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SECTION 1: Identification of the substance/mixture and of the company/ undertaking

1.1 Product identifier

· Trade name: <u>Aqua-Clear™</u>

· Article number: F17093-0000

• **1.2 Relevant identified uses of the substance or mixture and uses advised against** No further relevant information available.

· Application of the substance / the mixture Water conditioner

· 1.3 Details of the supplier of the Safety Data Sheet

• Manufacturer/Supplier: Bel-Art Products 661 Route 23 Wayne, NJ 07470 (800) 423-5278

· 1.4 Emergency telephone number: +1 (800) 457-4280

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture Classification according to Regulation (EC) No 1272/2008 Classifications listed also are applicable to the OSHA GHS Hazard Communication Standard (29CFR1910.1200).

The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H400.

flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



Skin Corr. 1A H314 Causes severe skin burns and eye damage.

b environment

Aquatic Acute 1 H400 Very toxic to aquatic life.



Acute Tox. 4 H302 Harmful if swallowed.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

C; Corrosive

R35: Causes severe burns.

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Trade name: Aqua-Clear™ (Contd. of page 1) X Xn; Harmful R22: Harmful if swallowed. K Dangerous for the environment Very toxic to aquatic organisms. R50: R10: Flammable. · Information concerning particular hazards for human and environment: The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version. **Classification system:** The classification is according to the latest editions of the EU-lists, and extended by company and literature data. The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company. · 2.2 Label elements Labelling according to Regulation (EC) No 1272/2008 The product is additionally classified and labelled according to the Globally Harmonized System within the United States (GHS). The product is classified and labelled according to the CLP regulation. · Hazard pictograms This pictogram only applicable for EU regulations. Not for use in the United States (OSHA GHS). GHS02 GHS05 GHS07 GHS09 Signal word Danger · Hazard-determining components of labelling: Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides ethanol · Hazard statements The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H400. H226 Flammable liquid and vapour. H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H400 Very toxic to aquatic life. **Precautionary statements** P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking. P260 Do not breathe mist/vapours/spray. P280 Wear protective gloves / eye protection. (Contd. on page 3)

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Trade name: Aqua-Clear™ (Contd. of page 2) P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. P301+P312 P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting. P370+P378 In case of fire: Use for extinction: CO2, powder or water spray. P403+P235 Store in a well-ventilated place. Keep cool. P501 Dispose of contents/container in accordance with local/regional/national/international regulations. · Hazard description: WHMIS-symbols: B3 - Combustible liquid D2B - Toxic material causing other toxic effects E - Corrosive material NFPA ratings (scale 0 - 4) Health = 3Fire = 2 Reactivity = 0 · HMIS-ratings (scale 0 - 4) 4 Health = 4 HEALTH ² Fire = 2 FIRE REACTIVITY O Reactivity = 0 HMIS Long Term Health Hazard Substances None of the ingredients are listed. · 2.3 Other hazards Results of PBT and vPvB assessment · **PBT:** Not applicable. vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

· 3.2 Mixtures

· Description: Mixture of substances listed below with nonhazardous additions.

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· Dangerous components:		
CAS: 68424-85-1 EINECS: 270-325-2	Quaternary ammonium compounds, benzyl-C12-16- alkyldimethyl, chlorides C R35; Xn R22; Xi R41; N R50 Skin Corr. 1A, H314; Eye Dam. 1, H318 Aquatic Acute 1, H400 Acute Tox. 4, H302	25-50%
CAS: 64-17-5 EINECS: 200-578-6 Index number: 603-002-00-5	ethanol Xi R36; F R11 Flam. Liq. 2, H225 Eye Irrit. 2, H319	2,5-10%
• Additional information: For	the wording of the listed risk phrases refer to section 16.	

SECTION 4: First aid measures

· 4.1 Description of first aid measures

· General information:

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

After inhalation:

Supply fresh air; consult doctor in case of complaints.

Provide oxygen treatment if affected person has difficulty breathing.

· After skin contact:

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

Seek immediate medical help for blistering or open wounds.

· After eye contact:

Protect unharmed eye.

Remove contact lenses if worn, if possible.

Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing:

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

Drink plenty of water and provide fresh air. Call for a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

Strong caustic effect on skin and mucous membranes.

Gastric or intestinal disorders when ingested.

Nausea

Coughing

· Hazards

Danger of gastric perforation. Causes serious eye damage.

