



VersaFlex Incorporated
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Material Processing & Handling Information

Material: VF 340

Material Type: Fast Set Spray Polyurea Coating

Application: Concrete, Tile, CMU Block, Wood and other substrates

Application Process: High pressure heated equipment with impingement gun

| Process Equipment: | Pumps | Dispensing Gun |
|-------------------------------|--|---|
| Graco: | EXP-1 (Electric) EXP-2 (Electric) 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) |
| Gusmer: | 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) |
| GlasCraft: | MX, MXII (Pneumatic) MH, MHII, MHII (Hydraulic) SuperMaxi, Guardian A Series | Probler (Air Purge) Probler P2 (Air Purge) |
| Gama: | Evolution G-250H | GDI (Mechanical) |
| PMC: | PMC GH-40 (Hydraulic) | PMC A-P2 (Air Purge) |
| Pentech USA: | | PalmGun or MG Gun (low output) |
| WIWA: | DuoMix 460 (Pneumatic) | Pentech MG (Mechanical) |
| Material Supply Pumps: | <u>Pump Type</u> | <u>Continuous delivery/output at 70°F/25°C</u> |
| Graco: | Standard 2:1 (T1) | Up to 1.75 gpm, 9.5 lpm |
| | Diaphragm: | |
| | • Husky 515 | Up to 5 gpm, 26 lpm |
| | • Husky 716 | Up to 11 gpm, 61 lpm |
| IPM/Gusmer 2:1 (T2) | | Up to 3.85 gpm, 21 lpm |
| IR/ARO (2:1) | (for fluids <1000 cps) | Up to 1.4 gpm, 7.6 lpm |
| Process Temperature: | 150°-160° F optimum (140°F min., 170°F max.) | |
| Process Pressure: | 2,000-2,500 psi optimum (1,700 psi min., 3,500 psi max.) | |
| Gel Time: | 5-10 seconds | |

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|---------------------------------|---|---------------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|--------------|
| Tack Free: | 25-45 minutes | | | | | | | | | | | | | | | | |
| Light Traffic: | 60-120 minutes | | | | | | | | | | | | | | | | |
| Moisture Content: | Calcium chloride test: 3 lb./24 hr./1,000 ft ² Concrete: 5% maximum as per ASTM F2170 & ASTM F2420. | | | | | | | | | | | | | | | | |
| Application Temperature: | -40°F and higher Note that VF 340 will cure at sub-freezing temperatures, but the effects may impact the application in a variety of ways. It is recommended that material and equipment ambient temperatures be kept at 60°F or above. Frozen concrete substrates with high moisture content will affect coating adhesion and long-term performance. | | | | | | | | | | | | | | | | |
| Dew Point: | Substrate temperature must be 5°F above dew point and rising before application of coating materials. | | | | | | | | | | | | | | | | |
| Surface Prep: | Abrasive blast per ICRI Technical Guideline No. 310.2R-2013 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/voids/imperfections of concrete surfaces shall be repaired prior to coating. | | | | | | | | | | | | | | | | |
| Surface Primer: | Versaflex VF 20 (6 to 10 wet mils): Two-component primer. Maximum overcoat time: 72 hours, after which a light recoat is required. | | | | | | | | | | | | | | | | |
| 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. <table border="0"> <tr> <td>CSP-1 & CSP-2</td> <td>45 - 55 mils</td> </tr> <tr> <td>CSP-3</td> <td>55 - 60 mils</td> </tr> <tr> <td>CSP-4</td> <td>60 - 65 mils</td> </tr> <tr> <td>CSP-5</td> <td>65 - 70 mils</td> </tr> <tr> <td>CSP-6</td> <td>70 - 75 mils</td> </tr> <tr> <td>CSP-7</td> <td>75 - 80 mils</td> </tr> <tr> <td>CSP-8</td> <td>80 - 85 mils</td> </tr> <tr> <td>CSP-9</td> <td>85 - 90 mils</td> </tr> </table> <p>** Please review the <i>Spray Gun Configuration Recommendation PDF</i> for specific modules and tips.</p> <p>*** The "B" side of the system shall be continuously mixed while the spray application is occurring to insure the non-settling of components.</p> | 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 |
| 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 | | | | | | | | | | | | | | | | |

| | Storage Temp | Storage | Special Handling |
|--|---------------------------|--|---|
| 'A' Side | 60°F min. 70°F optimum | Keep dry. Keep from freezing. Store in covered temperature controlled environment if possible. | Use dry air desiccant for intake vent on drum. |
| 'B' Side | 60°F min. 70°F optimum | Keep dry. Keep from freezing. Store in covered temperature controlled environment if possible. | Mix well with mixer to re-disperse any settled pigment. |
| <p>Safety: Please consult product MSDS for full details. Safety glasses, rubber gloves, protective clothing, organic vapor or fresh air respirator.</p> | | | |