.  |
| Explosion hazard                 | : Container may rupture from gas generation in a fire situation.         |
| Hazardous decomposition products | : Toxic fumes may be released. Carbon oxides (CO, CO2). Nitrogen oxides. |

|                                |  |
|--------------------------------|--|
| Firefighting instructions      | : Evacuate personnel to a safe area. Do not enter fire area without proper protective equipment, including respiratory protection. Stay upwind/keep distance from source. Move containers from fire area if it can be done without personal risk. Use water spray or fog for cooling exposed containers. |
| Protection during firefighting | : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.   |

## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

|                      |   |
|----------------------|---|
| Protective equipment | : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection". Do not exceed the occupational exposure limits (OEL). |
| Emergency procedures | : Evacuate unnecessary personnel. Stop leak if safe to do so. Ventilate spillage area.  |

### Environmental precautions

|                           |   |
|---------------------------|---|
| Environmental precautions | : Avoid release to the environment. Notify authorities if product enters sewers or public waters. |
|---------------------------|---|

### Methods and material for containment and cleaning up

|                         |  |
|-------------------------|--|
| For containment         | : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak, if possible without risk.  |
| Methods for cleaning up | : Soak up residue with inert absorbent material. Place in non-leaking containers for immediate disposal. Do not absorb in sawdust, paper, cloth or other combustible absorbents. |
| Other information       | : Dispose of materials or solid residues at an authorized site.  |

## SECTION 7: Handling and storage

### Precautions for safe handling

|                                   |   |
|-----------------------------------|---|
| Additional hazards when processed | : Not expected to present a significant hazard under anticipated conditions of normal use.  |
| Precautions for safe handling     | : Ensure good ventilation of the work station. Wear personal protective equipment. Avoid dust or mist formation. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin, eyes and clothing. Do NOT taste or swallow. DO NOT pressurize, cut, weld, solder, drill, grind or expose empty containers to heat, flame, sparks or other sources of ignition. |
| Hygiene measures                  | : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.  |

### Conditions for safe storage, including any incompatibilities

|                        |   |
|------------------------|---|
| Storage conditions     | : Keep in a cool, well-ventilated place away from heat. Store in a secure manner.   |
| Incompatible materials | : Keep away from incompatibles. Refer to Section 10 on Incompatible Materials.  |
| Storage temperature    | : No additional information available   |
| Heat-ignition          | : Keep away from all sources of ignition.   |
| Packaging materials    | : Keep only in the original container. Do not store in unlabeled or mislabeled containers. Keep container tightly closed. |

## SECTION 8: Exposure controls/personal protection

| Control parameters  |                   |                   |
|---|-------------------|-------------------|
| Component   | ACGIH             | OSHA              |
| ALKYL(50%C14,40%C12,10%C16) DIMETHYL BENZYL AMMONIUM CHLORIDE | No data available | No data available |
| DIDECYL DIMETHYL AMMONIUM CHLORIDE                            | No data available | No data available |
| DIOCTYL DIMETHYL AMMONIUM CHLORIDE                            | No data available | No data available |

| Control parameters                     |                   |                            |
|--|-------------------|----------------------------|
| Component                              | ACGIH             | OSHA                       |
| OCTYL DECYL DIMETHYL AMMONIUM CHLORIDE | No data available | No data available          |
| ETHYL ALCOHOL                          | 1000 ppm STEL     | 1900 mg/m <sup>3</sup> TWA |

### Appropriate engineering controls

- Appropriate engineering controls : General room ventilation and local exhaust are required. Maintain adequate ventilation. Do not use in closed or confined spaces. Avoid creating dust or mist. Keep levels below exposure limits. To determine exposure levels, monitoring should be performed regularly.
- Environmental exposure controls : Avoid release to the environment.

### Individual protection measures/Personal protective equipment

- Personal protective equipment : Wear recommended personal protective equipment. Provide readily accessible eye wash stations and safety showers.
- Hand protection : Protective gloves. Chemical-resistant. Impervious. Neoprene or nitrile rubber gloves. Check gloves for leaks before use.
- Eye protection : Wear chemical safety goggles while handling this product. Wear additional eye protection such as chemical safety goggles and/or face shield when the possibility exists for eye contact with splashing or spraying liquid, or airborne material.
- Skin and body protection : Prevent contact with this product. Wear gloves and protective clothing depending on condition of use.
- Respiratory protection : Respiratory protection must be worn if ventilation does not eliminate symptoms or keep levels below recommended exposure limits. If dust or mist is present, wear: NIOSH-Approved respirator for dusts and mists. If exposure limits are exceeded, wear: NIOSH-Approved respirator. NIOSH-Approved self-contained breathing apparatus. DO NOT exceed limits established by the respirator manufacturer. All respiratory protection programs must comply with OSHA 29 CFR 1910.134 and ANSI Z88.2 requirements and must be followed whenever workplace conditions require a respirator's use.
- Other information : Wash with soap and water before meal times and at the end of each work shift. Good manufacturing practices require gross amounts of any chemical be removed from skin as soon as practical, especially before eating or smoking. Food, beverages, and tobacco products should not be carried, stored or consumed where this material is in use.

