

## 717.02.1, Silane Sealer

### Qualification Requests

On the laboratory test report that is sent in with the request, the test data must show that the material is in compliance with the material requirements.

### Material Requirements

Silane Sealer must conform to the following physical and performance property requirements or approved for sealer type 1b for Alberta Transportation.

Physical Property Requirements for Resin	
Solids and active ingredients by weight:	Minimum 40%

Performance Properties of Silane	
Waterproofing performance using 72 gram abrasion	After Abrasion Minimum 86.0%
Alkaline Resistance Performance 21days exposure to potassium hydroxide	Waterproofing performance shall be within 3% of the actual after-abrasion waterproofing performance
Vapor Transmission Performance	Minimum VT 70%

### Qualification Samples

The requirements for information that is received for QPL prequalification are as follows.

The producer will submit a packet with the following items.

- ❖ A manufacturer's safety data sheet (MSDS)
- ❖ Certification from an independent testing laboratory that the materials meet these requirements.
- ❖ An Infrared spectrum (IR or FTIR) of each bulk component collected at sufficient resolution to provide identification by use of a known standard.
- ❖ A gas chromatogram of each bulk component. Utilizing the following instrument conditions:
  - ◆ GC Column – 5% diphenyl, 95% dimethylpolysiloxane bonded stationary phase column, 30 m x 0.25 mm x 0.25um film thickness (e.g. DB-5 or DB-5MS column).
  - ◆ Injector – split injector (100:1), 300 C.
  - ◆ Dector – Flame Ionization (FID), Mass Selective Detector (MS), or other suitable detection system, 300 C.
  - ◆ Carrier Gas – Helium
  - ◆ Carrier Gas Flow Rate – 0.8 mL/min (0.6 to 1.0 mL/min acceptable range).

- ◆ Oven Program – Initial temperature 50 C, hold 5 minutes, temperature program rate 10 C/minute until 300 C, hold at 300 C for 5 minutes.
  - ◆ Run Time – 35 minutes
  - ◆ Injection Volume – 1 uL of neat solution.
- ❖ An analysis of the product solids content taken in compliance with ASTM D5095, “*Standard Test Method for Determination of Nonvolatile Content in Silanes, Siloxanes and Silane-Siloxane Blends Used in Masonry Water Repellant Treatments.*”