

# **PRODUCT DATA SHEET**



LIQUID FLASHING -

## PRODUCT #:

P-1590 - Water-Based, Liquid Flashing

## PRODUCT DESCRIPTION:

BLOCKSEAL is a liquid applied waterproof coating that seals window and door substrates in new and existing applications.

BLOCKSEAL liquid flashing is a water-based, low VOC, acrylic adhesive that provides excellent adhesion on a wide variety of surfaces including: weathered wood, shakes, plywood, clapboard, primed metal, galvanized, urethane, polyester, adobe, brick, stucco, concrete, masonry, slate, slab, and various other substrates.

The latex based BLOCKSEAL contains a high resin formula with ceramic pigments that creates a watertight seal, keeping moisture from penetrating door and window openings beneath the exterior façade of the structure. The high resin content provides excellent adhesion to the substrate, allowing a tight bond to formed with the finish coat. The bond between BLOCKSEAL and the substrate eliminates any possibility of moisture penetrating under the finish coat, thus considerably extending the life of the coating.

For use on residential, commercial, and industrial applications. BLOCKSEAL may be installed over green concrete. The American Concrete Institute defines green concrete as concrete which has set, but has not appreciably hardened.

## SUBSTRATE PREPARATION:

For appropriate adhesion, it is essential that the surface is properly prepared prior to the application of BLOCKSEAL Clean exterior surfaces by thoroughly pressure-washing to remove any previous coatings, dirt, grease, and other foreign materials, especially mold, mildew and algae. BLOCKSEAL will resist mildew growth, but will not kill mildew already on the surface.

Repair any structural deficiencies before applying BLOCKSEAL. Non-structural gaps or cracks should be filled with a waterproofing caulk or sealant.

## APPLICATION:

Do not thin, use product as is. Stir well before using. Do not apply when temperatures are below 45 degrees fahrenheit or when humidity is very high. Do not apply when substrate will be subjected to rain or heavy dew before it has had enough time to dry (approx. 1-2 hours).

Apply BLOCKSEAL using a brush or roller and spread uniformly, creating a wet film thickness coat of 20 mil. Wait a minimum of four hours before applying a compatible paint or other finish coat. Spread rate will vary depending on substrate. Drying time will vary depending on temperature, humidity and location.

If desired surface texture is not achieved, wait at least 12 hours, then, if needed, apply a second coat of BLOCKSEAL.

## **CLEAN UP:**

Clean all spills and tools immediately after use while coating is wet with warm soapy water.

**NOTE:** New masonry must cure 30 days before priming or applying BLOCKSEAL. Although APV's coating systems have been designed to be apply over a wide variety of surface types, some substrates require additional preparation. Always consult your APV technical representative regarding each project. In all cases, the substrate must be properly prepared as defined in the instructions below and tested using the ASTM D3359 Standard Test Methods for Measuring Adhesion by Tape Test prior to coating the surface. Please consult with your APV representative for additional guidelines. Inadequate surface preparation and application can lead to coating failure and/or under-performance.

