



PolyVers International  
87 Shawnee Avenue  
Kansas City, KS 66105  
(913) 321-9000  
(913) 321-1490 (fax)

## **Material Processing & Handling Information**

**Material:** PV 42D Aliphatic Spray (FSS 42D)

**Material Type:** Fast Set Spray Aliphatic Polyurea Coating

**Application:** Concrete, Tile, Cement Block, Wood and other porous substrates

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

<b>Process Equipment:</b>	<b>Pumps</b>	<b>Dispensing Gun</b>
<b>Graco:</b>	EXP-1 (Electric) EXP-2 (Electric) EXP-3 (Pneumatic) H-XP2 (Hydraulic) H-XP3 (Hydraulic) H-VR (Hydraulic)	Fusion AP (Air Purge) Fusion MP (Mechanical Purge)
<b>Gusmer:</b>	FF 2500 (Hydraulic) FF 3500 (Hydraulic) H-20/35 (Pro Hydraulic)	GX-7 400 (Mechanical Purge) GX-7 DI (Mechanical Purge) GAP Pro (Air Purge)
<b>GlasCraft:</b>	MX, MXII (Pneumatic) MH, MHII, MHIII (Hydraulic)	Probler (Air Purge)
<b>Process Temperature:</b>	77°C (170°F) optimum, 66°C min, 88°C max(150°F min, 190°F max)	
<b>Process Pressure:</b>	2,000 - 2,500 psi optimum (1,700 psi min, 3,500 psi max)	
<b>Gel Time:</b>	Less than 2 minutes	
<b>Tack Free:</b>	15 minutes	
<b>Light Traffic:</b>	2 hours	
<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>	-30°F to 125°F  Note that <b>PV 42</b> will cure at these temperatures, but the effects from these conditions will impact the application in a variety of ways. It is recommended that material and equipment ambient temperatures be kept at 10°C (50°F) or above. Frozen concrete substrates with high moisture content will affect coating adhesion and long-term performance.	
<b>Dew Point:</b>	Substrate temperature must be -15°C (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.																
<b>Surface contaminates:</b>	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 Sulphates           10 immersion, 20 non-immersion																
<b>Substrate Parging:</b>	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.																
<b>Surface Primer:</b>	PV QuickMender (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).  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).																
<b>Adhesion Testing:</b>	Adhesion to concrete: Minimum 150 psi. Cohesive failure of concrete is optimum. Pull values will vary depending on concrete strength.																
<b>Coating Application:</b>	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> <tr> <td>CSP-1 &amp; 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>	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																

	<b>Storage Temp</b>	<b>Storage</b>	<b>Special Handling</b>
<b>A Side</b>	10°C (50°F) min 21°C (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>B Side</b>	10°C (50°F) min 21°C (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.

**Safety:** Please consult product MSDS for full details.  
  
Safety glasses, Rubber gloves, Protective clothing, Organic vapor or fresh air respirator.