Indian River County Purchasing Division
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ADDENDUM NO. 1

Issue Date:	May 3, 2019
Project Name:	Secondary Containment Coating at the North County RO Facility
Bid Number:	2019059
Bid Opening Date:	May 16, 2019

This addendum is being released to modify the bid documents. The information and documents contained in this addendum are hereby incorporated in the invitation to bid. **This addendum must be acknowledged where indicated on the bid form, or the bid will be declared non-responsive.**

Attachments:
Tnemec Series 217 Product Data Sheet
Tnemec Series 201 Product Data Sheet

MODIFICATION TO BID DOCUMENTS
Additional scope of work for the Containment Areas is hereby added as follows. This is the guide specification for a plural component coating system for severe sulfuric acid spillage. References are to Tnemec products, but equivalent product may be proposed for approval by County.

Service
Provide a secondary containment coating for Sulfuric Acid area. Areas include floors, pump bases, elevated tank concrete bases and walls. Concrete restoration will be required. Area contained a spill and the concrete has been contaminated.

Chemical Secondary Containments
Surface Preparation: Remove all existing coatings, curing compounds, laitance, hardeners, sealers, and other contaminants in accordance with the Preparation of Concrete(SSPC-SP13/NACE No.6), while creating minimum surface profile of an ICRI CSP-6 or greater. Check pH.

Surface must be clean and dry prior to the application of any coating.

Resurfacer for Floors: Apply Tnemec Series 217 MortarCrete @ a rate of ¼ inch to 4 inches to create a smooth finish. Follow strict Tnemec guidelines for Application and Curing. Once cured, abrasive blast clean per SSPC-SP13 the Surface Preparation of Concrete to create a minimum ICRI CSP-3 or greater.

Resurfacer for Walls: Apply Tnemec Series 218 MortarClad @ a minimum rate of 1/16" to all vertical walls.

		DFT-Mils
Full Prime Coat:	201 – Epoxoprime	4.0 – 6.0
Intermediate Coat:	282 – Tneme-Glaze	8.0 – 10.0
Finish Coat:	282 – Tneme-Glaze	8.0 – 10.0
		Minimum 20.0 mils DFT

*Apply a Polysulfide Sealant to all expansion joints, steel-to-concrete seams, etc…

EXAMINATION

Examine areas and conditions under which coating systems are to be applied. Notify Project Manager of areas or conditions not acceptable. Do not begin surface preparation or application until unacceptable areas or conditions have been corrected.

PROTECTION OF SURFACES NOT SCHEDULED TO BE COATED

Protect surrounding areas and surfaces not scheduled to be coated from damage during surface preparation and application of coatings.

Immediately remove coatings that fall on surrounding areas and surfaces not scheduled to be coated.

Coating System: Steel

Surface Preparation: Structural Steel

SURFACE PREPARATION OF STEEL

Prepare steel surfaces in accordance with manufacturer's instructions.

Fabrication Defects:

1. Correct steel and fabrication defects revealed by surface preparation.
2. Remove weld spatter and slag.
3. Round sharp edges and corners of welds to a smooth contour.
4. Smooth weld undercuts and recesses.
5. Grind down porous welds to pinhole-free metal.
6. Remove weld flux from surface.

Ensure surfaces are dry.

Immersion or Below Grade Surfaces: Remove visible oil, grease, dirt, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter in accordance with SSPC-SP 10/NACE 2.

Exterior Exposed or Interior Exposed Surfaces: Remove visible oil, grease, dirt, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter in accordance with SSPC-SP 7/NACE 4.

Interior or Immersion Surfaces, Severe Exposure: Remove visible oil, grease, dirt, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter in accordance with SSPC-SP 5/NACE 1.

Marginally Prepared Surfaces (Maintenance): Remove visible oil, grease, dirt, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter in accordance with manufacturer's instructions.

Abrasive Blast-Cleaned Surfaces: Coat abrasive blast-cleaned surfaces with primer before visible rust forms on surface. Do not leave blast-cleaned surfaces uncoated for more than 5 hours.

All Blast media must be captured and cannot be of a silicone base/type. Dust must be kept to a controllable level.