## **FEATURES:**

Water-based Liquid Flashing

Exceptional adhesion to most surfaces

Fast drying formula

Meets & exceeds AAMA 714-22

Low VOCs

May be used on green concrete

# **TECHNICAL DATA:**

## Section 1

| Product Code          | P-1590  |   |  |
|-----------------------|---|---|--|
| Product Description   | BLOCKSEAL   |   |  |
| Physical Properties   | Color:  | Off-White   |  |
|                       | Type:   | Water Based   |  |
|                       | Viscosity   | 105 - 125 KU  |  |
|                       | Weight Per Gallon   | 10.95 ibs/gal +/- 0.30 lbs 1.31 g/<br>ml +/- 0.04 g/ml                          |  |
|                       | Specific Gravity (ASTM D 1475-90  | 1.300 +/04  |  |
|                       | Gloss @ 60°:  | NA  |  |
|                       | pH:   | 8.0-9.0   |  |
|                       | Flash Point   | > 200° F 93.3° C  |  |
|                       | Solids  | 50% by weight - 34.1% by volume   |  |
|                       | Theoretical Coverage  | 546.96 ft²/gal @ 1.0 mil dry - 13.42<br>m²/l @25.4 μ                            |  |
|                       | VOC (wet):  | 0.19 lb(s)/gal (22.8 g/l)   |  |
|                       | VOC (dry):  | 0.38 lb(s)/gal (45.6 g/l)   |  |
| Application           | Recommended Film Thickness  | 20 mil (wet) - 12 mil (dry)   |  |
|                       | Coverage  | 152.76 ft²/gal @ 3.58 mil (dry)   |  |
|                       | Method  | Brush, roll   |  |
|                       | Cure Method   | Air Dry   |  |
|                       | Reduction   | None Required   |  |
|                       | Clean Up:   | Clean or flush with water   |  |
|                       | Recommended Equipment   | Paint Brush or Roller   |  |
| Substrate             | Type:   | Concrete, Masonry, Stucco   |  |
|                       | Preparation   | IPA wipe; surface should be clean, dry and free from oils, dirt & contamination |  |
| Handling & Storage    | Shelf Life:   | 1 year  |  |
|                       | Freeze Caution  | Protect from freezing   |  |
|                       | Recommended Storage   | Cool Dry Location - Maximum 104° F  |  |
| Additional Guidelines | Mix well before using. Keep away from food, drink and heat. Avoid contact with eyes |   |  |
|                       |   |   |  |
|                       |   |   |  |



Results: AAMA 714

| Property   | Test Method                             | Result | Requirement             |
|--|---|--------|-------------------------|
| Test Requirements  |   |        |                         |
| Adhesive Strength to Substrates (lbf) 3 specimens; 1"; Cure 7d @ 73.4±3.6°F & 50±5%RH followed by; Test Cond. 73.4±3.6°F & 50±5%RH; Rate 2.0"/min  | ASTM C 794                              |        |                         |
| Concrete Masonry Units (CMU)   |   | 21     | ≥ 5                     |
| Cement Mortar Slabs  |   | 10     | ≥ 5                     |
| Plywood (APA Grade Exposure 1)   |   | 27     | ≥ 5                     |
| OSB <sup>1</sup>   |   | 8      | ≥ 5                     |
| Water Penetration Around Nails [Pass/Fail] 5 specimens; 4" x 4" (applied to plywood); Two 1-1/4" roofing nails placed near center of specimen; Cond. 24h @ standard conditions; Test 1.2inw.c. @ 40±5°F for 24h; Visual Inspection for water infiltration  | AAMA 711/<br>ASTM D 1970<br>Section 7.9 | Pass   | Pass                    |
| Bottom Can; [Water/No Water]   |   | Pass   | No Water                |
| Nail Shank; [Water/No Water]   |   | Pass   | No Water                |
| Underside of Plywood; [Water/No Water]   |   | Pass   | No Water                |
| Water Penetration Around Nails [Pass/Fail] 5 specimens; 4" x 4" (bonded to plywood); Two 1-1/4" roofing nails placed near center of specimen; Cond. 24h @ 73.4±3.6°F & 50±5% RH followed by; 10 cycles; 8h @ 120±2°F followed by 16h @ -40±2°F Test 1.2inw.c. @ 40±5°F for 24h; Visual Inspection for water infiltration | AAMA 711/<br>ASTM D 1970<br>Section 7.9 | Pass   | Pass                    |
| Bottom Can; [Water/No Water]   |   | Pass   | No Water                |
| Nail Shank; [Water/No Water]   |   | Pass   | No Water                |
| Underside of Plywood; [Water/No Water]   |   | Pass   | No Water                |
| Accelerated Aging (lbf/in) 3 specimens; 1"; Cement Mortar Slab Cond. vertically 24h @ 73.4±3.6°F; Cond. 336h ASTM G 154 UVA Cycle 1; Test Cond. 73.4±3.6°F & 50±5%RH; Rate 2.0"/min  | ASTM G 154<br>ASTM C 794                | 12     | ≥5                      |
| Visual examination [Pass/Fail]   |   | Pass   | No change in appearance |

