



VersaFlex Incorporated  
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## Material Processing & Handling Information

**Material:** VF 380 FR - Elastomeric Polyurea

**Material Type:** Abrasion Resistant Fast Set Spray Polyurea Coating

**Application:** Concrete, Tile, CMU, Wood and other porous substrates

**Application Process:** High pressure heated equipment with impingement gun

Process Equipment:	Pumps	Dispensing Gun
<b>Graco:</b>	EXP-1 (Electric) EXP-2 (Electric) EXP-3 (Pneumatic) H-XP2 (Hydraulic) H-XP3 (Hydraulic)	Fusion AP (Air Purge) Fusion MP (Mechanical Purge) GX-7 Standard (Mechanical Purge) GX-8 (Mechanical Purge) Probler (Air Purge) Probler P2 (Air Purge)
<b>Gusmer:</b>	FF 2500 (Hydraulic) FF 3500 (Hydraulic) H-20/35 (Pro Hydraulic)	GX-7 Standard (Mechanical Purge) GX-7 400 (Mechanical Purge) GX-7 DI (Mechanical Purge) GX-8 (Mechanical Purge) GAP Pro (Air Purge)
<b>GlasCraft:</b>	MX, MXII (Pneumatic) MH, MHII, MHIII (Hydraulic) SuperMaxi, Guardian A Series	Probler (Air Purge) Probler P2 (Air Purge)
<b>Gama:</b>		Master Gun (Air Purge)
<b>Process Temperature:</b>	150° F (optimum) to 160 ° F (max)	
<b>Process Pressure:</b>	2,000 - 2,500 psi optimum (1,700 psi min, 3,500 psi max.)	
<b>Gel Time:</b>	15 - 25 seconds	
<b>Tack Free:</b>	45 - 60 seconds	
<b>Light Traffic:</b>	60 - 120 minutes	
<b>Full Cure:</b>	7 days	
<b>Moisture Content:</b>	Calcium chloride test: 3 lb./24 hr./1,000 ft <sup>2</sup> Tramex concrete moisture meter: 5% maximum	
<b>Application Temperature:</b>	-40°F and higher	
	<p><b>VF 380 FR</b> will cure at sub-freezing temperatures, but the effects from these conditions may impact the application in a variety of ways. It is recommended that material and equipment ambient temperatures be kept at 50°F or above. Frozen concrete substrates with high moisture content will affect coating adhesion and long-term performance.</p>	
<b>Dew Point:</b>	Substrate temperature must be 5°F above dew point and rising before application of coating materials.	
<b>Surface Prep:</b>	Abrasive blast per ICRI Technical Guideline No. 03732 or SSPC SP13. Achieve a concrete surface profile of ICRI CSP-3 to CSP-5.	

**Surface contaminants:** Check for soluble salts on surfaces to be coated. Test with Chlor\*Test. If amount of soluble salts exceeds recommended limits, treat with Chlor\*Rid. Repeat process until acceptable limits are reached.  
 Maximum amounts of soluble salts (micrograms per square centimeter):  
 Chlorides - 3 immersion, 7 non-immersion  
 Nitrates - 5 immersion, 10 non-immersion  
 Sulfates - 10 immersion, 20 non-immersion

**Substrate Parging:** Formed walls with honeycombing or concrete surfaces with large exposed aggregate. Recommended that the surface is rubbed or parged to eliminate surface defects. Use Five Star Structural Concrete.

**Surface Primer:** Concrete & other porous substrates: **VersaFlex** Quick Mender (8 to 10 wet mils): Two-component sealer and primer. Maximum overcoat time: 24 hours, after which a light recoat is required (2 to 4 wet mils). Do not use Quick Mender on steel.

All substrates: **VersaFlex** VF 20 (8 to 10 wet mils): Two-component primer. Maximum overcoat time: 72 hours, after which a light recoat is required.

Steel only: **VersaFlex** PW-1 (4 to 6 wet mils): Single component primer. Maximum overcoat time: 24 hours, after which a light recoat is required. (1 to 2 wet mils).

**Adhesion Testing:** Adhesion to concrete: Minimum 150 psi. Cohesive failure of concrete is optimum. Pull values will vary depending on concrete strength.

**Coating Application:** Coating thickness will vary depending on intended use, surface roughness and profile. The International Concrete Repair Institute (ICRI) has developed a standard for Concrete Surface Profile (CSP) ranging between 1 (smoothest) and 9 (Roughest).

The following chart gives approximate minimum coating thickness to achieve a continuous coating using the ICRI CSP standard.

CSP-1 & CSP-2	45 – 55 mils
CSP-3	55 - 60 mils
CSP-4	60 – 65 mils
CSP-5	65 – 70 mils
CSP-6	70 – 75 mils
CSP-7	75 – 80 mils
CSP-8	80 - 85 mils
CSP-9	85 – 90 mils

**\*\* Please consult the VersaFlex Spray Gun Configuration Recommendation PDF for specific modules and tips.**

	<b>Storage Temp</b>	<b>Storage</b>	<b>Special Handling</b>
<b>'A' Side</b>	70°F min.	Keep dry. Keep from freezing. Store in covered temperature controlled environment if possible.	Use dry air desiccant for intake vent on drum.
<b>'B' Side</b>	70°F min.	Keep dry. Keep from freezing. Store in covered temperature controlled environment if possible.	Mix well with mixer to re-disperse any settled pigment.

**Safety:** Please consult product MSDS for full details. Safety glasses, rubber gloves, protective clothing, organic vapor or fresh air respirator.