Material Safety Data Sheet

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M(TM) QUAT DISINFECTANT CLEANER CONCENTRATE (Product No. 5, Twist 'n Fill(TM) System)
MANUFACTURER: 3M
DIVISION: Commercial Care Division

ADDRESS: 3M Center
St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

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Product Use:
Specific Use: Disinfectant

SECTION 2: INGREDIENTS

Ingredient	C.A.S. No.	% by Wt
WATER	7732-18-5	60 - 90
BENZYL-C12-16-ALKYL DIMETHYL AMMONIUM CHLORIDES	68424-85-1	8.68
OCTYL DECYL DIMETHYL AMMONIUM CHLORIDE	32426-11-2	6.51
ETHOXYLATED C12-C15 ALCOHOLS	68131-39-5	5 - 10
ETHYL ALCOHOL	64-17-5	1 - 5
DIDECYL DIMETHYL AMMONIUM CHLORIDE	7173-51-5	3.91
EDTA TETRASODIUM SALT	64-02-8	1 - 5
DIOCTYL DIMETHYL AMMONIUM CHLORIDE	5538-94-3	2.6
SODIUM METASILICATE	6834-92-0	1 - 5

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Liquid
Odor, Color, Grade: Clear; green color; pleasant fragrance.
General Physical Form: Liquid
Immediate health, physical, and environmental hazards: Combustible liquid and vapor. May cause chemical eye burns. May cause chemical skin burns. May be fatal if ingested.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:

Corrosive (Eye Burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

Skin Contact:
Corrosive (Skin Burns): Signs/symptoms may include localized redness, swelling, itching, intense pain, blistering, ulceration, and tissue destruction.

Inhalation:
Single exposure, above recommended guidelines, may cause:

Upper Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May be absorbed following inhalation and cause target organ effects.

Prolonged or repeated exposure may cause:

Lung Effects: Signs/symptoms may include difficulty breathing, cough, wheezing, weakness, increased heart rate, bluish colored skin (cyanosis), sputum production and changes in lung function tests.

Ingestion:
Gastrointestinal Corrosion: Signs/symptoms may include severe mouth, throat and abdominal pain, nausea, vomiting, and diarrhea; blood in the feces and/or vomitus may also be seen.

May be fatal if swallowed.

Target Organ Effects:
Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Carcinogenicity:
Contains a chemical or chemicals which can cause cancer.

WARNING: This product contains ethanol. In IARC published Monograph No. 44, entitled, "Alcohol Drinking", the carcinogenicity of ethanol was determined based on chronic exposure to ethanol through human consumption of alcoholic beverages. This is not an expected effect during the foreseeable use of this product.

Ingredient	C.A.S. No.	Class Description	Regulation
ETHYL ALCOHOL	64-17-5	Group 1	International Agency for Research on Cancer

3.3 POTENTIAL ENVIRONMENTAL EFFECTS
This product is a disinfectant; it is toxic to microorganisms. Care must be taken to avoid improper disposal or release to the environment. When properly handled, use of this product is expected to have minimal environmental impact.

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES
The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.
Eye Contact: Immediately flush eyes with large amounts of water for at least 15 minutes. Get immediate medical attention.

Skin Contact: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water for at least 15 minutes. Get immediate medical attention. Wash contaminated clothing and clean shoes before reuse.

Inhalation: If signs/symptoms develop, remove person to fresh air. If signs/symptoms persist, get medical attention.

If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get immediate medical attention.

4.2 NOTE TO PHYSICIANS
Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression, and convulsion may be needed.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature	*No Data Available*
Flash Point	133 ºF [*Test Method:* Tagliabue Closed Cup]
Flammable Limits - LEL	*No Data Available*
Flammable Limits - UEL	*No Data Available*
OSHA Flammability Classification:	Class II Combustible Liquid

5.2 EXTINGUISHING MEDIA
Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

5.3 PROTECTION OF FIRE FIGHTERS
Special Fire Fighting Procedures: Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

Unusual Fire and Explosion Hazards: Combustible liquid and vapor.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Remove all ignition sources such as flames, smoking materials, and electrical spark sources. Use only non-sparking tools. Ventilate the area with fresh air. Contain spill. Avoid contact with incompatible materials listed in the Reactivity Data Section. Dilute in a large excess of water. Carefully, and with stirring, add appropriate dilute acid such as sulfamic acid or vinegar. Confirm neutrality. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a toxic, corrosivity or flammability hazard. Collect as much of the spilled material as possible using non-sparking tools. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and MSDS. Place in a metal container approved for use in transportation by appropriate authorities. The container must be lined with polyethylene plastic or contain a plastic drum liner made of polyethylene. Cover, but do not seal for 48 hours. Dispose of collected material as soon as possible.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING
This product is not intended to be used without prior dilution as specified on the product label. Avoid eye contact with vapors, mists, or spray. Avoid skin contact. Avoid breathing of vapors, mists or spray. Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits. If ventilation is not adequate, use respiratory protection equipment. Keep away

from heat, sparks, open flame, pilot lights and other sources of ignition. Avoid contact with oxidizing agents. Keep out of the reach of children. Avoid creasing or impacting side walls.

