

SAFETY DATA SHEET

1. Identification

Product identifier	MAQUAT® MC1412-80 E
Other means of identification Product Code	863201
Product registration number	10324-14
Recommended use	FIFRA Regulated Manufacturing Use Product (Quat Active)
Recommended restrictions	None known.
Manufacturer/Importer/Supplier	/Distributor information
Manufacturer	
Company name Address	Mason Chemical Company 9075 Centre Pointe Drive Suite 400 West Chester, OH 45069 United States
Telephone	(513) 326-0600 1-800-707-4568
E-mail	sdsinfo@pilotchemical.com
Emergency phone number	CHEMTREC International: 1-703-527-3887
CHEMTREC USA:	1-800-424-9300

2. Hazard(s) identification

Physical hazards	Flammable liquids	Category 3
Health hazards	Acute toxicity, oral	Category 4
	Skin corrosion/irritation	Category 1B
	Serious eye damage/eye irritation	Category 1
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 1
	Hazardous to the aquatic environment, long-term hazard	Category 1
OSHA defined hazards	Not classified.	
Label elements		



Signal word Hazard statement

Flammable liquid and vapor. Harmful if swallowed. Causes severe skin burns and eye damage. Causes serious eye damage. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

Precautionary statement Prevention

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe mist/vapors. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. 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/doctor. Wash contaminated clothing before reuse. In case of fire: Use appropriate media to extinguish. Collect spillage.
Storage	Store in a well-ventilated place. Keep cool. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Quaternary Ammonium Compounds, Benzyl-C12-C16-alkyldimethyl, Chlorides		68424-85-1	75 - < 85
Ethanol		64-17-5	9 - < 15
Other components below report	able levels		5 - < 10
Composition comments	Occupational Exposure Limits for residuals a	re listed in Section 8.	
4. First-aid measures			
Inhalation	Move to fresh air. Call a physician if symptom	ns develop or persist.	
Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.		
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.		
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.		
Most important symptoms/effects, acute and delayed	Burning pain and severe corrosive skin dama include stinging, tearing, redness, swelling, a blindness could result.		
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.		
General information	Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.		
5. Fire-fighting measures			
Suitable extinguishing media	Water fog. Alcohol resistant foam. Dry chemi	cal powder. Carbon dioxide (C	O2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as th	is will spread the fire.	
Specific hazards arising from the chemical	Vapors may form explosive mixtures with air. of ignition and flash back. During fire, gases I		
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full p	rotective clothing must be wor	n in case of fire.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breath so without risk.	e fumes. Move containers from	n fire area if you can c
Specific methods	Use standard firefighting procedures and con	sider the hazards of other invo	lved materials.
General fire hazards	Flammable liquid and vapor.		

6. Accidental release measures

0. Accidental release meas	sules
Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist/vapors. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. This product is miscible in water. Prevent entry into waterways, sewer, basements or confined areas.
	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.
	Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.
7. Handling and storage	
Precautions for safe handling	Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not breathe mist/vapors. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. When using, do not eat, drink or smoke. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).
0 Experies controls/nero	

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Туре	Value	
Ethanol (CAS 64-17-5)	PEL	1900 mg/m3	
		1000 ppm	
US. ACGIH Threshold Lir	nit Values		
Components	Туре	Value	
Ethanol (CAS 64-17-5)	STEL	1000 ppm	
US. NIOSH: Pocket Guide	e to Chemical Hazards		
Components	Туре	Value	
Ethanol (CAS 64-17-5)	TWA	1900 mg/m3	
		1000 ppm	
ological limit values	No biological exposure limits noted	No biological exposure limits noted for the ingredient(s).	
opropriate engineering ontrols	Ventilation rates should be matched exhaust ventilation, or other engine exposure limits. If exposure limits h	xhaust ventilation. Good general ventilation should be used. I to conditions. If applicable, use process enclosures, local ering controls to maintain airborne levels below recommended ave not been established, maintain airborne levels to an and emergency shower must be available when handling this	

product.

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles) and a face shield.	
Skin protection Hand protection	Wear appropriate chemical resistant gloves.	
Other	Wear appropriate chemical resistant clothing.	
Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.	
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.	
General hygiene considerations	When using do not smoke. Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.	

