



your partner in food safety

Issue Date: 26-Oct-2018

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Version 1

## 1. IDENTIFICATION

### Product identifier

**Product Name** Quadra-Quat

### Other means of identification

**SDS #** BIR-043

**Product Code** I00177

**UN/ID No** UN1903

### Recommended use of the chemical and restrictions on use

**Recommended Use** Four-way quaternary ammonium (Quat) sanitizer/disinfectant.

### Details of the supplier of the safety data sheet

#### **Supplier Address**

Birko Corporation  
9152 Yosemite Street  
Henderson, CO 80640-8027  
[www.birkocorp.com](http://www.birkocorp.com)

### Emergency telephone number

**Company Phone Number** Phone: 303-289-1090 or 1-800-525-0476

Fax: 303-289-1190

**Emergency Telephone** Chemtrec 1-800-424-9300

## 2. HAZARDS IDENTIFICATION

**Appearance** Colorless to Amber, Gray, or  
Pale Pink

**Physical state** Liquid

**Odor** Alcohol

### Classification

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1

### Signal Word

Danger

### Hazard statements

Causes skin irritation  
Causes serious eye damage



**Precautionary Statements - Prevention**

Wear protective gloves/protective clothing/eye protection/face protection  
Wash face, hands and any exposed skin thoroughly after handling

**Precautionary Statements - Response**

If exposed or concerned: Get medical advice/attention  
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  
IF ON SKIN: Wash with plenty of water and soap  
If skin irritation occurs: Get medical advice/attention  
Take off contaminated clothing and wash it before reuse

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical name	CAS No	Weight-%
Alkyl dimethyl benzyl ammonium chloride (C12-16)	68424-85-1	1-5
Decyldimethyloctylammonium Chloride	32426-11-2	1-5
N,N-Dioctyl-N, N-dimethylammonium Chloride	5538-94-3	1-5
Ethyl Alcohol	64-17-5	1-5
Didecyldimethylammonium chloride	7173-51-5	1-5

\*\*If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.\*\*

**4. FIRST AID MEASURES****Description of first aid measures**

**General Advice** Provide this SDS to medical personnel for treatment.

**Eye Contact** 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/physician.

**Skin Contact** Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.

**Inhalation** Remove to fresh air.

**Ingestion** Clean mouth with water and drink afterwards plenty of water.

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

**Symptoms** Causes skin irritation. Causes serious eye damage.

**Indication of any immediate medical attention and special treatment needed**

**Notes to Physician** Treat symptomatically.

**5. FIRE-FIGHTING MEASURES****Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray (fog). Carbon dioxide (CO2). Dry chemical. Foam blanket.

**Unsuitable Extinguishing Media** Not determined.

**Specific Hazards Arising from the Chemical**

Not determined.

**Hazardous combustion products** Carbon monoxide. Carbon dioxide (CO<sub>2</sub>). Nitrogen oxides (NO<sub>x</sub>).

**Protective equipment and precautions for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## 6. ACCIDENTAL RELEASE MEASURES

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

**Personal Precautions** Use personal protective equipment as required.

**Environmental precautions**

**Environmental precautions** See Section 12 for additional Ecological Information.

**Methods and material for containment and cleaning up**

**Methods for Containment** Prevent further leakage or spillage if safe to do so.

**Methods for Clean-Up** Keep in suitable, closed containers for disposal.

## 7. HANDLING AND STORAGE

**Precautions for safe handling**

**Advice on Safe Handling** Handle in accordance with good industrial hygiene and safety practice. Wear protective gloves/protective clothing and eye/face protection. Wash face, hands and any exposed skin thoroughly after handling.

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

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place.