#### **CONTINUED ON FOLLOWING PAGE**

## 2151T0002

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| 3 specimens; 1"; CMU Cond. vertically 24 h @ 73.4±3.6"F; Cond. 336h ASTM G 154 UVA Cycle 1; Test Cond. 73.4±3.6"F & 50±5%RH; Rate 2.0"/min  Visual examination [Pass/Fail]  ACCelerated Aging (lbf/in) 3 specimens; 1"; Plywood Cond. vertically 24 h @ 73.4±3.6"F; Cond. 336h ASTM G 154 UVA Cycle 1; Test Cond. 73.4±3.6"F & 50±5%RH; Rate 2.0"/min  Visual examination [Pass/Fail]  ACCelerated Aging (lbf/in) 3 specimens; 1"; OSB¹ Cond. vertically 24 h @ 73.4±3.6"F; Cond. 336h ASTM G 154 UVA Cycle 1; Test Cond. 73.4±3.6"F & 50±5%RH; Rate 2.0"/min  Visual examination [Pass/Fail]  Elevated Temperature (lbf/in) 3 specimens; 1" wide; Cement Mortar Slab Cond. vertically 24 h @ 73.4±3.6"F; Cond. 73.4±3.6"F & 50±5%RH; Rate 2.0"/min  Visual examination [Pass/Fail]  Elevated Temperature (lbf/in) 3 specimens; 1" wide; Cement Mortar Slab Cond. vertically 24 h @ 73.4±3.6"F; Test Cond. 73.4±3.6"F & 50±5%RH; Rate 2.0"/min  Visual examination [Pass/Fail]  Pass No change in appearance  AAMA 714 ASTM C 794  28 ≥ 5  No change in appearance  AAMA 714 ASTM C 794  29 ≥ 5  No change in appearance  AAMA 714 ASTM C 794  20 ≥ 5  No change in appearance  Pass No change in appearance  No change in appearance | A 1 1 1 A 2 (11 C/2 )   |            |      |                         |
|---|---|------------|------|-------------------------|
| Visual examination [Pass/Fail]  | Cond. vertically 24h @ 73.4±3.6°F;  |            | 15   | ≥5                      |
| Accelerated Aging (lbf/in) 3 specimens; 1", Plywood Cond. vertically 24h @ 73.4±3.6°F; Cond. 336h ASTM G 154 UVA Cycle 1; Test Cond. 73.4±3.6°F & 50±5%RH; Rate 2.0″/min  Visual examination [Pass/Fail]  Accelerated Aging (lbf/in) 3 specimens; 1", OSB¹ Cond. vertically 24h @ 73.4±3.6°F; Cond. 336h ASTM G 154 UVA Cycle 1; Test Cond. 73.4±3.6°F & 50±5%RH; Rate 2.0″/min  Visual examination [Pass/Fail]  Pass No change in appearance  ASTM G 154 ASTM C 794  19 ≥ 5  No change in appearance     | Test Cond. 73.4±3.6°F & 50±5%RH; Rate 2.0"/min  |            |      |                         |
| Accelerated Aging (lbf/in) 3 specimens; 1"; Plywood Cond. vertically 24h @ 73.4±3.6"F; Cond. 336h ASTM G 154 UVA Cycle 1; Test Cond. 73.4±3.6°F & 50±5%RH; Rate 2.0"/min  Visual examination [Pass/Fail]  Accelerated Aging (lbf/in) 3 specimens; 1"; OSB¹ Cond. vertically 24h @ 73.4±3.6°F; Cond. 336h ASTM G 154 UVA Cycle 1; Test Cond. 73.4±3.6°F & 50±5%RH; Rate 2.0"/min  Visual examination [Pass/Fail]  Pass  No change in appearance  ASTM G 154 ASTM C 794  19  ≥ 5  ASTM G 154 ASTM C 794  19  ≥ 5  No change in appearance  Pass  No change in appearance  Pass  No change in appearance  RAMA 714 ASTM C 794 Level 3  Test Cond. 7a.4±3.6°F & 50±5%RH; Rate 2.0"/min  Visual examination [Pass/Fail]  Pass  No change in appearance  No change in appearance  No change in appearance  AAMA 714 ASTM C 794 Level 3  Thermal Cycling (lbf/in) 3 specimens; 1"; Cement Mortar Slab Cond. vertically 24h @ 73.4±3.6°F; AAMA 714 ASTM C 794 Level 3  No change in appearance               | Visual examination [Pass/Fail]  |            | Pass | ū                       |
