

## Acrylate Injection Resin

- Excellent penetration into various substrates & soil
- Adjustable curing times
- Environmentally friendly
- Waterproof, stabilize soil & fill voids
- Can be injected against water pressure

### Product Description

AQUAFIN®-PM-3811 is a low viscosity, environmentally safe, acrylate injection resin with superior sealing characteristics. It is able to permeate very fine soil and fill voids between the interface area of the concrete and substrate. This 2 component injection gel provides excellent waterproofing capabilities for use in the creation of grout curtains behind existing concrete walls or abutments. It can create solid, homogenous membranes beneath concrete floors, as well as stabilizing soil and filling voids at the building foundation and interface areas. The hydrophilic properties provide a lasting and durable barrier against moisture intrusion. There is no chemical reaction with water, therefore there are no formation of bi-products.

### Typical Applications

- Creation of grout curtains
- Soil stabilization behind brick and concrete structures above and below grade
- Tunnels, basements, water treatment and waste water sewage facilities
- Construction joints, expansion joints
- Concrete precast segments
- Cracks

### Product Installation

- Applications against water pressure
- Sealing of the entire defective area
- Injection of non-active (static) cracks
- Soil stabilization

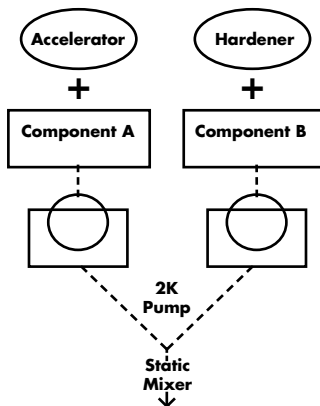
Injection can be accomplished from the inside of the building by drilling through the structure into the void space and soil back-filled areas. Packers are placed in the pre-drilled holes and a two-component pump is connected to the packers. Under low pressure the injection resin is pumped through the packers into the defective areas.

The low viscosity of the injection resin guarantees that even the smallest of voids, soil fractures, tiny capillaries and hair line cracks in the concrete or substrate will be completely filled and sealed with injection material. Following the timed curing, the material remains as a durable and reliable barrier.

### Mixing Instructions

AQUAFIN®-PM-3811 requires the use of a two-component pump specially designed to pump the mixed components 1:1 by volume. Suitable two component injection pumps have an integral purge or cleaning assembly. This allows the injection hoses and mixing head to be cleaned whenever there is a cessation of the injection process. The lack of solvents and toxic components in the injection resin allows the pump to be cleaned with soap and water.

Reaction times (gel times) can be adjusted so that the material will cure in time to provide optimum performance depending on the structure and the nature of the repair. The low viscous resin travels easily into cracks and honeycombed areas in concrete, masonry or brick.



Pumping is 1:1 by volume

Example:

- **Comp A:** Measure 100g PM-3811 and add accelerator e.g. 5g (=5%)  
Total: 105g
- **Comp B:** Measure 5g (=5%) of the Hardener Powder and add 100g water (HP + water = 105g).

### Reaction Times

The reaction time for polymerization depends on the ambient temperature and the amounts of accelerator and hardener powder used to mix the components. The times quoted are from laboratory data, in practice, reaction times may vary. It is highly recommended that exact reaction times be determined on site using hand tests before starting injection work.

Note: Reaction times can increase due to changes in the temperatures of the material in the soil.

Note: pH of water used to mix Component B can affect cure times. Potable water should be used for mixing material and for cleaning pump.

### Physical Properties

**Comp-A (PM-3811 + Accelerator)**  
Mixable with water in any ratio.

Appearance | blue liquid

Density | 1.0 - 1.2 g/cm<sup>3</sup>

Viscosity | 230 cps

**Comp-B (Hardener Powder + water)**  
Mixable with water in any ratio.

Appearance | clear, low viscous liquid

Density | 1.0 g/cm<sup>3</sup>

Viscosity | 100 cps

VOC content | 0 g/L

**Accelerator**

Mixable with water in any ratio.

Appearance | clear, low viscous liquid

Density | 1.0 - 1.2 g/cm<sup>3</sup>

Viscosity | 240 cps

VOC content | 15 - 30 g/L

**Hardener Powder (HP)**

Appearance | crystalline dry chemical

Density | 2.4 g/cm<sup>3</sup>

Bulk Density | 1.1 - 1.2 g/cm<sup>3</sup>

Solubility | 545 g/L at 20°C

**Mixed Product - AQUAFIN-PM3811**

Appearance | light blue, hardened gel

Viscosity | 240 cps

VOC content | less than 0.1 g/L

### Gel Times

Temperature:

Temperature has an influence on the gel time.