SURFACE PREPARATION OF GALVANIZED STEEL AND NONFERROUS METAL
Prepare galvanized steel and nonferrous metal surfaces in accordance with manufacturer's instructions.

Surface preparation recommendations will vary depending on substrate and exposure conditions.

Ensure surfaces are dry.

Immersion Service: Clean surfaces by abrasive blasting.

Remove Rust From Galvanized Steel:
Remove white rust from galvanized steel by hand or power brushing.
Remove rust from old galvanized steel in accordance with SSPC-SP 2 or SP 3.
Do not damage or remove galvanizing.

Increase mechanical adhesion under moderate to severe conditions, such as exterior exposure or chemical environments, by abrasive blast and/or chemical cleaning.

SURFACE PREPARATION OF DUCTILE OR CAST IRON
Prepare ductile or cast iron surfaces in accordance with manufacturer's instructions.

Ensure surfaces are clean, dry, and free of oil, grease, dirt, dust, and other contaminants.

SURFACE PREPARATION OF PVC
Prepare PVC surfaces in accordance with manufacturer's instructions.

Ensure surfaces are clean, dry, and free of oil, grease, dirt, dust, and other contaminants.

Scarify PVC surfaces.

SURFACE PREPARATION OF CONCRETE
Interior, Wet Substrate:

1. Prepare concrete surfaces in accordance with manufacturer's instructions, SSPC-SP 13/NACE 6, and ICRI 03732.
2. Allow concrete to cure for a minimum of 28 days.
3. Test concrete for moisture in accordance with ASTM D 4263 and F 1869.

4. Fill holes, pits, voids, and cracks.
5. Ensure surfaces are clean, dry, and free of oil, grease, chalk, form release agents, and other contaminants.

APPLICATION

Apply coatings in accordance with manufacturer's instructions.

Mix and thin coatings, including multi-component materials, in accordance with manufacturer's instructions.

Keep containers closed when not in use to avoid contamination.

Do not use mixed coatings beyond pot life limits.

Use application equipment, tools, pressure settings, and techniques in accordance with manufacturer's instructions.

Uniformly apply coatings at spreading rate required to achieve specified DFT.

Apply coatings to be free of film characteristics or defects that would adversely affect performance or appearance of coating systems.

Stripe paint with brush critical locations on steel such as welds, corners, and edges using specified primer.

DISINFECTION

Disinfection of Water Contact Surfaces and Filling of Water Storage Tanks:

1. Do not disinfect water contact surfaces or fill water storage tanks until application of coating systems is complete, coatings have fully cured, and field quality control inspection is complete.
2. Allow number of days in accordance with manufacturer's instructions and as directed by Engineer for full cure of coating systems on water contact surfaces before flushing, disinfecting, or filling with water.
3. Disinfection: AWWA C 652 or as directed by Engineer.

REPAIR

Materials and Surfaces Not Scheduled To Be Coated: Repair or replace damaged materials and surfaces not scheduled to be coated.

Damaged Coatings: Touch-up or repair damaged coatings. Touch-up of minor damage shall be acceptable where result is not visibly different from adjacent surfaces. Recoat entire surface where touch-up result is visibly different, either in sheen, texture, or color.

Coating Defects: Repair in accordance with manufacturer's instructions coatings that exhibit film characteristics or defects that would adversely affect performance or appearance of coating systems.

FIELD QUALITY CONTROL

Inspector's Services (to be Provided by County):

1. Verify coatings and other materials are as specified.
2. Verify surface preparation and application are as specified.
3. Verify DFT of each coat and total DFT of each coating system are as specified using wet film and dry film gauges.
4. Coating Defects: Check coatings for film characteristics or defects that would adversely affect performance or appearance of coating systems.
    a. Check for holidays on interior steel immersion surfaces using holiday detector.
5. Report nonconforming work not corrected.

CLEANING

Remove temporary coverings and protection of surrounding areas and surfaces.

ONE-YEAR INSPECTION

Owner will set date for one-year inspection of coating systems.

Inspection shall be attended by Owner, Contractor, and manufacturer's representative.

