



**FILTERPAVE PRODUCTS LLC**

**FILTERPAVE®**  
**AGGREGATE SPECIFICATION AND  
QUALITY CONTROL DOCUMENT**



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FP QC DECEMBER 12, 2012



### **Aggregate Processing Standards (Glass or Stone)**

Suppliers approved to supply aggregate for FPPS must comply with the process standards and specifications identified in this document. Aggregate must meet the specifications for processing, treatment, particle size, appearance, moisture control, bagging, quality control, storage and shipping.

Aggregate processing operations certified as FilterPave aggregate suppliers will be subject to quality control audits.

### **Aggregate Requirements**

Glass must be cleaned (recommended to be heated between 175-225 degrees), crushed, gradated and dried to conform to the glass material specification. A roller crusher or impact crusher may be used, but the processed material must be “shard less” with rounded edges and meet the particle size and moisture requirements as identified in the glass material specification.

Stone must be igneous rock with a hardness of 6.2 or higher on the Moh’s scale, angular to sub-angular and less than 1% absorption. Stone must also be cleaned, gradated and dried to conform to the stone material specification.

### **Amino-Silane Treatment**

Glass suppliers must treat all supplied glass with an Amino-Silane solution, Silquest A-1120 or equivalent. (stone is **not** treated with Amino-Silane). The Amino-Silane solution shall consist of 0.3% Amino-Silane, with the remainder of the solution being water, and at minimum be applied at a 6% ratio to glass weight. The Amino-Silane is applied to the processed glass prior to drying. The glass may **not** be heated past 400 degrees after the Amino-Silane solution has been applied to avoid degradation of the Amino-Silane. Glass suppliers will keep a project traceable “Amino-Silane run log” to show that appropriate amounts of Amino-Silane have been applied to any glass run. Amino-Silane must be kept above 40 degrees and used within 48 hours of being mixed with water. Any Amino/water solution older than 48 hours is **not** to be used and shall be discarded. Glass suppliers shall keep an Amino-Silane MSDS sheet on file.

### **SuperSak® Storage Bags**

The processed Aggregate must be shipped in FPLLC approved SuperSaks containing an interior poly liner. The sacks shall be a minimum of a 5:1 safety factor and 35”Lx35”Wx35”H. The SuperSaks shall be stored indoors out of sunlight and kept dry. Aggregate shall be added to the SuperSaks immediately following processing. In some cases shipment in bulk will be allowed if pre-approved by FPLLC and if meeting all other QC standards set forth in this guide.

#### **The weight of SuperSaks**

The weight of each SuperSak shall be a maximum of 2500 pounds for glass and 3000 lbs for stone.

#### **Temperature of Glass Post-Production**

Temperature of glass is critical to the performance of the FilterPave system. Prior to closure, the temperature of glass within each SuperSak shall be taken to ensure the glass has adequately cooled. The temperature of the glass shall be less than 150° F when the liner of the SuperSak is closed.

#### **Grab Samples**

A cubic foot sample size of material shall be taken at the start of a batch, every 20 supersaks and at the end of the batch. The material should be taken as it falls off the conveyor belt that feeds the SuperSak loading. The sample should be tagged with the batch number and born on date corresponding to the bag it was taken. Samples are to be held by the vendor for a period of time to be determined and shall be used for quality control testing.

### **Moisture of Aggregate**

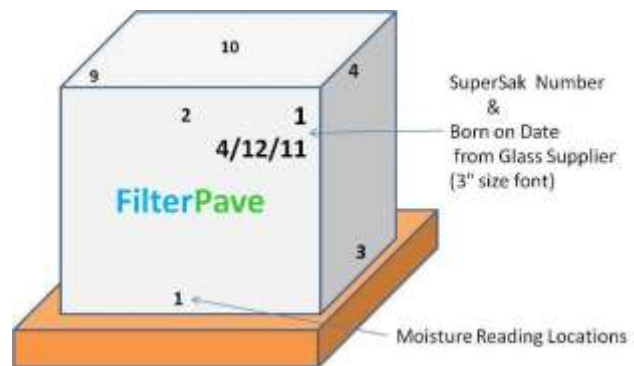
Moisture of aggregate is critical to the performance of the FilterPave system. Moisture readings of each filled SuperSak shall be taken with a FPLLC approved moisture meter prior to closing each SuperSak liner. If moisture readings are not acceptable, dry the aggregate and re-take the readings. With acceptable moisture readings, place a “Born on Date” in 3” font size written in permanent marker on the front face of the SuperSak.

Immediately preceding a shipment of glass to a project site or contractor location the Aggregate Supplier shall complete its portion of the Moisture Log following the procedure outlined on the Log. A minimum of 4 readings must be taken and 2 or more at the bottom sides of the sack.