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• **4.3 Indication of any immediate medical attention and special treatment needed** Medical supervision for at least 48 hours.

SECTION 5: Firefighting measures

- · 5.1 Extinguishing media
- Suitable extinguishing agents:
- CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- For safety reasons unsuitable extinguishing agents: None.
- 5.2 Special hazards arising from the substance or mixture
- During heating or in case of fire poisonous gases are produced.
- 5.3 Advice for firefighters

• Protective equipment:

Wear self-contained respiratory protective device.

Wear fully protective suit.

· Additional information

Eliminate all ignition sources if safe to do so.

Cool endangered receptacles with water spray.

Evacuate area and fight fire from from the upwind side.

SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures Use respiratory protective device against the effects of fumes/dust/aerosol. Keep people at a distance and stay on the windward side. Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation Keep away from ignition sources. Protect from heat. · 6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water. Inform respective authorities in case of seepage into water course or sewage system. 6.3 Methods and material for containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Use spark-proof equipment. Pick up mechanically. Send for recovery or disposal in suitable receptacles. Dispose contaminated material as waste according to item 13. Ensure adequate ventilation. 6.4 Reference to other sections See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

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SECTION 7: Handling and storage

· 7.1 Precautions for safe handling Open and handle receptacle with care. Prevent formation of aerosols. Avoid splashes or spray in enclosed areas. Use only in well ventilated areas. Wash hands before breaks and at the end of work. · Information about fire - and explosion protection: Keep ignition sources away - Do not smoke. Protect against electrostatic charges. Keep respiratory protective device available. Flammable liquid and vapour. When heated the product forms flammable fumes. Flammable gas-air mixtures may form in empty receptacles. · 7.2 Conditions for safe storage, including any incompatibilities · Storage: · Requirements to be met by storerooms and receptacles: Avoid storage near extreme heat, ignition sources or open flame. Unsuitable material for receptacle: aluminium. Unsuitable material for receptacle: steel. · Information about storage in one common storage facility: Store away from foodstuffs. Store away from oxidising agents. · Further information about storage conditions: Store in cool, dry conditions in well sealed receptacles.

Store receptacle in a well ventilated area.

Protect from heat and direct sunlight.

· 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

• Additional information about design of technical facilities: No further data; see item 7.

· 8.1 Control parameters

	 Ingredients with 	limit values that	t require monito	ring at the workplace:
--	--------------------------------------	-------------------	------------------	------------------------

	64-17-5 etha	nol	
	PEL (USA)	Long-term value: 1900 mg/m³, 1000 ppm	
l	REL (USA)	Long-term value: 1900 mg/m³, 1000 ppm	
l	TLV (USA)	Short-term value: 1880 mg/m ³ , 1000 ppm	
l	EL (Canada)	Short-term value: 1000 ppm	
l	EV (Canada)	Long-term value: 1,900 mg/m³, 1,000 ppm	
L	· DNELs No fu	rther relevant information available.	
L		rther relevant information available.	
	• Additional in	formation: The lists valid during the making were used as basis.	(Contd. on page

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(Contd. of page 6) · 8.2 Exposure controls · Personal protective equipment: General protective and hygienic measures: The usual precautionary measures are to be adhered to when handling chemicals. Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Avoid contact with the eyes and skin. Do not inhale gases / fumes / aerosols. Clean skin thoroughly immediately after handling the product. Use only in well ventilated areas. **Respiratory protection:** Not required under normal conditions of use. Use suitable respiratory protective device when aerosol or mist is formed. For spills, respiratory protection may be advisable. Protection of hands: Protective gloves The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation. Material of gloves The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. Penetration time of glove material The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed. Eve protection: Contact lenses should not be worn. Safety glasses Body protection: Protective work clothing · Limitation and supervision of exposure into the environment No further relevant information available. · Risk management measures See Section 7 for additional information. No further relevant information available.

