

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 Skin Corr. 1B, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
OCTYL DECYL DIMETHYL AMMONIUM CHLORIDE	CAS-No.: 32426-11-2	2.30	Acute Tox. 3 (Oral), H301 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
ETHYL ALCOHOL	CAS-No.: 64-17-5	1.31	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H335
DIDECYL DIMETHYL AMMONIUM CHLORIDE	CAS-No.: 7173-51-5	1.10	Acute Tox. 3 (Oral), H301 Acute Tox. 4 (Dermal), H312 Skin Corr. 1B, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

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

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- 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

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Control parameters		
Component	ACGIH	OSHA
OCTYL DECYL DIMETHYL AMMONIUM CHLORIDE	No data available	No data available
ETHYL ALCOHOL	1000 ppm STEL	1900 mg/m ³ 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

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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) DIMETHYL BENZYL AMMONIUM CHLORIDE	Rat: 426 mg/kg	Rabbit: 2730 mg/kg	No data available
DIDECYL DIMETHYL AMMONIUM CHLORIDE	No data available	Rabbit: 3342 mg/kg Rat:> 1000 mg/kg	No data available
DIOCTYL DIMETHYL AMMONIUM CHLORIDE	Rat: 238 mg/kg body weight	Rabbit: 259 mg/kg	Rat: > 2.5 mg/l/4h
OCTYL DECYL DIMETHYL AMMONIUM 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
This product does not contain 0.1% or more of the known or potential carcinogens listed in NTP, IARC, or OSHA.
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

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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
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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
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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.