



VersaProof™ Primer F

Technical Data Sheet

686 S. Adams St. | Kansas City, KS 66105 | (913) 321-9000 | www.versaflex.com

Selection & Specification Data

Description

VersaProof™ Primer F is a specially formulated, two-component urethane based rapid repair and primer. In its low viscosity formulation, **VersaProof™ Primer F** may be used to repair or prime cementitious and porous masonry substrates. It's unique low viscosity formulation allows for excellent substrate penetration for improved adhesion.

VersaProof™ Primer F may be applied at temperatures greater than -20°F by plural component sprayer, roller, squeegee, or broom. **VersaProof™ Primer F** may be used with all **VersaFlex** rapid curing sealants and coatings for interior and exterior application.

Features

- Repairing spalls, dusted concrete, and cracks
- Ideal as a horizontal resurfacing compound
- Low temperature repair and priming
- Easily polishes for polished concrete floors
- Ultra-low for excellent penetration and absorption into porous substrates which seals the surface and reduces out-gassing
- Rapid cure and return to service
- Can be mixed with quartz sand to form a durable polymer concrete
- Can be thickened with fumed silica or Cabosil
- Can be applied by plural component spray, or mixed and applied by hand

Colors

VersaProof™ Primer F is sold un-pigmented. **VersaProof™ Primer F** can be made in a variety of colors on the **ColorFlex Standard Colors** Chart. Some color selections may require additional lead time. In thicker builds, un-pigmented **VersaProof™ Primer F** dries to a milky opacity.

Technical Properties

Description	Method	Result
VOC (g/l)	Theoretical	388 g/l
Solids Content	Theoretical	61%
Pot Life @ 77°F	Internal	2 –3 min.
Working Time @ 77°F—Neat Mix	Internal	2—3 min.
Working Time @ 77°F—Aggregate	Internal	5—6 min.
Tack Free @ 77°F	Internal	15 min.
Open to Traffic @ 77°F	Internal	30 min.
Tensile Strength	ASTM D638	> 3,300 psi
Tensile Elongation	ASTM D638	> 4%
Die C Tear Strength	ASTM D624	> 180 pli
Shore D Hardness	ASTM D2240	> 60
Tabor Abrasion (H-18, mg loss) ¹	ASTM D4060	< 1000 mg
Adhesion to Steel ²	ASTM D4541	> 500 psi
Adhesion to Concrete ³	ASTM D7234	> 200 psi

The value ranges stated in this Technical Data Sheet are based on system processing under controlled laboratory conditions. Equipment configuration and/or field application conditions may produce variances in the final system values.

Footnotes

1. 1000 g, 1000 revs.
2. Steel prepared in accordance with SSPC-SP 6/NACE N° 3. 2+ mil profile
3. Concrete prepared in accordance with SSPC-SP 13/NACE N° 6

Coverage Rate

VersaProof™ Primer F is designed for concrete, masonry, CMU & Concrete Cover Boards. Application method, substrate roughness, profile, and porosity will effect coverage rates. Contact VersaFlex for recommended coverage rate.

Typical coverage rate is 130—200 ft² per gallon.



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Substrate and Surface Preparation	
<p>General</p> <p>Prior to coating, the substrate must be prepared in a manner that provides a uniform, clean, sound, neutralized surface suitable for the specified coating. The substrate shall be free of all contaminants, such as oil, grease, rust, scale or deposits. The substrate shall be free of all dirt, dust, debris, and deleterious material. Coating performance is dependent on the degree of surface preparation.</p> <p>Maximum Moisture Content Concrete: Calcium Chloride Test – 3 lb/24 hr./1,000 ft² 5% maximum as per ASTM F2160 or ASTM F2420</p>	<p>Concrete & Masonry</p> <p>Reference SSPC-SP 13/NACE No. 6 Surface Preparation of Concrete. Minimum surface profile equivalent to ICRI CSP3 to CSP5 in accordance with ICRI Technical Guide-line No. 03732.</p> <p>Other Substrates:</p> <p>Contact VersaFlex Technical Services for more information. Do not apply to non-porous substrates or substrates susceptible to damage from solvents such.</p>
Mixing, Thinning, Pre-Warming	
<p>Components & Mix Ratio</p> <ul style="list-style-type: none"> Mix ratio is 1:1 by volume Mix pigmented B side prior to combining Measure each component using metered buckets Drill mix at low speed for 10 seconds <p>Thinning</p> <p>DO NOT THIN</p>	<p>Polymer Concrete</p> <p>Pre-mix A and B components prior. Slowly add 30 mesh quartz silica or fumed silica to desired viscosity. Do not exceed 1:4 liquid to solid loading</p> <p>Pre-warming</p> <p>A and B components should be warmed to a minimum of 50°F prior to mixing.</p>
Application and Equipment Guidelines	
<p>Polymer Concrete</p> <p>VersaProof™ Primer F can be installed as a polymer concrete patching and repair material on horizontal surfaces to strengthen “dusted” or spalled concrete, as a leveler and resurfacing compound, or to repair damaged joint headers.</p> <p>Be sure to remove and loosely adhering or spalled substrate prior to repair.</p> <p>Prime the area to be repaired using VersaProof™ Primer F in the neat form to prevent liquid material absorption of the polymer concrete.</p>	<p>Combine A & B components prior to adding aggregate. Follow all mixing and material handling recommendations.</p> <p>A 20-30 mesh Quartz Silica is recommended.</p> <p>Liquid to aggregate mix ratio will vary based on aggregate size and selection. A 1:3 mx ratio is recommended as a starting point. Always try a small amount to determine working time and workability prior to placement. DO NOT exceed a 1:4 mix ratio.</p> <p>Repair patches may be prepared using traditional surface preparation methods after 1 hour. Do not use wire wheels or brushes as this can cause burnishing</p>



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Application and Equipment Guidelines

Primer

VersaProof™ Primer F can be installed by plural component sprayer, roller, brush, broom or squeegee. Install at temperatures greater than –20°F. Application methods should be adjusted based on surface profile and roughness. Additional coats may be needed based on material absorption and substrate porosity. Avoid pooling or puddling.

