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Section 1 – Product Identification

IDENTITY: *Product Name:* **PRO-TEKT TOPCOAT, Component A**

AQUAFIN, INC.
505 BLUE BALL RD. #160
ELKTON, MD 21921

Emergency Phone No. **(800) 394-1410**
Information Phone No. **(410) 392-2300**
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Recommended use of the chemical and restriction on use: Refer to the product technical data sheet. For industrial and professional users.

Section 2 – Hazards Identification

GHS Classification:

This material is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

Skin sensitization - Category 1

GHS Label element:

Hazard Pictograms

GHS07

Signal Word: WARNING!

Hazard Statements:
H317 May cause an allergic skin reaction.

Precautionary Statements:
Prevention:
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:
P302+352 IF ON SKIN: Wash with plenty of soap and water.
P333+313 If skin irritation or rash occurs: Get medical advice/ attention.
P363 Wash contaminated clothing before reuse.

Disposal:
P501: Dispose of contents/container to an approved waste disposal site.

Other hazards: No data available.

Section 3 – Composition / Information on Ingredients

Chemical nature: mixture.

Hazardous Components	CAS No.	Weight %
Aspartic acid, N,N'-(methylenedi-4, 1-cyclohexanediyl)bis-, tetraethyl ester	136210-30-5	>= 60.0 - <= 100.0 %
2-Butenedioic acid(E)-diethylester	623-91-6	>= 1.0 - <= 5.0 %

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence not require reporting in this section.

Section 4 – First Aid Measures

General Advice: First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

After Inhalation: Move person to fresh air. If effects occur, consult a physician.

After Skin Contact: Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation persists. Wash clothing before reuse. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands.

After Eye Contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

After Ingestion: If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

Most important symptoms and effects, both acute and delayed: Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed
Notes to physician: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

Section 5 – Fire Fighting Measures

Suitable Extinguishing Media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Do not use direct water stream. May spread fire. General purpose synthetic foams (including AFFF type) or protein foams are preferred if available. Alcohol resistant foams (ATC type) may function. Water fog, applied gently may be used as a blanket for fire extinguishment.

Unsuitable extinguishing media: Do not use direct water stream. May spread fire.

Special hazards arising from the substance or mixture:
Hazardous combustion products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Nitrogen oxides. Hydrogen cyanide. Carbon monoxide. Carbon dioxide.

Unusual Fire and Explosion Hazards: Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.

Advice for firefighters
Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Do not use direct water stream. May spread fire. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Water fog, applied gently may be used as a blanket for fire extinguishment. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.

Special protective equipment for firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

Section 6 – Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to section 7, Handling, for additional precautionary measures. No smoking in area. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. Spills or discharge to natural waterways is likely to kill aquatic organisms.

Methods and materials for containment and cleaning up: Contain spilled material if possible. Collect in suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

Section 7 – Handling and Storage

Precautions for safe handling: Avoid prolonged or repeated contact with skin. Avoid contact with eyes. Wash thoroughly after handling. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Conditions for safe storage: Store in accordance with good manufacturing practices.

Section 8 – Exposure Controls / Personal Protection

Control parameters
Exposure limits are listed below, if they exist.
Exposure limits have not been established for those substances listed in the composition, if any have been disclosed.

Exposure controls:
Engineering controls: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.
Individual protection measures:
Eye/face protection: Use safety glasses (with side shields).
Skin protection:
Hand protection: Use gloves chemically resistant to this material.

Other protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator.

Section 9 – Physical and Chemical Properties

Appearance:	
Physical State	Liquid
Color	Clear
Odor:	Amine
Odor Threshhold:	No test data available.
pH:	No data available.
Melting point/range:	No data available.
Freezing point:	No data available.
Boiling point (760 mmHg):	No data available.
Flash point:	**Closed cup** 93.3°C (199.9°F*) Estimated.* **Open cup** 93.3°C (199.9°F) *Estimated.*
Evaporation Rate (Butyl Acetate =1):	Not available.
Flammability (solid, gas):	Not applicable.
Lower explosion limit:	Liquid.
Upper explosion limit:	Liquid.
Vapor Pressure:	No data available.
Relative Vapor Density (air = 1):	No data available.
Relative Density (water = 1):	No data available.
Water Solubility:	No data available.
Partition coefficient: n-octanol/water	This product is a mixture. See Section 12 for individual component data.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
Kinematic Viscosity	No information available.
Explosive properties	No data available.
Oxidizing properties	No data available.
Molecular weight	Not reported.

NOTE: The physical data presented above are typical values and should not be construed as a specification.

Section 10 – Stability and Reactivity

Reactivity: No data available.

Chemical stability: Stable under recommended storage conditions. See Storage, Section 7.

Possibility of hazardous reactions: Polymerization will not occur.

Conditions to avoid: None known.

Incompatible materials: There are no known materials which are incompatible with this product.

Hazardous decomposition products: Does not decompose.

Section 11 – Toxicological Information

Toxicological information appears in this section when such data is available.

Acute toxicity
Acute oral toxicity
Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.
Single dose oral LD50 has not been determined. Based on information for component(s):
LD50, Rat, > 2,000 mg/kg Estimated.
Acute dermal toxicity
Prolonged skin contact is unlikely to result in absorption of harmful amounts.
The dermal LD50 has not been determined. Based on information for component(s):
LD50, Rat, > 2,000 mg/kg Estimated.
Acute inhalation toxicity
Excessive exposure may cause irritation to upper respiratory tract (nose and throat).
As product: The LC50 has not been determined.

Skin corrosion/irritation
Brief contact may cause slight skin irritation with local redness.
Effects may be slow to heal.

Serious eye damage/eye irritation
May cause slight temporary eye irritation.
Corneal injury is unlikely.

