



VF 20™

Primer

Technical Data Sheet

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

Selection & Specification Data

Description

VF-20™ is a versatile two-component urethane based primer designed for a variety of substrates. It's unique formulation allows for dilution with acetone by 33-50% for improved penetration, coverage, and adhesion. **VF-20** may be applied at temperatures greater than 0° F by airless sprayer, roller, squeegee, or broom. **VF-20** may be used with all **VersaFlex** rapid curing sealants and coatings for interior and exterior application.

VF-20 has been designed along with **VF-15** to offer versatility and flexibility in primer selection. **VF-20** is ideal for use when longer working time is needed. While **VF-20** will cure down to 0° F it is ideal at temperatures above 75°F. **VF-15** is typically preferred at temperatures between 40—75° F or at elevated temperatures when a faster re-coat is required such as smaller projects or where quick return to service is needed.

Features

- 100% Solids, Zero VOC's
- Excellent penetration and absorption into porous substrates which seals the surface and reduces out-gassing
- Reduces Moisture Vapor Emission (MVE) in concrete
- Easy to use, multi-purpose primer
- Reduces Pinholes and improves adhesion

Colors

VF-20 is sold un-pigmented. **VF-20** will dry to an opaque pale yellow when applied in thicker layers.

Technical Properties

Description	Method	Result
Solids Content		100%
Mix Ratio by Volume		1:1
Adhesion to Concrete	ASTM D7234	>200 psi
Adhesion to Steel	ASTM D4541	>500 psi
Working Time		45 min.
Recoat Window		72 hr.

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.

Reduction in MVE

Concrete, MVE ASTM F1869 lbs./1000 ft ² /24 hr.	10.6 to 1.78
Concrete Humidity ASTM F2420	> 87% to 78%

Coverage Rate

VF-20 is designed for a variety of substrates. Application method, substrate roughness, profile, and porosity will effect coverage rates. Contact VersaFlex for recommended coverage rate.

- Concrete, Masonry: 100-200 ft² per gallon
- Foam: 100-200 ft² per gallon
- Plastics: 400-600 ft² per gallon
- Metal: 400-600 ft² per gallon



Substrate and Surface Preparation

General

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. Refer to the Installation Guide for more information.

Maximum Moisture Content Concrete

5% maximum as per ASTM F2160 or ASTM F2420

Concrete & Masonry

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 Guideline No. 310.2R-2013. Maximum Moisture Content of 3 lb./24 hr./1,000 ft² per ASTM F1869 and/or less than 5% maximum moisture content per ASTM F2420.

Other Substrates

Refer to the Installation Guide or contact VersaFlex Technical Services for more information.

Steel (Atmospheric/Non-Immersion Service)

Visible deposits of oil, grease, or other contaminants shall be removed according to SSPC-SP 1. Prepare in accordance with SSPC-SP6/NACE No. 3 Commercial Blast Cleaning. Provide a sharp angular anchor profile of 3.0 or greater.

Non-Ferrous Metals

Reference SSPC SP-16 Brush-Off Blast Cleaning of Coated and Uncoated Galvanized Steel, Stainless Steels, and Non-Ferrous Metals. Contact VersaFlex Technical Services for primer recommendation and additional information.

Fiberglass, PVC, and other Plastics

Use a low-pressure washer to remove dirt, biologic growth and other contaminants. Apply a de-greaser and wash clean. Clean contamination with a silicone and wax remover such as DuPont Prep-Sol™ 3919S. Sand with 80-grit paper to a dull finish. Consult VersaFlex Technical Service for primer recommendation.

Mixing, Thinning, and Pre-Warming

Components & Mix Ratio

- Mix ratio is 1:1 by volume
- Combine and mix part A and B prior to diluting
- Measure each component using metered buckets.
- Drill mix at low speed for 3 minutes
- Ensure the mixed system is a uniform homogeneous
- Always mix Part A and Part B prior to dilution
- Always use clean, dry, virgin acetone

Mixing

If pigmented, B Side must be mixed prior to use.