A SuperSak of aggregate with average moisture readings of 10% or greater shall be rejected. If any reading is greater than 15% or the average is >10% the glass is not acceptable. If 3 readings average 9-11% take two additional readings inside the SuperSak in locations 9 and 10, if either one is above 10% reject that SuperSak from the load.

To ensure accurate individual readings, the probe should be wiped between the moisture readings.

SuperSaks with appropriate moisture content shall be given sequential “batch numbers” and it shall be written in 3” font size in permanent marker on the front face of the SuperSak near the “Born on Date”.



### **Closure of SuperSaks**

SuperSak liners shall be closed when the temperature and moisture of glass is acceptable. SuperSak liners shall be closed by twisting the inner liner tightly, goose necking, then securing with a Zip Tie or wire. Aggregate shall not be stored in open SuperSaks. Aggregate shall be produced and SuperSak liner closed on the same day.

### **Labeling of SuperSaks**

The Aggregate supplier will print the SuperSak “number #1 thru #XX” and the “Born on date” of the aggregate with permanent marker in 3” size font on the front face of each SuperSak to be supplied to a project.

### **Storing of SuperSaks**

SuperSaks must be stored on suitable quality shipping pallets in a dry environment. SuperSaks should not be stored outside or in areas exposed to weather or standing water unless proper care is taken to cover and keep each supersak dry.

### **Shipping of SuperSaks**

SuperSaks must be shipped on covered watertight flatbed trucks, curtainside vans or standard dry vans.



**Aggregate Material Specification**

**Glass Material Specification**

Glass approved for use with the FilterPave system must meet the material specification standards outlined below. Glass that does not meet the specification will be rejected and returned to the Glass provider at the Glass provider's expense.

Item	Specification
Amino-Silane Treated	Glass must be Amino-Silane treated 6% solution to glass weight.
Glass Particle Size	Shard-less and round-edged glass, 100% passing #4, retained on #12 screen, with 5% fines maximum.
Colors	Mixed, vary by region
Moisture (when bagged)	0-<10%. Bagged glass with 10% average moisture or more will be rejected.
SuperSak	5.1 or better load rated and 3" hand written SuperSak number with Born on date.
SuperSak Capacity	2500 Lb. Max

**Stone Material Specification**

Stone approved for use with the FilterPave system must meet the material specification standards outlined below. Stone that does not meet the specification will be rejected and returned to the Stone provider at the Stone provider's expense.

Item	Specification
Stone Type	Igneous Rock, angular to sub-angular, 6.2 or higher on Moh's hardness scale, 0-<1% absorption
Stone Particle Size	100% passing ¼" screen, retained on #12 screen, with 5% fines maximum.
Colors	Brown, Tan, Gold, Red, Black, Gray. (Vary by region)
Moisture (when bagged)	0-<10%. Bagged aggregate with 10% average moisture or more will be rejected.
SuperSak	5.1 or better load rated and 3" hand written SuperSak number with Born on date.
SuperSak Capacity	3000 Lb. Max

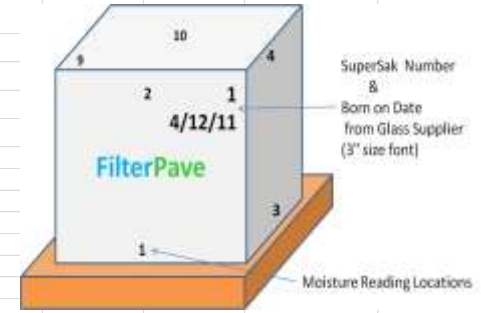


# FILTERPAVE®

## QUALITY CONTROL DOCUMENT

### Moisture Log - FilterPave

Today's Date:		Page #:	1
Contractor Name:			
Shipping Address:			
FPLLC Contact:	Phone 573-228-9025- email: info@filterpave.com		



1. Aggregate Supplier assigns sack batch#, completes Moisture Log upon shipment, sends copy with shipment and copy to FPLLC within 24 hrs after shipment date.
2. Contractor completes a Moisture Log and sends to FPLLC within 24 hr after receiving date.
3. Contractor completes a Moisture Log and sends to FPLLC within 24 hr after installation date.

If 1-8 readings have an Average of greater than 10% isolate the wet SuperSak and open and take readings 9 & 10.  
 If readings 9 & 10 are above 10% ... don't use the SuperSak until properly dried. Call FPLLC and advise plan.

Sack-Batch#	Moisture % Readings in following Location Number										Ave	Inside Corner	Inside Center	
	Bottom	Top	Bottom	Top	Bottom	Top	Bottom	Top	Bottom	Top				
	1	2	3	4	5	6	7	8			9	10		
Glass Supplier														
Contractor - Glass Arrival														
Contractor - Day of Glass Install														
Glass Supplier														
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Last revised: 11/26/2012

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