

Date prepared: MARCH 2010

Date revised:

MSDS No. IM.1.1.1.A

**Section 01 - Product Identification**

IDENTITY: *As Used on Label and List:* **AQUAFIN-PM-3811**  
**Component – A (liquid resin)**  
*Chemical Characterization:* **Aqueous preparation on basis of a specific methacrylate**  
*Product Use Description:* **Injection resin**

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

24 hr Emergency Phone: Chem-Tel (800) 255-3924  
Information Phone No. (410) 392-2300

**Section 02 - Composition/Information on Hazardous Ingredients**

Hazardous Components	CAS No.	OSHA PEL	ACGIH TLV	Percent
2-hydroxyethyl methacrylate	868-77-9			> 90
proprietary acrylate	TS			TS

**Section 03 - Hazards Identification**

(HMSI-Rating: 0 = Minimal; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe; \* = Chronic)  
(NFPA-Rating: 0 = Insignificant; 1 = Slight; 2 = Moderate; 3 = High; 4 = Extreme)

	HMIS <sup>®</sup> - Rating	NFPA - Rating
HEALTH	2	2
FLAMMABILITY	1	1
PHYSICAL HAZARD	1	1

**Primary Routes of Entry:** Inhalation, if exposed to aerosol  
Eye contact  
Skin contact

**Effects of Overexposure:**

**Inhalation:** Vapor can cause irritation of nose and throat, vomiting, nausea, dizziness.  
**Ingestion:** This product has a low order of acute oral toxicity based on animal test data.  
**Skin Contact:** Direct contact with material can cause irritation and sensitization. Prolonged or repeated skin contact can cause defatting and dermatitis.  
**Eye Contact:** Irritation.

**Section 04 – First Aid Measures**

**Inhalation:** Supply fresh air and consult a physician if breathing becomes difficult.  
**Ingestion:** Get immediate medical attention. Only induce vomiting if directed by a physician. Never give anything by mouth to an unconscious person.  
**Skin Contact:** Rinse skin with soap and plenty of water immediately. Remove contaminated clothing and shoes. Seek medical advice. Wash clothing before reuse.

**Eye Contact:** Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Obtain medical attention without delay, preferably from an ophthalmologist.

---

## Section 05 – Fire Fighting Measures

---

**Flash Point:** 100°C (212°F)

**Auto ignition Temperature:** Not available

**Lower explosion Limit:** Not available

**Upper explosion Limit:** Not available

**OSHA Flammability Classification:** None

**Other Flammable Properties:** Explosive mixtures may occur at temperatures at or above the flashpoint.

**Extinguishing Media:** When fighting fires involving this material use the following to extinguish: water spray - foam - dry chemical - carbon dioxide.

**Fire Fighting Procedures:** As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Containers can build up pressure if exposed to heat (fire). Cool with water spray.

---

## Section 06 - Accidental Release Measures

---

**Measures for Cleaning/Collecting:** Ventilate area. Absorb spill with inert material and place in a chemical waste container. Obey relevant local, state, provincial and federal laws and regulations. Do not contaminate any lakes, streams, ponds, groundwater or soil. Use personal protective equipment. See Material Safety Data Sheet section 8, Exposure Controls/Personal Protection. After removal, flush contaminated area with water and collect for disposal.

---

## Section 07 – Handling and Storage

---

**Handling:** Avoid breathing vapor or mist. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Follow all MSDS/label precautions even after the container is emptied because it may retain product residues.

**Storage:** Keep container closed when not in use. Do not store in direct sunlight. Keep in the original container at a temperature not exceeding 30°C (86°F). Store in a cool, dry place. Fill the container by approximately 90% as oxygen (air) is required for stabilization. With large storage containers make sure the oxygen (air) supply is sufficient to ensure stability.

---

## Section 08 – Exposure Controls / Personal Protection

---

**General Information:** Eye-wash bottle must be available.  
The product does not contain any relevant quantities of materials that have to be monitored at the workplace.

<b>Engineering Controls:</b>	Use adequate ventilation.
<b>Respiratory Protection:</b>	A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal/provincial requirements must be followed whenever workplace conditions warrant respirator use. NIOSH's "Respirator Decision Logic" may be useful in determining the suitability of various types of respirators.
<b>Skin Protection:</b>	Use chemically resistant apron or other impervious clothing to avoid prolonged or repeated skin contact.
<b>Hand Protection:</b>	The glove(s) listed below may provide protection against permeation. Gloves of other chemically resistant materials may not provide adequate protection: butyl rubber gloves Chemical-resistant gloves should be worn whenever this material is handled. For each work-place a suitable glove type has to be selected. Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough.
<b>Eye Protection:</b>	Use safety glasses (ANSI Z87.1 or approved equivalent).
<b>Other Protective Equipment:</b>	A safety shower and eye wash fountain should be readily available. To identify additional Personal Protective Equipment (PPE) requirements, it is recommended that a hazard assessment in accordance with the OSHA PPE Standard (29CFR1910.132) be conducted before using this product.