Contractor must repair deficiencies in coating systems as determined by Owner in accordance with manufacturer's instructions.

MORTARCRETE® SERIES 217

PRODUCT PROFILE

GENERIC DESCRIPTION Cementitious Repair Mortar

COMMON USAGE A single-component, rapid setting, hydraulic cementitious resurfacer used to restore deteriorated concrete surfaces.

COLORS Gray

SPECIAL QUALIFICATIONS Series 217 is acceptable for use on the interior of potable water concrete storage tanks and reservoirs when topcoated with an NSF/ANSI Std. 61 certified protective coating. Contact your Tnemec representative for approved systems and additional information.

COATING SYSTEM

PRIMERS Concrete: Series 217 Bond Coat †
† A thin bond coat (scrub coat) is required. Refer to the Series 217 MortarCrete *Surface Preparation and Application Guide* or Contact Tnemec Technical Services with questions.

TOPCOATS Series 22, FC22, 27WB, 46H-413, L69, L69F, N69, N69F, V69, V69F, 120, L140, L140F, N140, N140F, V140, V140F, 201, 215, 218, 237SC, 239SC, 434, 435, 436, 446
Note: Series 217 must be mechanically prepared in accordance with SSPC-SP13/NACE 6, ICRI-CSP4-5 surface profile prior to application of recommended topcoats. Shrinkage cracks in the Series 217 may require filling with Series 215 or Series 218 to prevent transfer or telegraphing of any cracks. Contact Tnemec Technical Services for additional information.

SURFACE PREPARATION

REINFORCING STEEL The repair of deteriorated concrete resulting from reinforcing steel corrosion should be in accordance with ICRI Technical Guideline No. 310.1R. Concrete reinforcing steel (rebar) can be primed with Tnemec Series 1 or 69.

CONCRETE Remove all loose materials, deteriorated concrete, laitance, existing coatings, and other bond-inhibiting materials from the surface in accordance with SSPC-SP13/NACE 6, minimum surface profile of ICRI-CSP6.

EDGE CONDITIONING The edges of the patch should be sawcut perpendicular to the surface to a depth of at least 1/4 inch (6 mm). Break out the complete repair area to a minimum depth of 1/4 inch (6 mm) up to the sawed edge to prevent feather edging. Avoid cutting the reinforcing steel.

ALL SURFACES Must be clean and free of oil, grease and other contaminants. Always take precautions to prohibit the surface from becoming contaminated prior to product application.

TECHNICAL DATA

RECOMMENDED DFT **Horizontal/Vertical:** 1/4 inch (6 mm) to 4 inches (102 mm)
Overhead: 1/4 inch (6 mm) to 2 inches (51 mm)

CURING TIME

Temperature	Initial Set	Final Set	To Topcoat
70°F (21°C)	60 minutes	90 minutes	12 hours

Note: Use Series 211-217 Slow Set additive to extend set times. Refer to Series 211-217 Slow Set product data sheet for information.

VOLATILE ORGANIC COMPOUNDS 0.0 lbs/gallon (0 grams/litre)

NUMBER OF COMPONENTS One: 2.4 gallons/0.3 cu ft (9.0 L) (dry volume) approximately

MIXING RATIO Add 3 to 5 quarts (2.8 to 4.7 L) potable water per 55 lb (23 kg) plant-proportioned, pre-blended unit. Do not mix partial units.

PACKAGING 5 gallon bucket

NET WEIGHT 55 lbs (23 kg)

STORAGE TEMPERATURE Condition product to 65°F-75°F (18°C-24°C) 24 hours before using. Protect from moisture; store in dry environment.

SHELF LIFE 6 months in original, unopened packaging at recommended storage conditions.

HEALTH & SAFETY This product contains chemical ingredients which are considered hazardous. Read container label warning and Material Safety Data Sheet for important health and safety information prior to the use of this product.
Keep out of the reach of children.

MORTARCRETE® | SERIES 217

APPLICATION

SPREADING RATE

Prior to application, review the Series 217 MortarCrete *Surface Preparation and Application Guide.*
Approximate theoretical spread rate based upon 4 quarts (3.8 L) of water to yield 3.4 gal/0.45 cu ft (12.9 L) unit.