Sensitization
For the minor component(s):
Has caused allergic skin reactions when tested in guinea pigs.
For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)
Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
For some component(s):
In animals, effects have been reported on the following organs:
Gastrointestinal tract.
Thyroid.

Carcinogenicity
No relevant data found.

Teratogenicity
For some component(s): Did not cause birth defects or any other fetal effects in laboratory animals.

Reproductive toxicity
For some component(s): In animal studies, did not interfere with reproduction. In animal studies, did not interfere with fertility.

Mutagenicity
For some component(s): In vitro genetic toxicity studies were negative in some cases and positive in other cases.

Aspiration Hazard
Based on available information, aspiration hazard could not be determined.

COMPONENTS INFLUENCING TOXICOLOGY:

Aspartic acid, N,N'-(methylenedi-4,1-cyclohexanediyl)bis-, tetraethyl ester
Acute inhalation toxicity
Excessive exposure may cause irritation to upper respiratory tract (nose and throat).
The LC50 has not been determined. For similar material(s): LC50, Rat, male and female, 4 Hour, dust/mist, > 4.224 mg/l No deaths occurred at this concentration.

2-Butenedioic acid(E)-diethylester
Acute inhalation toxicity
The LC50 has not been determined.

Section 12 – Ecological Information

Ecotoxicological information appears in this section when such data is available.

Toxicity

Aspartic acid, N,N'-(methylenedi-4,1-cyclohexanediyl)bis-, tetraethyl ester

Acute toxicity to fish
Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested).
For similar material(s):
LC50, Danio rerio (zebra fish), semi-static test, 96 Hour, 66 mg/l, OECD Test Guideline 203]

Acute toxicity to aquatic invertebrates
For similar material(s):
EC50, Daphnia magna (Water flea), static test, 48 Hour, 88.6 mg/l, Other guidelines

Acute toxicity to algae/aquatic plants
For similar material(s):
ErC50, Desmodesmus subspicatus (Scenedesmus subspicatus), static test, 72 Hour, Growth rate, 113 mg/l, EU Method C.3 (Algal Inhibition test)

Toxicity to bacteria
EC50, activated sludge, 3 Hour, Respiration rates., 3,110 mg/l, ISO 8192

Chronic toxicity to aquatic invertebrates
For similar material(s):
NOEC, Daphnia magna (Water flea), semi-static test, 21 d, number of offspring, 0.013 mg/l

2-Butenedioic acid(E)-diethylester

Acute toxicity to fish
Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).
LC50, Oryzias latipes (Orange-red killifish), semi-static test, 96 Hour, 2.4 mg/l, Method Not Specified.

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna (Water flea), 24 Hour, 11 mg/l, Method Not Specified.

Acute toxicity to algae/aquatic plants
EC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, Biomass, 1.1 mg/l, Method Not Specified.

Persistence and degradability

Aspartic acid, N,N'-(methylenedi-4,1-cyclohexanediyl)bis-, tetraethyl ester
Biodegradability: No relevant information found.
Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.

Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 302C or Equivalent
For similar material(s): 10-day Window: Fail
Biodegradation: 13 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

Theoretical Oxygen Demand: 2.31 mg/mg

Photodegradation
Test Type: Half-life (indirect photolysis)
Sensitizer: OH radicals
Atmospheric half-life: 0.048 d

2-Butenedioic acid(E)-diethylester
Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.
10-day Window: Not applicable
Biodegradation: 92 - 95 %
Exposure time: 28 d
Method: OECD Test Guideline 301C or Equivalent

Theoretical Oxygen Demand: 1.67 mg/mg

Photodegradation
Test Type: Half-life (indirect photolysis)
Sensitizer: OH radicals
Atmospheric half-life: 1.045 - 11.50 d
Method: Estimated.
Photodegradation
Test Type: Half-life (indirect photolysis)
Sensitizer: Ozone.
Atmospheric half-life: 6.55 - 13.1 d
Method: Estimated.

Bioaccumulative potential

Aspartic acid, N,N'-(methylenedi-4,1-cyclohexanediyl)bis-, tetraethyl ester
Bioaccumulation: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).
Partition coefficient: n-octanol/water(log Pow): 5.16 at 25 °C Estimated.
Bioconcentration factor (BCF): 1,900 Fish Estimated.

2-Butenedioic acid(E)-diethylester

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3). Potential for mobility in soil is very high (Koc between 0 and 50). Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): 2.12 at 25 °C OECD Test Guideline 107 or Equivalent

Mobility in soil

Aspartic acid, N,N'-(methylenedi-4,1-cyclohexanediyl)bis-, tetraethyl ester

Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.
Expected to be relatively immobile in soil (Koc > 5000).
Partition coefficient (Koc): > 5000

2-Butenedioic acid(E)-diethylester

Potential for mobility in soil is very high (Koc between 0 and 50).
Partition coefficient (Koc): 11 Estimated.

Section 13 – Disposal Considerations

Disposal methods: NOTICE: Research sample for use by qualified personnel only. Upon completion of tests, dispose of material and container safely and in accord with federal, state/provincial and local laws and regulations. If further information is needed on disposal or use, consult your supplier.

Section 14 – Transport Information

USDOT (Domestic Surface) Not regulated for transport.

Classification for SEA transport (IMO-IMDG): Not regulated for transport.

Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO): Not regulated for transport.

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

Section 15 – Regulatory Information

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312
Acute Health Hazard

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313
To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

Pennsylvania Worker and Community Right-To-Know Act:
To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)
This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

United States TSCA Inventory (TSCA)
All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

Section 16 – Other Information

Other information
For research use only.

Revision
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Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Abbreviations and acronyms:

USDOT: United States Department of Transportation.

SDS prepared by: Aquafin product safety department.

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END OF SDS (February 27, 2019)