



## Hycrete Concrete Testing Summary



[www.hycrete.com](http://www.hycrete.com)

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300  
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### Hydrophobic

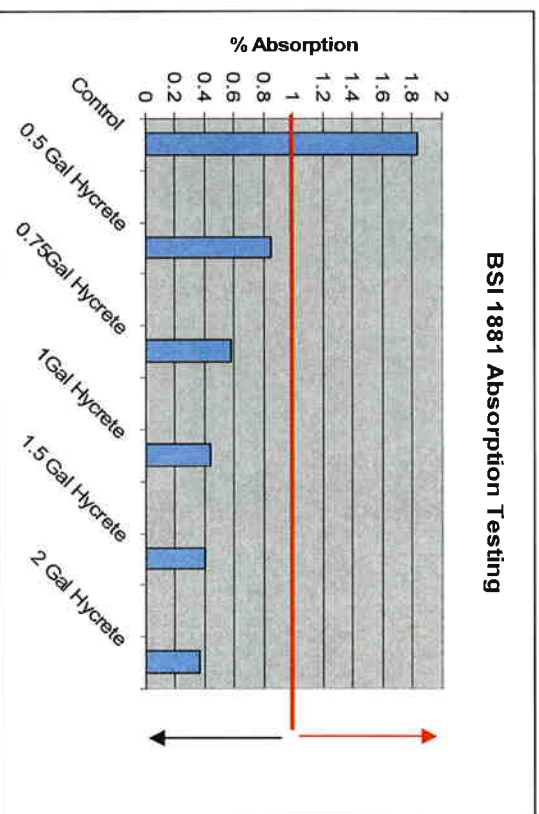
**Properties:** **Unequaled** Hycrete concrete achieves the highest waterproofing performance ratings of all waterproof concrete mix designs.

### Absorption

**Testing (BSI 1881-122):** **Excellent** This test is used as the benchmark for hydrophobic concrete. Low w/c concrete typically tests in the 2%-4% absorption range with BSI 881-122 testing. Hydrophobic concrete is specified at less than 1% absorption. Hycrete performs at the 0.4% to 0.9% range.



South Carolina  
Independent  
Lab Testing:  
40/60 Structural Mix  
0.40 w/c - 611 Type I-II Cement  
Polycarboxylate Superplasticizer

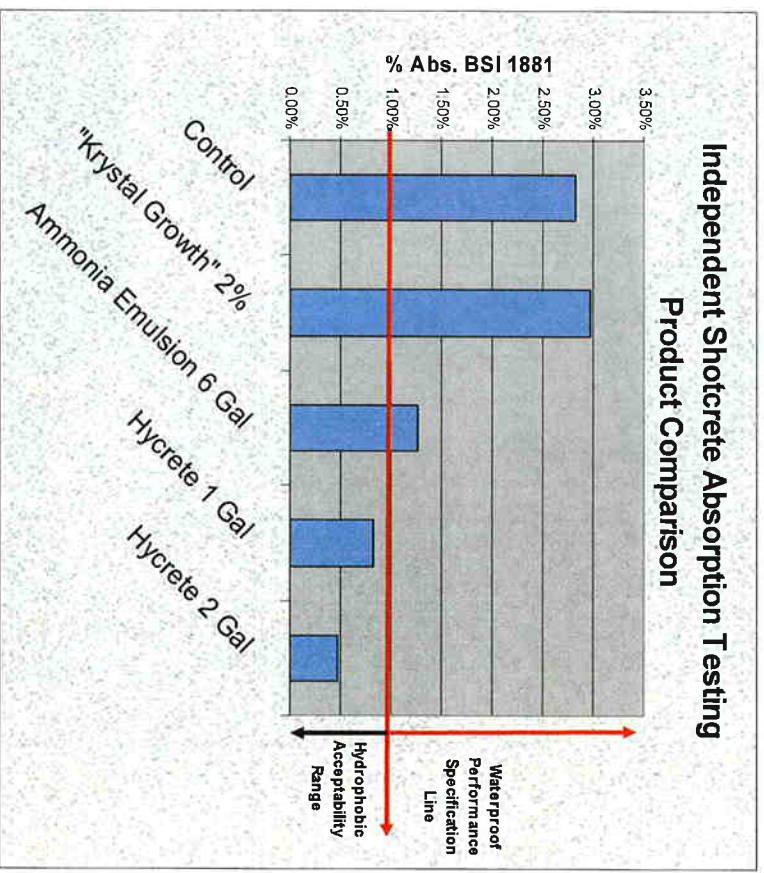


Northern California  
Independent Lab Testing

70/30 Shotcrete Mix  
780 lbs Cementitious - 25% Slag  
.38 W/C Water Reducer and  
Polycarboxylate Superplasticizer

**Shotcrete Performance**

Rebound = Excellent  
Odor = Neutral  
Consolidation = Excellent  
Stand up = Excellent  
Set Time = Neutral  
Absorption = Superior



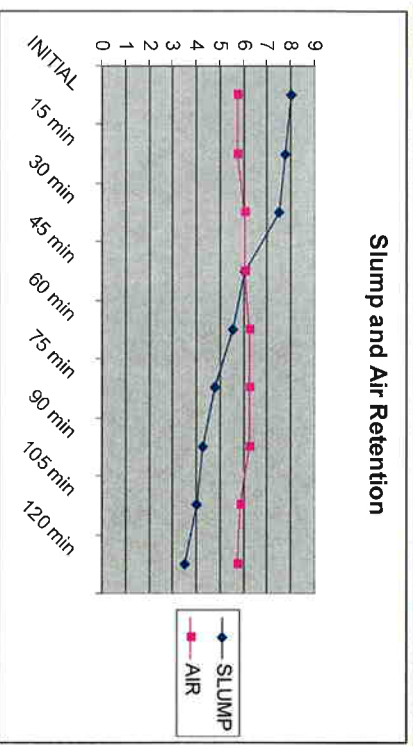
**Plastic Concrete Properties:**

**Workability & Cohesion:**                      **Excellent**



**Slump Retention:**                              **Excellent**  
**Air Content:**                                      **Highly Stable**