**Incompatible Materials** Acids. Oxidizers. Strong alkalis. Anionic surfactants. Metal salts.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Exposure Guidelines**

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ethyl Alcohol 64-17-5	STEL: 1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m <sup>3</sup> (vacated) TWA: 1000 ppm (vacated) TWA: 1900 mg/m <sup>3</sup>	IDLH: 3300 ppm TWA: 1000 ppm TWA: 1900 mg/m <sup>3</sup>

**Appropriate engineering controls**

**Engineering Controls** Apply technical measures to comply with the occupational exposure limits.

**Individual protection measures, such as personal protective equipment**

**Eye/Face Protection** Wear eye/face protection. Refer to 29 CFR 1910.133 for eye and face protection regulations.

**Skin and Body Protection** Wear protective gloves and protective clothing. Refer to 29 CFR 1910.138 for appropriate skin and body protection.

**Respiratory Protection** Refer to 29 CFR 1910.134 for respiratory protection requirements.

**General Hygiene Considerations** Handle in accordance with good industrial hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

Physical state	Liquid	<b>Odor</b> <b>Odor Threshold</b>	Alcohol Not determined
Appearance	Clear		
Color	Colorless to Amber, Gray, or Pale Pink		
<b>Property</b>	<b>Values</b>	<b>Remarks • Method</b>	
pH	6.9		
Melting point / freezing point	-6.6°C - 0°C / 20°F - 32°F		
Boiling point / boiling range	100°C - 104.4°C / 212°F - 220°F		
Flash point	>93.3°C / >200°F		
Evaporation Rate	<1		
Flammability (Solid, Gas)	Liquid - not applicable		
Flammability Limit in Air			
Upper flammability or explosive limits	Not determined		
Lower flammability or explosive limits	Not determined		
Vapor Pressure	Not determined		
Vapor Density	>1		
Relative Density	0.99		
Water Solubility	100%		
Solubility in other solvents	Not determined		
Partition Coefficient	Not determined		
Autoignition temperature	Not determined		
Decomposition temperature	Not determined		
Kinematic viscosity	Not determined		
Dynamic Viscosity	Not determined		
Explosive Properties	Not determined		
Oxidizing Properties	Not determined		

## 10. STABILITY AND REACTIVITY

### Reactivity

Not reactive under normal conditions.

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

None under normal processing.

**Hazardous Polymerization** Hazardous polymerization does not occur.

### Conditions to Avoid

Keep out of reach of children.

### Incompatible materials

Acids. Oxidizers. Strong alkalis. Anionic surfactants. Metal salts.

### Hazardous decomposition products

Carbon monoxide. Carbon dioxide (CO<sub>2</sub>). Nitrogen oxides (NO<sub>x</sub>).

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### Product Information

<b>Eye Contact</b>	Causes serious eye damage.
<b>Skin Contact</b>	Causes skin irritation.
<b>Inhalation</b>	Do not inhale.
<b>Ingestion</b>	Do not ingest.

### Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Alkyl dimethyl benzyl ammonium chloride (C12-16) 68424-85-1	= 426 mg/kg ( Rat )	-	-
Didecyldimethylammonium chloride 7173-51-5	= 84 mg/kg ( Rat )	-	-
Ethyl Alcohol 64-17-5	= 7060 mg/kg ( Rat )	-	= 124.7 mg/L ( Rat ) 4 h

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

<b>Symptoms</b>	Please see section 4 of this SDS for symptoms.
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### Delayed and immediate effects as well as chronic effects from short and long-term exposure

<b>Carcinogenicity</b>	Ethanol has been shown to be carcinogenic in long-term studies only when consumed as an alcoholic beverage.
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Chemical name	ACGIH	IARC	NTP	OSHA
Ethyl Alcohol 64-17-5	A3	Group 1	Known	X

#### Legend

**ACGIH (American Conference of Governmental Industrial Hygienists)**  
 A3 - Animal Carcinogen  
**IARC (International Agency for Research on Cancer)**  
 Group 1 - Carcinogenic to Humans  
**NTP (National Toxicology Program)**  
 Known - Known Carcinogen  
**OSHA (Occupational Safety and Health Administration of the US Department of Labor)**  
 X - Present

### Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document .