7.2 STORAGE

Store away from areas where product may come into contact with food or pharmaceuticals. Store away from acids. Store away from heat. Store out of direct sunlight. Store away from oxidizing agents. Keep container in well-ventilated area.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

NOTE: When used as directed and diluted and dispensed with a TWIST 'n FILL(TM) Chemical Dispenser, special ventilation is not required. Use with appropriate local exhaust ventilation.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

NOTE: When used as directed and diluted and dispensed with a TWIST 'n FILL(TM) Chemical Dispenser, eye contact with the concentrate is not expected to occur. Avoid eye contact. The following eye protection(s) are recommended: Full Face Shield, Indirect Vented Goggles.

8.2.2 Skin Protection

NOTE: When used as directed and diluted and dispensed with a TWIST 'n FILL(TM) Chemical Dispenser, skin contact with the concentrate is not expected to occur. Avoid skin contact. Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials. Gloves made from the following material(s) are recommended: Butyl Rubber, Neoprene, Nitrile Rubber.

8.2.3 Respiratory Protection

NOTE: When used as directed and diluted and dispensed with a TWIST 'n FILL(TM) Chemical Dispenser, respiratory protection is not required. Avoid breathing of vapors, mists or spray.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

Ingredient	Authority	Type	Limit	Additional Information
ETHYL ALCOHOL	ACGIH	TWA	1000 ppm	Table A4
ETHYL ALCOHOL	OSHA	TWA	1000 ppm	Table Z-1

SOURCE OF EXPOSURE LIMIT DATA:

ACGIH: American Conference of Governmental Industrial Hygienists
CMRG: Chemical Manufacturer Recommended Guideline
OSHA: Occupational Safety and Health Administration
AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form:	Liquid
Odor, Color, Grade:	Clear; green color; pleasant fragrance.
General Physical Form:	Liquid
Autoignition temperature	*No Data Available*
Flash Point	133 ºF [*Test Method:* Tagliabue Closed Cup]
Flammable Limits - LEL	*No Data Available*
Flammable Limits - UEL	*No Data Available*
Boiling point	Approximately 212 ºF

Density	1.0 [*Ref Std:* WATER=1]
Vapor Density	*No Data Available*
Vapor Pressure	No Data Available
Specific Gravity	Approximately 1 [*Ref Std:* WATER=1]
pH	Approximately 12.6
Melting point	*Not Applicable*
Solubility in Water	Complete
Evaporation rate	*No Data Available*
Volatile Organic Compounds	1 - 5 % [*Test Method:* calculated per CARB title 2]
Percent volatile	60 - 95 %
VOC Less H2O & Exempt Solvents	27 - 135 g/l [*Test Method:* calculated per CARB title 2]
Viscosity	<=100 centipoise

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid: Strong acids

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

Substance	Condition
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Hydrogen Chloride	During Combustion
Oxides of Nitrogen	During Combustion

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

CHEMICAL FATE INFORMATION

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Incinerate in a permitted hazardous waste incinerator. As a disposal alternative, dispose of waste product in a permitted hazardous waste facility. Combustion products will include HCl. Facility must be capable of handling halogenated materials.
Container Disposal: For container sizes one gallon or less, rinse thoroughly, securely wrap empty container in several layers of newspaper, and discard in trash or recycle. For container sizes greater than one gallon, triple rinse, then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable), D002 (Corrosive)

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14:TRANSPORT INFORMATION

ID Number	UPC	ID Number	UPC
70-0711-2639-8	00-48011-34719-6	70-0711-2640-6	00-48011-34720-2
70-0711-2641-4	00-48011-34721-9	70-0711-2642-2	00-48011-34722-6

Please contact the emergency numbers listed on the first page of the MSDS for Transportation Information for this material.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

311/312 Hazard Categories:

Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - No

FIFRA

Status	Registration Number
Registered	6836-78-10350

CHEMICAL INVENTORIES

The components of this product are in compliance with the chemical notification requirements of TSCA.

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS.

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 3 **Flammability:** 2 **Reactivity:** 0 **Special Hazards:** None
Corrosive: Yes

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

HMIS Hazard Classification

Health: 3 **Flammability:** 2 **Reactivity:** 0 **Protection:** X - See PPE section.

Hazardous Material Identification System (HMIS(r)) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS(r) ratings are to be used with a fully implemented HMIS(r) program. HMIS(r) is a registered mark of the National Paint and Coatings Association (NPCA).

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