## SECTION 9: Physical and chemical properties

### Information on basic physical and chemical properties

- Physical state : Liquid
- Color : Clear. Colorless.
- Odor : No odor.
- Odor threshold : No data available
- pH : 8 (as is)
- Melting point : Not applicable
- Freezing point : No data available
- Boiling point : No data available
- Flash point : None
- Relative evaporation rate (butyl acetate=1) : No data available
- Flammability (solid, gas) : Not applicable.
- Vapor pressure : 17.6 mm Hg @ 20 °C (calculated)
- Relative vapor density at 20°C : No data available
- Relative density : 0.99 @ 25 °C
- Solubility : Complete.
- Partition coefficient n-octanol/water (Log Pow) : No data available
- Auto-ignition temperature : No data available

**MULTIQUAT NO. 455**  
Product code: FP0455

|                           |                     |
|---------------------------|---------------------|
| Decomposition temperature | : No data available |
| Viscosity, kinematic      | : No data available |
| Viscosity, dynamic        | : No data available |
| Explosion limits          | : No data available |
| Explosive properties      | : No data available |
| Oxidizing properties      | : No data available |

## SECTION 10: Stability and reactivity

### Information on stability and reactivity

|                                    |  |
|------------------------------------|--|
| Reactivity                         | : The product is non-reactive under normal conditions of use, storage and transport.           |
| Chemical stability                 | : Stable under normal conditions.  |
| Possibility of hazardous reactions | : No dangerous reactions known under normal conditions of use.                                 |
| Conditions to avoid                | : Keep away from heat, sparks and flame. High temperature.                                     |
| Incompatible materials             | : oxidizing agents. strong inorganic acids. alkali metals. anionic materials, i e surfactants. |
| Hazardous decomposition products   | : Carbon monoxide. Carbon dioxide. Nitrogen oxides.  |

## SECTION 11: Toxicological information

### Information on toxicological effects

|                             |                  |
|-----------------------------|------------------|
| Acute toxicity (oral)       | : Not classified |
| Acute toxicity (dermal)     | : Not classified |
| Acute toxicity (inhalation) | : Not classified |

| Numerical measures of toxicity                                      |                            |  |                    |
|---|----------------------------|--|--------------------|
| Component   | Oral LD50                  | Dermal LD50                            | Inhalation LC50    |
| ALKYL(50%C14,40%C12,10%C16)<br>DIMETHYL BENZYL AMMONIUM<br>CHLORIDE | Rat: 426 mg/kg             | Rabbit: 2730 mg/kg                     | No data available  |
| DIDECYL DIMETHYL AMMONIUM<br>CHLORIDE                               | No data available          | Rabbit: 3342 mg/kg<br>Rat:> 1000 mg/kg | No data available  |
| DIOCTYL DIMETHYL AMMONIUM<br>CHLORIDE                               | Rat: 238 mg/kg body weight | Rabbit: 259 mg/kg                      | Rat: > 2.5 mg/l/4h |
| OCTYL DECYL DIMETHYL AMMONIUM<br>CHLORIDE                           | Rat: 238 mg/kg             | Rat:3342 mg/kg                         | No data available  |
| ETHYL ALCOHOL   | Rat: 7060 mg/kg            | No data available                      | Rat: 133.8 mg/l/4h |

|                                   |   |
|-----------------------------------|---|
| Skin corrosion/irritation         | : Causes severe skin burns.   |
| Serious eye damage/irritation     | : Causes serious eye damage.  |
| Respiratory or skin sensitization | : Not classified  |
| Germ cell mutagenicity            | : Not classified  |
| Carcinogenicity                   | : Not classified<br>This product does not contain 0.1% or more of the known or potential carcinogens listed in NTP, IARC, or OSHA.<br>Ethanol in alcoholic beverages is listed as a carcinogen by the International Agency for Research on Cancer (IARC). This carcinogenicity hazard is only relevant at doses associated with consumption of alcoholic beverages. In the context of industrial chemicals, these hazards are not applicable as they are not likely to result from the normal use of ethanol and ethanol-containing products. |
| Reproductive toxicity             | : Not classified  |
| STOT-single exposure              | : Not classified  |
| STOT-repeated exposure            | : Not classified  |

**MULTIQUAT NO. 455**  
Product code: FP0455

|   |   |
|---|---|
| Aspiration hazard                         | : Not classified  |
| Viscosity, kinematic                      | : No data available   |
| Likely routes of exposure                 | : Skin and eye contact. Ingestion. Inhalation.  |
| Symptoms/effects after inhalation         | : May cause moderate to severe irritation. Vapor, dusts, mists or spray may irritate or burn: respiratory tracts, nose, mouth, and throat. . Vapors or mists may cause: drowsiness. dizziness, headaches, nausea. CNS depression. |
| Symptoms/effects after skin contact       | : CORROSIVE-CAUSES SEVERE IRRITATION AND BURNS. severe skin irritation, redness, dermatitis. Prolonged or repeated contact may cause dermatitis by loss of natural skin fats.   |
| Symptoms/effects after eye contact        | : CORROSIVE-CAUSES SEVERE IRRITATION AND BURNS. May cause: Permanent eye damage. Can cause blindness.   |
| Symptoms/effects after ingestion          | : May cause mild to severe irritation. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.  |
| Medical Conditions Aggravated by Exposure | : Eye disorders. Skin disorders. Dermatitis.  |
| Other information                         | : No additional information available   |