(Higher temp. = faster or shorter gel time. Lower Temp. = slower or longer gel time.)

General calculation guideline:

A general rule is if the temperature is increased in increments of 10°C (18°F), the gel time will be cut in half. If the temperature is decreased by increments of 10°C (18°F), the gel time doubles.

### Average Gel Times

Accel.	HP	Gel Time	+/- %
5 (%)	5 (%)	4 - 5 min	20
4 (%)	4 (%)	5 min	20
3 (%)	3 (%)	5 - 7 min	20
2 (%)	2 (%)	14 min	20

\*A test is recommended prior to injection

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DIV. 03  
DIV. 31

03 64 00 Injection Grouting  
31 73 16 Tunnel Grouting

31 32 23.16 Pressure Grouting  
Soil Stabilization

# AQUAFIN® PM-3811

## Quantity:

Avoid mixing large quantities (full pails). This will speed up the gel time. Reaction time is slower in a thin layer (e.g. in a crack).

## Packaging

AQUAFIN®-PM-3811 is supplied in a kit containing:

- Component-A: 5 gal (44.9 lb) pail (19 L / 20.4 kg) liquid
- Accelerator: 1 quart (2.25 lb) bottle (0.9 L / 1.02 kg) liquid
- Component-B:  
Hardener: 2.2 lb (1.02 kg) powder  
Mix with 5 gal (19 L) water

Component-A is ready for use after being mixed with the accelerator supplied. Component-B is made up at the jobsite by dissolving the hardener powder in potable water. AQUAFIN®-PM-3811 is injected using a two component pump; with stainless steel mixing parts.

## Storage

AQUAFIN®-PM-3811 should be stored in a dry enclosure in closed containers at temperatures between 50°F to a maximum of 86°F. (10°C to 30°C) Protect product and packaging from inclement weather conditions.

CAUTION: Do not let the accelerator and hardener powder come in contact during storage. Poisonous gas might occur as a result!

## Care & Maintenance of Equipment

The pumps and accessories can be easily flushed and cleaned with soap and water. AQUAFIN®-PM-3811 can be cleaned from the jobsite by using normal detergent and clean water. Hardened material can be softened with mild cleaners (i.e., Simple Green, 409, etc.) and easily removed mechanically.

## General Information

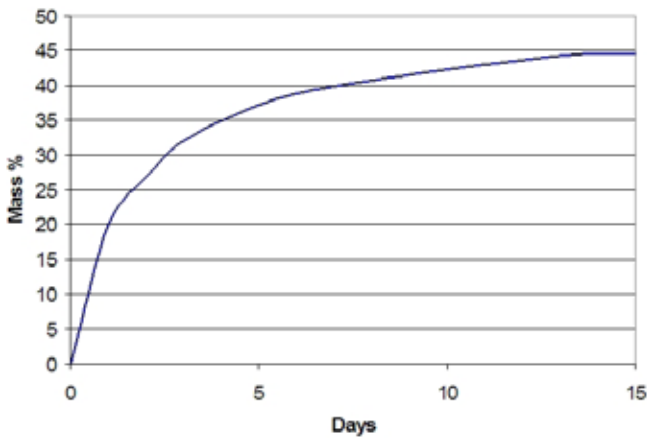
All details in particular to the suggestions for the processing and use of the product is based on our present knowledge and experiences at the time of printing. Depending on specific applications, in particular regarding substrates, processing and environmental conditions may affect the final results.

## Safety & Handling

AQUAFIN®-PM-3811 contains no toxic components. Acrylate-ester, acrylic monomers can irritate the eyes and skin. Sensitivity to the product is possible if it comes in direct contact with the skin. During use wear protective clothing, gloves, and appropriate safety goggles consistent with OSHA regulations. Avoid eye and skin contact. Do not ingest. Refer to Material Safety Data Sheet for detailed safety precautions. Hardened PM-3811 is environmentally safe and can be disposed of as normal household waste.

CAUTION: Do not use aluminum equipment near the accelerator and hardener powder, they are not compatible with aluminum.

## Swelling Performance



For professional use only. Not for use by the general public.

LIMITED WARRANTY: AQUAFIN, INC. warrants its products to be manufactured free of defects and to be consistent with its standard high quality. We will replace or, at our election, refund the purchase price of, any product which is proven to be defective, provided that the product was properly applied. Our product recommendations are based on Industry Standards and testing procedures. We assume no warranties either written, expressed or implied as to any specific methods of application or use of the product. AQUAFIN, INC. MAKES NO WARRANTY AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES EXPRESS OR IMPLIED. AQUAFIN, INC. shall not be liable for damages of any sort including remote or consequential damages, down time, or delay.

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Page 2 of 2