| Accelerated Aging (lbf/in) 3 specimens; 1"; OSB¹ Cond. vertically 24h @ 73.4±3.6°F; Cond. 336h ASTM G 154 UVA Cycle 1; Test Cond. 73.4±3.6°F & 50±5%RH; Rate 2.0"/min  Visual examination [Pass/Fail]  Elevated Temperature (lbf/in) 3 specimens; 1" wide; Cement Mortar Slab Cond. vertically 24h @ 73.4±3.6°F; Cond. 7d @ 80°C; Test Cond. 73.4±3.6°F & 50±5%RH; Rate 2.0"/min  Visual examination [Pass/Fail]  Pass  No change in appearance  AAMA 714 ASTM C 794 Level 3  Pass  No change in appearance  Thermal Cycling (lbf/in) 3 specimens; 1"; Cement Mortar Slab Cond. vertically 24h @ 73.4±3.6°F; Cond. 8h @ 50±1°C followed by; Cond. 16h @-40±1°C: total of 10 Cycle; Test Cond. 73.4±3.6°F & 50±5%RH; Rate 2.0"/min  Visual examination [Pass/Fail]  Pass  No change in appearance  | 3 specimens; 1 <sup>1</sup> ; Plywood<br>Cond. vertically 24h @ 73.4±3.6°F;<br>Cond. 336h ASTM G 154 UVA Cycle 1;                                     |            | 27   | ≥5                      |
| Accelerated Aging (lbf/in) 3 specimens; 1"; OSB¹ Cond. vertically 24h @ 73.4±3.6°F; Cond. 336h ASTM G 154 UVA Cycle 1; Test Cond. 73.4±3.6°F & 50±5%RH; Rate 2.0"/min  Visual examination [Pass/Fail]  Elevated Temperature (lbf/in) 3 specimens; 1" wide; Cement Mortar Slab Cond. vertically 24h @ 73.4±3.6°F; Cond. 7d @ 80°C; Test Cond. 73.4±3.6°F & 50±5%RH; Rate 2.0"/min  Visual examination [Pass/Fail]  Thermal Cycling (lbf/in) 3 specimens; 1"; Cement Mortar Slab Cond. vertically 24h @ 73.4±3.6°F; Cond. 8h @ 50±1°C followed by; Cond. 16h @-40±1°C: total of 10 Cycle; Test Cond. 73.4±3.6°F & 50±5%RH; Rate 2.0"/min  Visual examination [Pass/Fail]  Thermal Cycling (lbf/in) 3 specimens; 1"; CMU Cond. vertically 24h @ 73.4±3.6°F; AAMA 714 ASTM C 794  20  ≥ 5  No change in appearance  No change in appearance  No change in appearance  AAMA 714 ASTM C 794  25  ≥ 5  No change in appearance  No change in appearance  | Visual examination [Pass/Fail]  |            | Pass | •                       |
| Visual examination [Pass/Fail]  Elevated Temperature (Ibf/in) 3 specimens; 1" wide; Cement Mortar Slab Cond. vertically 24h @ 73.4±3.6°F; Cond. 7d @ 80°C; Test Cond. 73.4±3.6°F & 50±5%RH; Rate 2.0"/min  Visual examination [Pass/Fail]  Thermal Cycling (Ibf/in) 3 specimens; 1"; Cement Mortar Slab Cond. vertically 24h @ 73.4±3.6°F; Cond. 8h @ 50±1°C followed by; Cond. 16h @-40±1°C: total of 10 Cycle; Test Cond. 73.4±3.6°F & 50±5%RH; Rate 2.0"/min  Visual examination [Pass/Fail]  Pass  No change in appearance  AAMA 714 ASTM C 794  20 ≥ 5  No change in appearance  No change in appearance  AAMA 714 ASTM C 794  25 ≥ 5  No change in appearance   | 3 specimens; 1"; OSB <sup>1</sup> Cond. vertically 24h @ 73.4±3.6°F; Cond. 336h ASTM G 154 UVA Cycle 1;   |            | 19   |                         |
| Elevated Temperature (lbf/in)   3 specimens; 1" wide; Cement Mortar Slab   AAMA 714   Cond. vertically 24h @ 73.4±3.6°F; Cond. 73.4±3.6°F & 50±5%RH; Rate 2.0"/min      Visual examination [Pass/Fail]   Pass   No change in appearance   |   |            |      | No change in            |