When working on horizontal surfaces pouring the batch out onto the substrate will extend the working time and improve penetration into porous substrates.

Hand Mix

Follow all mixing and thinning instructions. Detail work should be done with a roller or brush. Larger areas are more easily covered using a broom or soft silicone or foam squeegee.

Plural Component Sprayer

Use a plural component pump and a direct impingement mix spray gun. A back roll or broom back is still required to ensure proper coverage, and absorption. **DO NOT** use static mix as primary mixing mechanism. Contact VersaFlex for additional equipment set-ups and recommendations.

Recommend Equipment Operating Parameters

Do NOT heat **VersaProof™ Primer F**

Dynamic Pressure 900—1200 psi

Dynamic Pressure Differential < 100 psi

Recommended Proportioning Equipment

Graco Reactor series proportioners are acceptable. If using a gear type pump, contact the pump manufacturer to ensure the pump is designed for the **VersaProof™ Primer F** viscosity.

Recommended Spray Gun Configurations

Graco	Fusion AP	AR/AF 2929
		AR/AF 3737
		AR/AF 4242
Graco	Fusion MP	MR/MF 3535
		MR/MF 4747
Graco	Probler P2	00 - 02

Application & Service Conditions

Environmental & Substrate Conditions

Material and equipment temperatures must be kept at 50°F or above. Lower substrate and ambient temperatures will reduce cure time.

Substrate temperatures must be greater than –20°F.

The substrate must be 5°F above dew point and rising before application of coating materials.

If the substrate is below freezing, traditional methods of determining moisture content are not effective. Additional steps should be taken to ensure moisture content is less than 5%. Refer to the Installation Guide for more information.

Service Temperatures (Temperature Resistance)

Dry temperature resistance is –40°F to 250°F.

Limitations

VersaProof™ Primer F is not designed as an exposed finished coating system. Prolonged exposure to UV will degrade the primer. **VersaProof™ Primer F** is hydroscopic. Exposure to moisture during storage or after installation while the material is still curing will negatively effect the material performance.



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Curing Schedule, Re-Coat Windows, and Top Coats	
<p>Cure Time</p> <p>Full cure is achieved in 14 days @ 72°F.</p> <p>Top Coating</p> <p>VersaProof™ Primer F can be top-coated after curing for 30 minutes at 77°F. Primer will be hard and not indented with a thumb nail. Colder ambient and substrate temperatures can lengthen cure times. Consult VersaFlex Technical Service for product and application recommendations.</p>	<p>Re-coat Time</p> <p>VersaProof™ Primer F can be re-coated up to 24 hrs. after application at 72°F. Warmer temperatures will reduce the re-coat window. If the re-coat window is exceeded, additional preparation is required. Prior to coating, primed substrate shall be clean, dry, and free of all dirt, dust, debris, contamination, or deleterious material. Consult VersaFlex Technical Service for product and application recommendations.</p>
Cleanup & Safety	
<p>Cleanup</p> <p>Cured product may be disposed of without restriction. Excess material should be mixed together and allowed to cure and disposed of in a normal manner. Product containers that are “drip free” may be disposed of according to local, state, and federal laws.</p> <p>Caution: VersaFlex VF-20™ contains isocyanate. All safety precautions must be followed including proper skin protection and breathing protection. Consult SDS for proper safety suggestions.</p>	<p>Safety</p> <p>Read, understand, and follow all recommendations on the SDS. Review SDS at www.versaflex.com</p> <p>Wash thoroughly after handling, and before eating, drinking, or smoking. Have proper First Aid and PPE on site prior to opening or processing the material. Use chemical safety glasses, or goggles with splash shields. Use impervious body coverings including long sleeve clothing and boots. Use neoprene or nitrile chemical resistant gloves. Use a combination particulate filter and organic vapor respirator.</p>
Packaging, Handling, & Storage	
<p>Packaging</p> <p>One Hundred Ten Gallon Kit: 55 gallons of ‘A’ side and 55 gallons of ‘B’ side. Drums filled by weight.</p> <p>Ten Gallon Kit: 5 gallons of ‘A’ side and 5 gallons of ‘B’ Side</p> <p>Two Gallon Kit: 1 gallon of ‘A’ Side and 1 gallon of ‘B’ Side</p>	<p>Shelf Life and Storage</p> <p>One year from date of shipment, in original, unopened factory containers, stored in a sheltered area between 60°F - 95°F. Seal tightly after use to prevent introduction of moisture laden air. Store open ‘A’ side with a nitrogen cap after each use.</p>
Warranty	
<p>During a period of one (1) year from date of shipping, VersaFlex Incorporated will refund the price of or replace, at its election, a product it finds to be defectively manufactured, provided the product has been stored and used properly. Except as expressly stated herein, the company makes no warranty of merchantability and no warranty of fitness for any particular purpose, nor does it make any <u>warranty</u>, expressed or implied, of any nature whatsoever with respect to the product or its use. In no event shall the company be liable for delay caused by defects, for loss of use, for indirect, special or consequential damages, or for any charges or expenses of any nature incurred without its written consent.</p>	