



December 4, 2023

The Tile Shop  
Attn: Wayne Druckenmiller  
8515 Brown Street  
Ottawa Lake, Michigan 49267

Dear Wayne Druckenmiller,

International Performance Assurance Laboratories has tested the samples you submitted. Test report IPAL-0686-23 is enclosed. If you have any questions or concerns, please contact us.

Best Regards,

INTERNATIONAL PERFORMANCE ASSURANCE LABORATORIES,

Damon McDowell  
Laboratory Supervisor  
Enclosures



**IPAL TEST REPORT NUMBER:**

**IPAL-0686-23**

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**TEST REQUESTED BY:**

**The Tile Shop**

**TEST METHOD:**

**ANSI A118.16 Standard Specifications for Flowable Hydraulic Cement Underlayment/Self-Leveling Underlayment**

This specification covers ordinary portland cement (OPC)-based and calcium aluminate-based Flowable Hydraulic Cement Underlayment / Self-Leveling Underlayment when used as a substrate for the installation of ceramic tile, manufactured stone and natural stone in interior applications. See ANSI A118.16 for all method details and information.

**TEST SUBJECT MATERIAL:**

Identified by client as: **“Pro-Level”**

**TEST DATE:**

10/30/2023 - 11/27/2023

**TEST PROCEDURE NOTES:**

- Sample prep: The underlayment was mixed at a liquid to powder ratio of 19.9:100 parts by weight per the client’s instruction.
- All samples were set up and cured according to ANSI A118.16.

**TEST RESULTS:**

Test Designation	Test Description	Evaluation	ANSI Specification
5.1	Initial Flow	149 mm	> 110 mm (4.33 in)
5.1	Healing Time	30 minutes	≥10 minutes
5.2	Setting Time		
	Final Set	2 hours	>20 minutes
5.3	Compressive Strength		
	4 Hours	14.4 MPa (2094 psi)	6.9 MPa (1000 psi)
	28 Days	41.1 MPa (5966 psi)	20.7 MPa (3000 psi)
5.4	Tensile Bond Strength		
	24 Hours	Specimen 1: 127 psi (CF-M 100%) Specimen 2: 122 psi (CF-M 100%) Specimen 3: 112 psi (CF-M 100%) Specimen 4: 144 psi (CF-M 100%) Specimen 5: 132 psi (CF-M 100%) Specimen 6: 114 psi (CF-M 100%) Specimen 7: 113 psi (CF-M 100%) Specimen 8: 113 psi (CF-M 100%) Average: (122 psi)	0.5 MPa (72.5 psi)

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**TEST RESULTS CONTINUED:**

5.4	Tensile Bond Strength		
	28 Days	Specimen 1: 159 psi (CF-M 100%) Specimen 2: 180 psi (CF-M 100%) Specimen 3: 180 psi (CF-M 100%) Specimen 4: 212 psi (CF-M 100%) Specimen 5: 221 psi (CF-M 100%) Specimen 6: 214 psi (CF-M 100%) Specimen 7: 120 psi (CF-M 100%) Specimen 8: 171 psi (CF-M 100%) Average: (182 psi)	1.0 MPa (145.0 psi)

**IMAGE OF PRODUCT TESTED:**





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12/4/2023

**Damon McDowell**  
Laboratory Supervisor