| 3 specimens; 1" wide; Cement Mortar Slab Cond. vertically 24h @ 73.4±3.6°F; Cond. 7d @ 80°C; Test Cond. 73.4±3.6°F & 50±5%RH; Rate 2.0"/min  Visual examination [Pass/Fail]  Thermal Cycling (lbf/in) 3 specimens; 1"; Cement Mortar Slab Cond. vertically 24h @ 73.4±3.6°F; Cond. 8h @ 50±1°C followed by; Cond. 16h @-40±1°C: total of 10 Cycle; Test Cond. 73.4±3.6°F & 50±5%RH; Rate 2.0"/min  Visual examination [Pass/Fail]  Thermal Cycling (lbf/in) 3 specimens; 1"; CMU Cond. vertically 24h @ 73.4±3.6°F; Cond. 8h @ 50±1°C followed by; AAMA 714 ASTM C 794  20  ≥ 5  No change in appearance  No change in appearance  No change in appearance  No change in appearance  Pass No change in AAMA 714 ASTM C 794  25  ≥ 5  No change in AAMA 714 ASTM C 794  No change in ASTM C 794   |   |            | Pass | •                       |
| Thermal Cycling (lbf/in) 3 specimens; 1"; Cement Mortar Slab  Cond. vertically 24h @ 73.4±3.6°F; Cond. 8h @ 50±1°C followed by; Cond. 16h @-40±1°C: total of 10 Cycle; Test Cond. 73.4±3.6°F & 50±5%RH; Rate 2.0"/min  Visual examination [Pass/Fail]  Thermal Cycling (lbf/in) 3 specimens; 1"; CMU  Cond. vertically 24h @ 73.4±3.6°F; Cond. 8h @ 50±1°C followed by; Cond. 16h @-40±1°C: total of 10 Cycle; Test Cond. 73.4±3.6°F & 50±5%RH; Rate 2.0"/min   | 3 specimens; 1" wide; Cement Mortar Slab<br>Cond. vertically 24h @ 73.4±3.6°F;<br>Cond. 7d @ 80°C;  | ASTM C 794 | 28   | ≥5                      |
| Thermal Cycling (lbf/in) 3 specimens; 1"; Cement Mortar Slab  Cond. vertically 24h @ 73.4±3.6°F; Cond. 8h @ 50±1°C followed by; Cond. 16h @-40±1°C: total of 10 Cycle; Test Cond. 73.4±3.6°F & 50±5%RH; Rate 2.0"/min  Visual examination [Pass/Fail]  Thermal Cycling (lbf/in) 3 specimens; 1"; CMU Cond. vertically 24h @ 73.4±3.6°F; Cond. 8h @ 50±1°C followed by; Cond. 16h @-40±1°C: total of 10 Cycle; Test Cond. 73.4±3.6°F & 50±5%RH; Rate 2.0"/min  Visual examination [Pass/Fail]  Pass  No change in appearance  AAMA 714 ASTM C 794  25  ≥ 5  No change in Pass No change in Pass No change in Pass  | Visual examination [Pass/Fail]  |            | Pass | _                       |
| Thermal Cycling (lbf/in) 3 specimens; 1"; CMU Cond. vertically 24h @ 73.4±3.6°F; Cond. 8h @ 50±1°C followed by; Cond. 16h @-40±1°C: total of 10 Cycle; Test Cond. 73.4±3.6°F & 50±5%RH; Rate 2.0"/min  Visual examination [Pass/Fail]  Pass  AAMA 714 ASTM C 794  25  ≥ 5  No change in   | 3 specimens; 1"; Cement Mortar Slab<br>Cond. vertically 24h @ 73.4±3.6°F;<br>Cond. 8h @ 50±1°C followed by;<br>Cond. 16h @-40±1°C: total of 10 Cycle; |            | 20   |                         |
| Thermal Cycling (lbf/in) 3 specimens; 1"; CMU Cond. vertically 24h @ 73.4±3.6°F; Cond. 8h @ 50±1°C followed by; Cond. 16h @-40±1°C: total of 10 Cycle; Test Cond. 73.4±3.6°F & 50±5%RH; Rate 2.0"/min  Visual examination [Pass/Fail]  Pass  No change in   | Visual examination [ <i>Pass/Fail</i> ]   |            | Pass | _                       |
| Visual examination [Pass/Fail] Pass No change in  | 3 specimens; 1"; CMU Cond. vertically 24h @ 73.4±3.6°F; Cond. 8h @ 50±1°C followed by; Cond. 16h @-40±1°C: total of 10 Cycle;                         |            | 25   |                         |
|   | Visual examination [Pass/Fail]  |            | Pass | No change in appearance |