Pacific NW Independent Lab Testing:  
40/60 Structural Mix  
.42 W/C- 590 Lbs Cementitious - 20% Class F Flyash  
Polycarboxylate Superplasticizer



**Setting Time:**

**Set Neutral**

(Typically + / - 30 minutes of control)

New Jersey DOT  
Field Data

Set Time, Initial, hrs  
Set Time, Final, hrs

Control  
4:59  
6:05

Hycrete  
4:39  
5:47

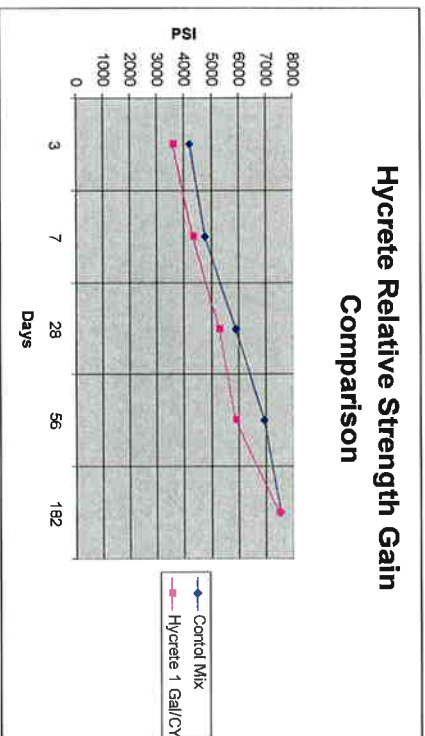
**Hardened Concrete Properties**

**Compressive**

**Strength:**

**Performance** Hycrete treated concrete mixes meet ACI strength guidelines requirements for structural concrete.

Kansas  
Independent  
Lab Testing:  
40/60 Structural Mix  
0.40 W/C – 600 lbs  
Type I - II OPC

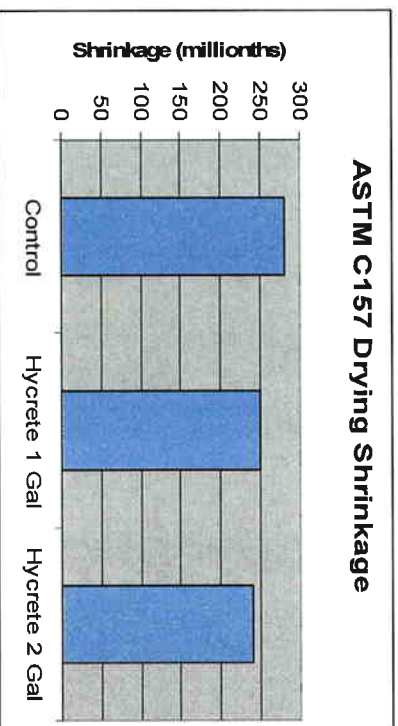


**Drying shrinkage ASTM C157**

**Excellent**

Shrinkage reduction versus control of 10% to 15%.  
(Cement + Flyash, 0.40 w/c)

Nelson Testing  
Labs, Chicago, IL:  
40/60 Structural Mix  
.40 W/C 565 lbs.  
Cementitious  
24% Type F Flyash  
Water Reducer



## Freeze Thaw Durability ASTM C666

Connecticut Transportation Institute  
School of Engineering  
University of Connecticut

### **Passes**

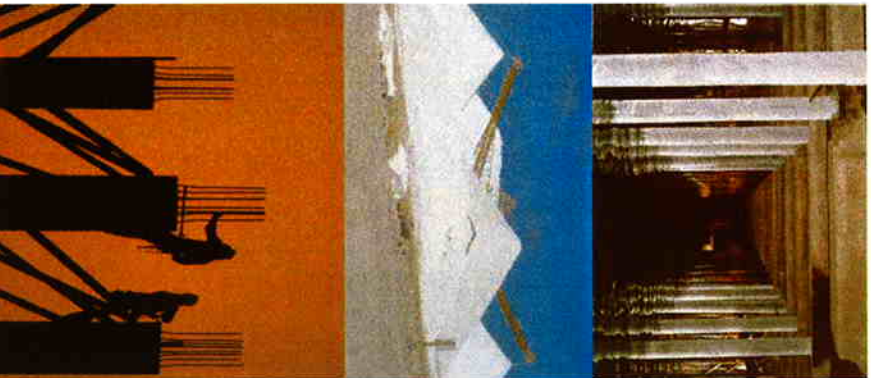
Hycrete treated concrete is air entrainable and meets the vigorous demands placed on concretes used in severe winter weather conditions. (300 + cycles with durability readings of 90+).



## Corrosion Protection

### **Chloride Diffusion Reduction:**

**Excellent. Outperforms Silica Fume HPC mixes.**  
UMass/ New England Transportation Consortium. Concrete mixes: w/c 0.40, Admixture: CN (3 gal/cy), Silica Fume (6%), Fly Ash (15%), Hycrete (2 gpy) Double-ASTM G-109 blocks, Salt Ponding Regime 12 weeks of 4 day ponding, then 12 weeks of continuous ponding.



**Chloride Diffusion Comparison between  
CN/SF/FA Combo.  
and Hycrete Concrete**

