



VersaFlex Incorporated
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Material Processing & Handling Information

Material: AquaVers 405

Material Type: Fast Set Spray Polyurea Coating

Application: Concrete, Metal/Steel & other substrates

Application Process: High pressure heated equipment with impingement gun

Process Equipment:	Pumps	Dispensing Gun
Graco:	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)
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, MHIII (Hydraulic) SuperMaxi, Guardian A Series	Probler (Air Purge) Probler P2 (Air Purge)
Gama:		Master Gun (Air Purge)
Process Temperature:	170° F optimum (150°F min., 190°F max)	
Process Pressure:	2,000 - 2,500 psi optimum (1,700 psi min, 3,500 psi max)	
Gel Time:	8 seconds	
Tack Free:	25 seconds	
Light Traffic:	60 minutes	
Moisture Content:	Calcium chloride test: 3 lb/24 hr/1,000 ft ² Tramex concrete moisture meter: 5% maximum	
Application Temperature:	-20°F and higher. Note that AquaVers 405 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.	
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. Steel: Achieve a 3 to 5 mil angular profile. SSPC-SP10 Near White Metal Blast Cleaning.

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.

Surface Primer: Most substrates: *AquaVers 20* (6 to 10 wet mils): Two-component primer. Maximum overcoat time: 72 hours, after which a light recoat is required.
Steel only: *VersaFlex PW-1* (2 to 3 wet mils): Single component primer. Maximum overcoat time: 24 hours, after which a light recoat is required.
PW-1 is only needed to prevent flash rust. Consult **VersaFlex** for details.

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.

	Storage Temp.	Storage	Special Handling
'A' Side	50°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	50°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.

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