### **CONTINUED ON FOLLOWING PAGE**

## 2151T0002

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|  | •                                       | I    | 1  |
|--|---|------|--|
| Thermal Cycling (lbf/in) 3 specimens; 1"; Plywood Cond. vertically 24h @ 73.4±3.6°F; Cond. 8h @ 50±1°C followed by; Cond. 16h @-40±1°C: total of 10 Cycle; Test Cond. 73.4±3.6°F & 50±5%RH; Rate 2.0"/min  | AAMA 714<br>ASTM C 794                  | 22   | ≥5   |
| Visual examination [Pass/Fail]   |   | Pass | No change in appearance  |
| Thermal Cycling (lbf/in) 3 specimens; 1"; OSB¹ Cond. vertically 24h @ 73.4±3.6°F; Cond. 8h @ 50±1°C followed by; Cond. 16h @-40±1°C: total of 10 Cycle; Test Cond. 73.4±3.6°F & 50±5%RH; Rate 2.0"/min   | AAMA 714<br>ASTM C 794                  | 12   | ≥ 5  |
| Visual examination [Pass/Fail]   |   | Pass | No change in appearance  |
| Crack Bridging Ability, Category I [Pass/Fail] 5 specimens; 51mm x 51mm x 20mil application; Cond. 14d @ 23±2°C & 50±10%RH to cure film; Cond. 7d @ 70±2°C; Test 10 cycles @ -26°C; Test Rate = 3.2mm/h from 0.0mm to 3.2mm Expose to 550 ml head of water for 24h extended position | ASTM C 1305/<br>AAMA 714<br>Section 5.6 | Pass | No cracking, splitting,<br>pinholes, or other<br>conditions in the area<br>of the joint in the<br>substrates |
| Water Immersion (lbf) 3 specimens; 1" wide; Cure 21d @ 73.4±3.6°F & 50±5%RH followed by; Immersed in distilled water for 7d @ 73.4±3.6°F Test Cond. 73.4±3.6°F & 50±5%RH; Rate 2.0"/min  | AAMA 714<br>Section 5.7<br>ASTM C 794   |      |  |
| Anodized Aluminum After Immersion  |   | 6    | ≥ 5  |
| Visual examination   |   | Pass | Note change in appearance  |
| Test Requirements on a Damp Surface (optional classification)  | )                                       |      |  |
| Damp Surfaces (lbf) 3 specimens; 1" x 1/16"; substrate immersed for 24h prior to application Cure 7d @ 73.4±3.6°F & 50±5%RH; Test Cond. 73.4±3.6°F & 50±5%RH; Rate 2.0"/min  | ASTM C 794                              |      |  |
| Damp Cement Mortar Slabs   |   | 13   | ≥ 5  |
| Moisture Vapor Permeance (Perms)  3 specimens; Cure 14d @ 23±2°C & 50±10%RH to cure film; Test Cond. 21±1°C & 50±2%RH  | ASTM E 96<br>Procedure B                | 21   | ≥ 10   |

Note(s): 1- OSB moisture content = 7%.

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