---

## Section 09 – Physical and Chemical Properties

---

<b>Physical state:</b>	Liquid
<b>Color:</b>	Colorless
<b>Odor:</b>	Acrylic
<b>Solubility in water:</b>	at 20°C / 68°F miscible
<b>Solubility (qualitative):</b>	Miscible with most organic solvents
<b>pH-value:</b>	N/A
<b>Boiling point:</b>	212°C (413°F)
<b>Flash point:</b>	100°C (212°F)
<b>Specific Gravity (water = 1) at 20°C:</b>	1.07 g/cm <sup>3</sup>
<b>Viscosity, (kinematic) at 20°C:</b>	1-3 cps
<b>Vapor density (air = 1):</b>	is heavier than air
<b>Vapor pressure:</b>	0.08 hPa (= mbar) at 20 °C / 68 °F (OECD 104, dynamic method)
<b>Evaporation rate:</b>	is slower than butyl acetate
<b>Odor threshold:</b>	not available
<b>Further information:</b>	none

---

## Section 10 – Stability and Reactivity

---

<b>Stability:</b>	This product is stable under normal storage conditions.
<b>Hazardous Decomposition:</b>	None if used as directed.
<b>Chemical Stability:</b>	Stable under normal temperatures and pressures.
<b>Conditions To Avoid:</b>	See 'Hazardous Polymerization' for conditions to avoid.



**Hazardous Polymerization:** The product is normally supplied in a stabilized form. If the permissible storage period and/or storage temperature is noticeably exceeded, the product may polymerize with heat evolution. Polymerization with heat evolution may occur in the presence of radical forming substances (e.g. peroxides), reducing substances, and/or heavy metal ions.

**Incompatibilities:** Reducing agents. Tertiary amines. Heavy metals. Peroxides. Oxidizing agents. Mineral acids.

---

## Section 11 – Toxicological Information

---

**Product Information:** None available

---

## Section 12 – Ecological Information

---

### Information on Elimination (Persistence and Degradability)

- **Biodegradability** **84%**  
readily degradable, OECD 301 D, Closed Bottle Test, 28 d  
(plant or external testing)  
Related to substance: 2-hydroxyethyl methacrylate

### Ecotoxicological Effect

- **Fish Toxicity** **227 mg/l**  
LC50 Pimephales promelas, flow through, 96 h  
Related to substance: 2-hydroxyethyl methacrylate
- **Daphnia Toxicity**
  - **NOEC Daphnia magna, OECD 202 part 2, flow through, 21 d** **24.1 mg/l**  
Related to substance: 2-hydroxyethyl methacrylate
  - **EC50 Daphnia magna, OECD 202 part 1, static test, 48 h** **380 mg/l**  
Related to substance: 2-hydroxyethyl methacrylate
- **Bacteria Toxicity** **> 3,000 mg/l**  
EC0 Pseudomonas fluorescens, DEV L8, 16 h  
(plant or external testing)  
Related to substance: 2-hydroxyethyl methacrylate

### Further Information on Ecology:

Do not allow to enter soil, waterways or waste water.

---

## Section 13 – Disposal Considerations

---

**Disposal:** Must be disposed of in a manner consistent with federal, state and local regulations. Preferred method is incineration.

**Section 14 – Transport Information**

**DOT (Domestic Surface) Hazard Class or Division:** Not regulated  
**IMO (Ocean) Hazard Class or Division:** Not regulated  
**ICAO (Air) Hazard Class or Division:** Not regulated

**Section 15 – Regulatory Information**

**TSCA Status:** Listed or exempt

**SARA 311/312 Hazard Categories (40CFR370):** Acute

**US State Regulatory Information:**

Component/CASRN	New Jersey RTK	Pennsylvania RTK	Massachusetts RTK	California Prop. 65 Cancer	California Prop. 65 Reproduction
2-hydroxyethyl methacrylate (CASRN 868-77-9)	NO	NO	NO	NO	NO

**SARA 313 Notification:** This product contains no toxic chemicals subject to the SARA 313 supplier notification requirements.

**CERCLA:** No CERCLA chemicals exist in this product.

**Section 16 – Other Information**

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind, expressed or implied, and we assume no responsibility for any loss, damage, or expense, direct or consequential, arising out of their use.

**END OF MSDS**

(March 25, 2010)