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9.1 Information on basic physical a General Information	and chemical properties
Appearance: Form: Colour: Odour: Odour threshold:	Liquid Blue Mild Not determined.
pH-value at 20 °C (68 °F):	7,5
Change in condition Melting point/Melting range: Boiling point/Boiling range:	Not Determined. 78 °C (172 °F) (approximate)
Flash point:	53,9 °C (129 °F)
Flammability (solid, gaseous):	Not applicable.
Auto/Self-ignition temperature:	Not determined.
Decomposition temperature:	Not determined.
Self-igniting:	Product is not self-igniting.
Danger of explosion:	Product is not explosive. However, formation of explosive a vapour mixtures are possible.
Explosion limits: Lower: Upper:	Not determined. Not determined.
Vapour pressure:	Not determined.
Density at 20 °C (68 °F): Relative density Vapour density Evaporation rate	0,974 g/cm³ (8,128 lbs/gal) Not determined. Not determined. Not determined.
Solubility in / Miscibility with water:	Soluble.
Partition coefficient (n-octanol/wat	er): Not determined.
Viscosity: Dynamic at 25 °C (77 °F): Kinematic:	80 cps Not determined.
9.2 Other information	No further relevant information available.

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SECTION 10: Stability and reactivity

· 10.1 Reactivity

· 10.2 Chemical stability

Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions

Flammable.

Used empty containers may contain product gases which form explosive mixtures with air.

Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomised. Reacts with strong acids and oxidising agents.

Corrosive action on metals.

· 10.4 Conditions to avoid

Keep ignition sources away - Do not smoke.

Store away from oxidising agents.

Keep away from heat and direct sunlight.

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

· 10.5 Incompatible materials:

Warning! Do not use together with other products. May release dangerous gases (chlorine).

· 10.6 Hazardous decomposition products:

Carbon monoxide and carbon dioxide

Chlorine

Chlorine compounds

Nitrogen oxides (NOx)

SECTION 11: Toxicological information

· 11.1 Information on toxicological effects

· Acute toxicity:

- · LD/LC50 values relevant for classification: None.
- · Primary irritant effect:
- on the skin: Caustic effect on skin and mucous membranes.
- · on the eye: Strong caustic effect.
- Sensitisation: No sensitising effects known.
- · Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Harmful Corrosive

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

- Acute effects (acute toxicity, irritation and corrosivity): Harmful if swallowed.
- Repeated dose toxicity: May cause damage to organs through prolonged or repeated exposure.

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SECTION 12: Ecological information

· 12.1 Toxicity

· Aquatic toxicity:

The material is harmful to the environment.

Toxic to aquatic life.

· 12.2 Persistence and degradability biodegradable

- · 12.3 Bioaccumulative potential No further relevant information available.
- 12.4 Mobility in soil No further relevant information available.
- · Ecotoxical effects:
- · Remark: Very toxic for algae
- · Additional ecological information:
- General notes:

Also poisonous for fish and plankton in water bodies.

Avoid transfer into the environment.

Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

Due to available data on eliminability/decomposition and bioaccumulation potential a prolonged damage of the environment is unlikely.

12.5 Results of PBT and vPvB assessment

· PBT: Not applicable.

· vPvB: Not applicable.

· 12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system. Can be burned with household garbage after consulting with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.

· Uncleaned packaging:

· Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

· 14.1 UN-Number · DOT

UN2920

Product is additionally classified as a MARINE POLLUTANT based on MARPOL and DOT rules. Labeling as a MARINE POLLUTANT is not required for non-bulk single package shipments by motor vehicle,

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Trade name: Aqua-Clear™ (Contd. of page 10) rail car or aircraft. Bulk packaging consists of a maximum capacity of greater than 450L (119 gallons) for a liquid and a maximum net mass greater than 400kg (882 pounds) for a solid. · ADR, IMDG, IATA UN2920 14.2 UN proper shipping name Limited Quantity for packages less than 30 kg (66 lb) and inner packagings less than 1 L (0.3 gal). · DOT Corrosive liquids, flammable, n.o.s. (Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides, Ethanol) · ADR 2920 CORROSIVE LIQUID, FLAMMABLE, N.O.S.(Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides, Ethanol), ENVIRONMENTALLY HAZARDOUS · IMDG CORROSIVE LIQUID. FLAMMABLE. N.O.S. (Quaternary ammonium compounds, benzyl-C12-16alkyldimethyl, chlorides, Ethanol), MARINE POLLUTANT · IATA Corrosive liquid, flammable, n.o.s. (Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides, Ethanol) · 14.3 Transport hazard class(es) · DOT · Class 8 Corrosive substances. · Label 8+3 · ADR · Class 8 (CF1) Corrosive substances. · Label 8+3 ·IMDG · Class 8 Corrosive substances. (Contd. on page 12)