9. Physical and chemical properties

Appearance	Clear.
Physical state	Liquid.
Form	Liquid.
Color	Colorless to Light Straw.
Odor	Slight Organic
Odor threshold	Not available.
рН	7 - 9 (1% soln)
Melting point/freezing point	41 °F (5 °C)
Initial boiling point and boiling	237.2 °F (114 °C)
range	
Flash point	107.6 °F (42.0 °C) Tag Closed Cup
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or exp	
Flammability limit - lower (%)	Not available.
	Not available.
Flammability limit - upper (%)	NOT available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	22.8 mm Hg @25°C
Vapor density	Not available.
Relative density	0.9475
Solubility(ies)	
Solubility (water)	Miscible
Partition coefficient (n-octanol/water)	Not available.
	Not available.
Auto-ignition temperature Decomposition temperature	Not available.
Viscosity	Not available.
•	Not available.
Other information	7.82 7.00 lb/gol
Density Explosive properties	7.82 - 7.99 lb/gal Not explosive.
Kinematic viscosity	340 cSt
-	
Kinematic viscosity temperature	77 °F (25 °C)
Oxidizing properties	Not oxidizing.
VOC	9.0 - 15.0 % estimated

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the decomposition temperature. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause irritation to the respiratory system. Prolonged inhalation may be harmful.
Skin contact	Causes severe skin burns.
Eye contact	Causes serious eye damage.
Ingestion	Causes digestive tract burns. Harmful if swallowed.
Symptoms related to the physical, chemical and toxicological characteristics	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

Information on toxicological effects

Acute toxicity	Harmful if swallowed.	
Product	Species	Test Results
MAQUAT® MC1412-80 E		
Acute		
Dermal		
Liquid		
LD50	Rabbit	> 2 g/kg
Oral		
Liquid		
LD50	Rat	435 mg/kg
Components	Species	Test Results
Ethanol (CAS 64-17-5)		
Acute		
Dermal		
Liquid		
LD50	Rabbit	> 15800 mg/kg
Inhalation		
Vapor		
LC50	Rat	51.3 mg/l, 6 Hours
Oral		
LD50	Rat	6.2 g/kg
Quaternary Ammonium Co	ompounds, Benzyl-C12-C16-alkyldimeth	yl, Chlorides (CAS 68424-85-1)
Acute		
Dermal		
Liquid		
LD50	Rabbit	3413 mg/kg
LD50	Rat	930 mg/kg
Oral		
Liquid		
LD50	Rat	795 mg/kg

Components	Species		Test Results	
LD50	Rat		304.5 mg/kg	
Skin corrosion/irritation	Causes severe skin burns and eye damage.			
Serious eye damage/eye rritation	Causes seri	ous eye damage.		
Respiratory or skin sensitizatior	ı			
Respiratory sensitization		atory sensitizer.		
Skin sensitization	This produc	t is not expected to cause skin sensitization	on.	
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.			
Carcinogenicity	No data available to indicate product or any components present at greater than 0.1% are carcinogenic. Not classifiable as to carcinogenicity to humans.			
IARC Monographs. Overall I	Evaluation of	Carcinogenicity		
Not listed. OSHA Specifically Regulate	d Substance	s (29 CFR 1910.1001-1053)		
Not listed. US. National Toxicology Pro Not listed.	ogram (NTP) I	Report on Carcinogens		
Reproductive toxicity	Not availabl	Not available.		
Specific target organ toxicity - single exposure	Not classified.			
Specific target organ toxicity - repeated exposure	Not classifie	ed.		
Aspiration hazard	Not an aspir	ration hazard.		
Chronic effects	-	nhalation may be harmful.		
12. Ecological information	-			
Ecotoxicity		aquatic life with long lasting effects		
Components	Very toxic to aquatic life with long lasting effects. Species Test Results			
Ethanol (CAS 64-17-5)		opecies	Test Nesulis	
Aquatic				
-	EC50	Water flea (Daphnia magna)	> 10000 mg/l, 48 hours	
-	LC50	Fathead minnow (Pimephales prometa	0 /	
			, 0,	
Aquatic Acute	ounus, benzy	I-C12-C16-alkyldimethyl, Chlorides (CAS	00424-05-1)	
Fish	LC50	Bluegill (Lepomis macrochirus)	0.515 mg/l	
<i>Chronic</i> Crustacea	NOEL	Daphnia	0.0042 mg/l	
Persistence and degradability	This product is expected to be readily biodegradable.			
Bioaccumulative potential				
Partition coefficient n-octan Ethanol	ol / water (lo	g Kow) -0.31		
Ethanior	No data available.			
	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.			
Mobility in soil Other adverse effects	No other ad			
Mobility in soil	No other ad potential, er			
Mobility in soil Other adverse effects	No other ad potential, er ns Pesticide wa rinsate is a v instructions,	ndocrine disruption, global warming potent astes are acutely hazardous. Improper dis	tial) are expected from this component. sposal of excess pesticide, spray mixture or nnot be disposed of by use according to lat nental Control Agency, or the Hazardous	

Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN2920
Corrosive liquids, flammable, n.o.s. (Quaternary Ammonium Compounds, Ethanol)
8
3
8, 3
ll
r Read safety instructions, SDS and emergency procedures before handling.
B2, IB2, T11, TP2, TP27
154
202
243
132

Note: Class 3 labels are not required when packages are transported domestically by rail or highway as noted in 49CFR 172.402 (a)

Note: Except when all or part of the transportation is by vessel, the requirements specific to marine pollutants do not apply to non-bulk packagings transported by motor vehicle, rail car or aircraft according to 49 CFR 171.4(c). A MARINE POLLUTANT mark is not required on a bulk packaging, freight container or transport vehicle that bears a label or placard specified in subparts E or F, except for transportation by vessel, according to 49 CFR 172.322(d).

ΙΑΤΑ

UN number UN proper shipping name Transport hazard class(es)	UN2920 Corrosive liquid, flammable, n.o.s. (Quaternary Ammonium Compounds, Ethanol)
Class	8
Subsidiary risk	3
Packing group	II
Environmental hazards	Yes
ERG Code	8F
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.
IMDG	
UN number	UN2920
UN proper shipping name	CORROSIVE LIQUID, FLAMMABLE, N.O.S. (QUATERNARY AMMONIUM COMPOUND, ETHANOL), MARINE POLLUTANT
Transport hazard class(es)	
Class	8
Subsidiary risk	3
Packing group	II
Environmental hazards	
Marine pollutant	Yes
EmS	F-E, S-C
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not established.





Not regulated.			
Safe Drinking Water Act (SDWA)	Not regulated.		
FEMA Priority Substa	nces Respiratory Health and Safety in the Flavor Manufacturing \	Norkplace	
Ethanol (CAS 64-1	7-5) Low priority		
FIFRA Information	This chemical is a pesticide product registered by the Environmen subject to certain labeling requirements under federal pesticide lay from the classification criteria and hazard information required for workplace labels of non-pesticide chemicals. Listed below is the h the pesticide label.	w. These requirements differ safety data sheets, and for	
Signal word	DANGER KEEP OUT OF REACH OF CHILDREN		
Hazard statement	Corrosive. Causes irreversible eye damage and skin burns. May be fatal if swallowed, absorbed through skin or inhaled. Do not get in eyes, on skin or on clothing. 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, using tobacco or using the toilet. Remove contaminated clothing and wash before reuse.		
rnational Inventories			
Country(s) or region Australia	Inventory name Australian Inventory of Chemical Substances (AICS)	On inventory (yes/no) Ye	
Canada	Domestic Substances List (DSL)	Ye	
Canada	Non-Domestic Substances List (NDSL)	Ν	
China	Inventory of Existing Chemical Substances in China (IECSC)	Ye	
China Europe	Inventory of Existing Chemical Substances in China (IECSC) European Inventory of Existing Commercial Chemical Substances (EINECS)		
	European Inventory of Existing Commercial Chemical	Ye	
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Ye	
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS) European List of Notified Chemical Substances (ELINCS)	Ye Ye N Ye Ye	

Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s) A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	05-27-2015
Revision date	10-04-2022
Version #	10
HMIS® ratings	Health: 3 Flammability: 2 Physical hazard: 0
NFPA ratings	Health: 3 Flammability: 2 Instability: 0

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Revision information

This document has undergone significant changes and should be reviewed in its entirety.