Oral LD50	6,163.58 mg/kg
ATEmix (inhalation-dust/mist)	11,084.40 mg/L

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

**Component Information**

Chemical name	Algae/aquatic plants	Fish	Crustacea
Ethyl Alcohol 64-17-5		100: 96 h Pimephales promelas mg/L LC50 static 13400 - 15100: 96 h Pimephales promelas mg/L LC50 flow-through 12.0 - 16.0: 96 h Oncorhynchus mykiss mL/L LC50 static	10800: 24 h Daphnia magna mg/L EC50 2: 48 h Daphnia magna mg/L EC50 Static 9268 - 14221: 48 h Daphnia magna mg/L LC50

**Persistence/Degradability**

Not determined.

**Bioaccumulation**

There is no data for this product.

**Mobility**

Chemical name	Partition coefficient
Ethyl Alcohol 64-17-5	-0.32

**Other Adverse Effects**

Not determined

**13. DISPOSAL CONSIDERATIONS****Waste Treatment Methods**

- |                               |   |
|-------------------------------|---|
| <b>Disposal of Wastes</b>     | Disposal should be in accordance with applicable regional, national and local laws and regulations. |
| <b>Contaminated Packaging</b> | Disposal should be in accordance with applicable regional, national and local laws and regulations. |

**California Hazardous Waste Status**

Chemical name	California Hazardous Waste Status
Ethyl Alcohol 64-17-5	Toxic Ignitable

**14. TRANSPORT INFORMATION****Note**

Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

**DOT**

- |                             |   |
|-----------------------------|---|
| <b>UN/ID No</b>             | UN1903  |
| <b>Proper Shipping Name</b> | Disinfectant, liquid, corrosive, n.o.s. (Quaternary Ammonium Compounds) |
| <b>Hazard class</b>         | 8   |
| <b>Packing Group</b>        | II  |

**IATA**

- |                                   |   |
|-----------------------------------|---|
| <b>UN number</b>                  | UN1903  |
| <b>Proper Shipping Name</b>       | Disinfectant, liquid, corrosive, n.o.s. (Quaternary Ammonium Compounds) |
| <b>Transport hazard class(es)</b> | 8   |
| <b>Packing Group</b>              | II  |

**IMDG**

<b>UN number</b>	UN1903
<b>Proper Shipping Name</b>	Disinfectant, liquid, corrosive, n.o.s. (Quaternary Ammonium Compounds)
<b>Transport hazard class(es)</b>	8
<b>Packing Group</b>	II

**15. REGULATORY INFORMATION****International Inventories**

Chemical name	TSCA	DSL/NDSL	EINECS/E LINCS	ENCS	IECSC	KECL	PICCS	AICS
Alkyl dimethyl benzyl ammonium chloride (C12-16)	X	X	X	X	X	X	X	X
Decyldimethyloctylammonium Chloride	X	X	X		X	X	X	
N,N-Dioctyl-N, N-dimethylammonium Chloride	X	X	X		X	X	X	X
Ethyl Alcohol	X	X	X	X	X	X	X	X
Didecyldimethylammonium chloride	X	X	X	X	X	X	X	X

**Legend:****TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances**ENCS** - Japan Existing and New Chemical Substances**IECSC** - China Inventory of Existing Chemical Substances**KECL** - Korean Existing and Evaluated Chemical Substances**PICCS** - Philippines Inventory of Chemicals and Chemical Substances**AICS** - Australian Inventory of Chemical Substances**US Federal Regulations****CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

**US State Regulations****California Proposition 65**

This product contains the following Proposition 65 chemicals.

Chemical name	California Proposition 65
Ethyl Alcohol - 64-17-5	Carcinogen Developmental

**U.S. State Right-to-Know Regulations**

Chemical name	New Jersey	Massachusetts	Pennsylvania
Ethyl Alcohol 64-17-5	X	X	X

**16. OTHER INFORMATION**

<u>NFPA</u>	<b>Health Hazards</b>	<b>Flammability</b>	<b>Instability</b>	<b>Special Hazards</b>
	1	1	0	-
<u>HMIS</u>	<b>Health Hazards</b>	<b>Flammability</b>	<b>Physical hazards</b>	<b>Personal Protection</b>
	1	1	1	C

**Issue Date:** 26-Oct-2018  
**Revision Date:** 09-Apr-2020  
**Revision Note:** New format

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**