Thinning

- Always use clean, dry, virgin acetone
- Application to Foam: Do Not Thin
- Concrete and Masonry: Reduce by 33% with Acetone
- Metal, Fiberglass, and Plastics: Reduce by 50% with Acetone

Pre-warming

A and B components should be warmed to a minimum of 60°F prior to mixing.

0% - 1 Part A to 1 Part B

33% - 1 Part A to 1 Part B to 1 Part Acetone

50% - 1 Part A to 1 Part B to 2 Part Acetone



VF 20™

Primer

Technical Data Sheet

Application and Equipment Guidelines

General

VF-20 can be installed by airless sprayer, roller, brush, broom or squeegee. Install at temperatures greater than 40°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.

Use a pump capable of producing 0.33 gpm. Use a FTX or Contractor Gun with a ¼" hose. Depending on pump capacity use a tip size of 0.013-0.019"

Airless Sprayer

Follow all mixing and thinning instructions. Monitor batch temperature and viscosity. Longer dwell time in mass will reduce pot life and working times. Apply evenly at recommended coverage rate based on substrate. A back roll or broom is still required to ensure proper coverage, and absorption.

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.

Application and Service Conditions

Environmental & Substrate Conditions

Material and equipment temperatures must be kept at 60°F or above. Lower substrate and ambient temperatures will reduce cure time.

Do not install over damp, wet, or saturated substrates. Concrete and masonry substrate moisture shall be less than 5% when measured with a Tramex CME meter. If the substrate is below freezing, traditional methods of determining moisture content are not effective. Additional steps should be taken to validate moisture readings.

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

Service Temperatures (Temperature Resistance)

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

Limitations

VF-20 Primer is not designed as an exposed finished coating system. Prolonged exposure to UV will degrade the primer. **VF-20** is hygroscopic. Exposure to moisture during storage or after installation while the material is still curing will negatively effect the material performance.

Curing Schedule, Re-Coat Windows, and Top Coats

Cure Time:

Full cure is achieved in 14 days @ 72°F.

Top Coating

VF-20 can be top-coated after curing for 120 minutes at 77°F. Primer may still have a slight tacky feel but should not pull up, or adhere. Colder ambient and substrate temperatures can lengthen cure times. Consult VersaFlex Technical Service for product and application recommendations.

Re-coat Time

VF-20 can be re-coated up to 72 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.



VF 20™

Primer

Technical Data Sheet

Cleanup & Safety

Cleanup

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.

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.

Safety

Read, understand, and follow all recommendations on the SDS. Review SDS at www.versaflex.com

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.

Packaging, Handling, & Storage

Packaging

VF20 is available in **2-gallon** and **10-gallon** kits.
Containers filled by weight.

Shelf Life and Storage

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.

Warranty

Limited Warranty. Company warrants its goods to be free of manufacturing defects. Goods manufactured by Company will comply with all applicable federal, state and local laws and regulations. Company makes no warranty as to any parts or equipment manufactured by others. Customer shall look solely and only to the manufacturer of such parts or equipment with respect to any warranty claims. Company hereby assigns to Customer the original manufacturer’s warranties to all such equipment and parts, to the full extent permitted. THE AFORESAID IS THE EXCLUSIVE WARRANTY AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. SPECIFICALLY, THERE ARE NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.

Limitation of Liability. COMPANY’S LIABILITY FOR DEFECTIVE OR NON-CONFORMING GOODS SHALL BE LIMITED TO, AND SHALL IN NO EVENT EXCEED, THE AMOUNT PAID BY CUSTOMER FOR SUCH DEFECTIVE OR NON-CONFORMING GOODS. UNDER NO CIRCUMSTANCES SHALL COMPANY BE LIABLE FOR ANY SPECIAL, PUNITIVE, INCIDENTAL OR CONSEQUENTIAL DAMAGES OR FOR LOST PROFITS. In no event may any claim by Customer arising from or relating to any sale of any goods or services referenced herein be brought more than one year after the date of delivery of such Goods.