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·	
Label	(Contd. of page 1 8+3
ΙΑΤΑ	
Class	8 Corrosive substances.
Label	8+3
14.4 Packing group	
DOT, ADR, IMDG, IATA	II
14.5 Environmental hazards:	"
Marine pollutant:	Yes
	Symbol (fish and tree)
Special marking (ADR):	Symbol (fish and tree)
14.6 Special precautions for user	Warning: Corrosive substances.
Danger code (Kemler):	83
EMS Number:	F-E,S-C
14.7 Transport in bulk according to Anne	
MARPOL73/78 and the IBC Code	Not applicable.
Transport/Additional information:	
ADR	
Limited quantities (LQ)	1L
Excepted quantities (EQ)	Code: E2
· · · · ·	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
Transport category	2
Tunnel restriction code	D/E
IMDG	
Limited quantities (LQ)	1 L
Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
	UN2920, CORROSIVE LIQUID, FLAMMABLE, N.O.S
UN "Model Regulation":	
UN "Model Regulation":	(Quaternary ammonium compounds, benzvl-C12-16
UN "Model Regulation":	(Quaternary ammonium compounds, benzyl-C12-16 alkyldimethyl, chlorides, Ethanol

SECTION 15: Regulatory information

 $^{\cdot}$ 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture $^{\cdot}$ United States (USA)

· SARA

• Section 355 (extremely hazardous substances):

None of the ingredients are listed.

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	(Contd. of page
Section 313 (Specific toxic chemical listings): None of the ingredients are listed.	
TSCA (Toxic Substances Control Act):	
All ingredients are listed.	
 Proposition 65 (California): Chemicals known to cause cancer: 	
Ethanol - listing refers specifically to alcoholic beverage consumption and is	not applicable for product.
64-17-5 ethanol	
• Chemicals known to cause reproductive toxicity for females:	
None of the ingredients are listed.	
· Chemicals known to cause reproductive toxicity for males:	
None of the ingredients are listed.	
· Chemicals known to cause developmental toxicity:	
Ethanol - listing refers specifically to alcoholic beverage consumption and is	not applicable for product.
64-17-5 ethanol	
Carcinogenic Categories	
· EPA (Environmental Protection Agency)	
None of the ingredients are listed.	
· IARC (International Agency for Research on Cancer)	
64-17-5 ethanol	
· TLV (Threshold Limit Value established by ACGIH)	
64-17-5 ethanol	A
· NIOSH-Ca (National Institute for Occupational Safety and Health)	
None of the ingredients are listed.	
· Canada	
· Canadian Domestic Substances List (DSL)	
All ingredients are listed.	
· Canadian Ingredient Disclosure list (limit 0.1%)	
64-17-5 ethanol	
· Canadian Ingredient Disclosure list (limit 1%)	
None of the ingredients are listed.	
· Information about limitation of use:	
Workers are not allowed to be exposed to the hazardous carcinogeni	ic materials contained in th
preparation. Exceptions can be made by the authorities in certain cases.	
Other regulations, limitations and prohibitive regulations	
This product has been classified in accordance with hazard criteria of the Ca and the SDS contains all the information required by the Controlled Products	
Substances of very high concern (SVHC) according to REACH, Article	57
None of the ingredients are listed.	
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· 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship. **Relevant phrases** H225 Highly flammable liquid and vapour. H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H318 Causes serious eve damage. H319 Causes serious eye irritation. H400 Very toxic to aquatic life. R11 Highly flammable. R22 Harmful if swallowed. R35 Causes severe burns. R36 Irritating to eyes. R41 Risk of serious damage to eyes. R50 Very toxic to aquatic organisms. Abbreviations and acronyms: ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association GHS: Globally Harmonised System of Classification and Labelling of Chemicals ACGIH: American Conference of Governmental Industrial Hygienists EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA) WHMIS: Workplace Hazardous Materials Information System (Canada) VOC: Volatile Organic Compounds (USA, EU) DNEL: Derived No-Effect Level (REACH) PNEC: Predicted No-Effect Concentration (REACH) Flam. Liq. 2: Flammable liquids, Hazard Category 2 Flam. Liq. 3: Flammable liquids, Hazard Category 3 Acute Tox. 4: Acute toxicity, Hazard Category 4 Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1 Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2 Aquatic Acute 1: Hazardous to the aquatic environment - AcuteHazard, Category 1 Sources SDS Prepared by: ChemTel Inc. 1305 North Florida Avenue Tampa, Florida USA 33602-2902 Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573 Website: www.chemtelinc.com