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Product Data Sheet

VF 380™ FR

Elastomeric Polyurea

USGBC LEED, EQ Credit 4:

Low-emitting VOC Compliant Materials

Product Description- *VersaFlex VF 380 FR* is a 100% solids elastomeric polyurea developed for applications such as geotextile lining membranes. **VF 380 FR** is a Class 1 flame resistant coating developed for applications requiring a flame resistant material and may be applied to concrete and steel substrates. **VF 380 FR** is a volatile free, odorless system applied with 1:1 mix ratio with plural component spray equipment.

Uses- *VersaFlex VF 380 FR* is a superior flame resistant material that resists ignition, will self-extinguish if ignited and provides less shrinkage with improved elongation characteristics. As a result, **VF 380 FR** makes an excellent polyurea for liners, geotextile coatings, and applications where resilience and durability are required. **VF 380 FR** may be applied at a thickness of 10 to 200 mils in a single application.

Ideal for Applications in:

- Waterproofing membranes
- Geotextile coatings
- Secondary containment
- Foam coatings
- Flexible membranes
- Liners
- Crude oil condensate pit liners
- Oil production water containments
- Typical ambient waste water & hydrogen sulfide exposures

Advantages:

- Class 1 Flame Resistant Approved Material
- 100% solids, no VOC's
- 1:1 mix ratio by volume
- Rapid cure
- Immediate return to service
- Applied by plural component spray
- Odorless
- No VOC's
- Low curing stress shrinkage
- Operating temperatures -40°F to 350°F

Physical Properties-

Property	Test Method	Typical Value
VOC	Theoretical	0%
Solids Content	Theoretical	100%
Gel Time	ASTM D1640	35 - 45 seconds
Tack Free	ASTM D1640	6 – 9 minutes
The following properties are typical after maintaining cured product at 70 – 77°F for 7 days:		
Tensile Strength (psi)	ASTM D638	1200 -1800
Tensile Elongation (%)	ASTM D638	300 - 350
Elastic Modulus (psi)	ASTM D638	500 - 900
Tear Strength (lb/in)	ASTM D624	150 - 300
Shore (A) Hardness	ASTM D2240	70 - 80
Taber abrasion, mg wt loss (1000 g, 1000 revs, H-18)	ASTM D4060	60 - 100
Burn Testing, Class 1	ASTM E84	Passed
The value ranges stated in this Technical Data Sheet are based on system processing under laboratory conditions. Equipment configurations and/or field application conditions may produce variances in final system values.		

Limitations- **VF 380 FR** should not be used for direct contact with extremely high or low pH attack. Composite systems are available. Consult *VersaFlex*.

Coverage Rates- Theoretical square feet per gallon

*Note: 1604 mil inches per gallon. Totally dependent on substrate texture and condition.

Mils	10	15	50	60	80	100	125
Sq. Ft.	160	107	32	27	20	16	13

Packaging-

- One Hundred Ten Gallon Kit: 55 gallons of 'A' side and 55 gallons of 'B' side. Drum containers filled by weight, volume is closely approximated.

Mixing- VF 380 FR must be spray applied using approved equipment. Use 1:1 ratio pump with appropriate material heaters, as required for individual application. For more information contact **VersaFlex**.

Colors- Please refer to the ColorFlex chart at www.versaflex.com

Preparation & Installation- Please review the material Processing & Handling Information for preparation and application procedures. Substrate priming is not required on all substrates, consult **VersaFlex** for recommendations. Also, please consult the **VersaFlex** Spray Gun Configuration Recommendation pdf for specific modules and tips.

Clean Up- Cured product may be disposed of without restriction. Excess liquid 'A' & 'B' material should be mixed together and allowed to cure, then disposed of in the normal manner. Product containers that are "drip free" may be disposed of according to local, state and federal laws.

Safety- Review MSDS at **VersaFlex.com**

Basic safety for personal protection is:

- Long sleeve overalls or disposable Tyvex overalls
- Rubber gloves
- Splash shield or safety glasses with splash guards
- Rubber or leather boots
- Respirator
- Do not use near high heat or open flame
- Do not take internally
- Keep out of reach of children

Shelf Life- One year from date of shipment, in original, unopened factory containers, under normal storage conditions of 55°F to 95°F (18°-35°C).

Technical Services- Sales and Customer Support 913-321-9000

Warranty-VersaFlex Incorporated will refund the price of or replace, at its election, product it finds to be defective provided the product has been used properly. Except as expressly stated above, the company makes no warranty of merchantability and no warranty of fitness for any particular purpose, nor does it make any warranty, expressed or implied, of any nature whatsoever with respect to the product of 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 changes or expenses of any nature incurred without its written consent.