## SECTION 12: Ecological information

### Toxicity

|                   |   |
|-------------------|---|
| Ecology - general | : Toxic to aquatic life. Toxic to aquatic life with long lasting effects. |
|-------------------|---|

### MULTIQUAT NO. 455 (MIXTURE)

|                      |  |
|----------------------|--|
| LC50 - Fish [1]      | 7.12 mg/l P. Promelas (fathead minnow) |
| EC50 - Crustacea [1] | 2.92 mg/l C. dubia                     |

### Persistence and degradability

No additional information available

## SECTION 13: Disposal considerations

### Disposal methods

|                         |   |
|-------------------------|---|
| Waste treatment methods | : Dispose of in accordance with all local, state and federal regulations.   |
| Additional information  | : Do not re-use empty containers. DO NOT pressurize, cut, weld, solder, drill, grind or expose empty containers to heat, flame, sparks or other sources of ignition. Since emptied containers retain product residue, follow label warnings even after container is emptied. Disposal methods identified are for the product as sold. For proper disposal of used material, an assessment must be completed to determine the proper and permissible waste management options permitted under applicable rules, regulations and/or laws governing your location. |

## SECTION 14: Transport information

### Modes of transport

#### DOT (Department of Transportation):

|                             |  |
|-----------------------------|--|
| Identification Number (DOT) | : UN1903   |
| Proper Shipping Name (DOT)  | : Disinfectants, liquid, corrosive n.o.s. (Quaternary Ammonium Compound) |
| Hazard Class (DOT)          | : 8  |
| Packing group (DOT)         | : III  |
| Labels Required (DOT)       | : Corrosive  |



#### IMDG (International Maritime Dangerous Goods Code):

|                              |          |
|------------------------------|----------|
| Identification Number (IMDG) | : UN1903 |
|------------------------------|----------|

**MULTIQUAT NO. 455**  
Product code: FP0455

|                             |  |
|-----------------------------|--|
| Proper Shipping Name (IMDG) | : DISINFECTANT, LIQUID, CORROSIVE, N.O.S. (Quaternary Ammonium Compound) |
| Hazard Class (IMDG)         | : 8  |
| Packing group (IMDG)        | : III  |
| Labels Required (IMDG)      | : Corrosive substances   |



**IATA (International Air Transport Association):**

|                              |   |
|------------------------------|---|
| Identification Number (IATA) | : UN1903                                  |
| Proper Shipping Name (IATA)  | : Disinfectant, liquid, corrosive, n.o.s. |
| Hazard Classes (IATA)        | : 8                                       |
| Packing group (IATA)         | : III                                     |
| Labels Required (IATA)       | : Corrosive                               |



**Environmental hazards**

No additional information available

**Other transport information**

The transportation classifications provided on this SDS are for informational purposes only and based upon the properties of the product as described in this document. The listed transportation classifications may not address variations due to changes in package size, mode of shipment, regional or country regulations, or other regulatory descriptors.

**SECTION 15: Regulatory information**

**US Federal regulations**

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

**FIFRA Labelling**

|                         |               |
|-------------------------|---------------|
| EPA Registration Number | 10324-81-2686 |
|-------------------------|---------------|

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.

**International Regulations**

**ETHYL ALCOHOL (64-17-5)**

Listed on IARC (International Agency for Research on Cancer)  
\*Ethanol in alcoholic beverages



### US State regulations

No additional information available

## SECTION 16: Other information

### Hazard Rating System

Health: 3  
Flammability: 0  
Physical: 0

### NFPA Rating System

NFPA health hazard: 3  
NFPA fire hazard: 0  
NFPA reactivity: 0

### Abbreviations and acronyms

|      |                           |
|------|---------------------------|
| HAP  | Hazardous Air Pollutant   |
| VOC  | Volatile Organic Compound |
| STEL | Short Term Exposure Limit |
| TWA  | Total Average Weight      |
| RQ   | Reportable Quantity       |

Revision date: 5/15/2024

Supersedes: 6/27/2018

Issue date: 7/27/2000

Indication of changes: Changes made throughout the SDS.New format.

SDS Prepared by: EP

The data in this Safety Data Sheet relates to the specific material designated and does not relate to its use in combination with any other material or process. The data contained is believed to be correct. However, since conditions of use are outside our control it should not be taken as warranty or representation for which HYDRITE CHEMICAL CO. assumes legal responsibility. This information is provided solely for your consideration, investigation, and verification.