Thickness	0.25 in. (.635 cm)	0.50 in. (1.27 cm)	0.75 in. (1.91 cm)	1.00 in. (2.54 cm)	1.25 in. (3.18 cm)	1.50 in. (3.81 cm)	1.75 in. (4.45 cm)	2.00 in. (5.08 cm)
Coverage	21.6 (2.01 m²)	10.8 (1.00 m²)	7.2 (.67 m²)	5.4 (.50 m²)	4.32 (.40 m²)	3.6 (.33 m²)	3.0 (.28 m²)	2.7 (.25 m²)

Thickness	2.25 in. (5.72 cm)	2.50 in. (6.35 cm)	2.75 in. (6.99 cm)	3.00 in. (7.62 cm)	3.25 in. (8.26 cm)	3.50 in. (8.89 cm)	3.75 in. (9.53 cm)	4.00 in. (10.16 cm)
Coverage	2.4 (.22 m²)	2.2 (.20 m²)	2.0 (.19 m²)	1.8 (.17 m²)	1.7 (.16 m²)	1.5 (.14 m²)	1.4 (.13 m²)	1.3 (.12 m²)

Note: Application below minimum or above maximum spreading rates may adversely affect product performance.

WORKING TIME

Approximately 20-30 minutes at 75ºF (24ºC), & 50% R.H. Placement time is dependent on environmental conditions and mixing water/set control amounts. Do not retemper the mortar with additional water. **Note:** Do not wait for bleed water. Finish surface as soon as material condition allows.

MIXING

Remove Series 217 from the 5-gallon plastic pail. Add 3-5 quarts (2.8 to 4.7 L) of potable water to a clean bucket. **Note:** Elevated water temperature can significantly reduce working time. **Note:** For repair of large bugholes, honeycomb and other cavities deeper than the recommended maximum thickness, 15-20 lbs of locally purchased pea gravel (coarse aggregate) can be post-added with 3.0 to 3.5 quarts of water to Series 217, to create "dry-pack" mortar. One half inch to No. 8 size (12.5 mm to 2.36 mm) pea gravel conforming to ASTM C 33 is recommended. Contact your Tnemec representative or Tnemec Technical Services for additional information.
Optional: Depending on the ambient temperature and desired consistency, add up to 3 packets of Series 211-217 Slow Set additive into the mixing water (refer to the Series 211-217 product data sheet). Under mechanical agitation with a slow-speed drill (400-600 rpm) and H-Style (box blade) mixing paddle, slowly sift powder into mixing bucket. Mix 1-4 minutes until fully blended. Avoid extended over-mixing.

APPLICATION

Substrate: Concrete substrate shall be "pre-wet" or dampened with potable water to a Saturated Surface Dry (SSD) condition prior to Series 217 application; the concrete substrate is darkened by water but there is no pooling of water on the concrete.
Bond Coat: Using a masons brush or rubber sponge, work a thin bond coat (scrub coat) of Series 217 into the SSD substrate to ensure intimate contact and to help prevent sloughing or sagging of repair materials on vertical and overhead surfaces.
Mortar: Apply the Series 217 with adequate pressure before the scrub coat dries. Thoroughly consolidate the repair material into the corners of patch and around any exposed reinforcement steel in the repair zone. Full encapsulation of the reinforcement and intimate contact with substrate is important for long-term durability.
Finishing: Do not wait for bleed water. Finish Series 217 by striking off with a straight edge and close with the recommended concrete finishing tools, as conditions allow, to create a smooth, even surface.

CURING

Begin water curing as soon as the surface has lost its moist sheen. Keep exposed surfaces wet for a minimum of 2 hours. The objective of water curing shall be to maintain a continuously wet surface until the product has achieved sufficient strength. When experiencing extended setting times, due to cold temperature or the use of Series 211-217, longer cure times may be required. Contact Tnemec Technical Services for additional information.

APPLICATION EQUIPMENT

Hand troweling can be accomplished using steel concrete finishing trowels, broad knives, rubber floats, wooden floats or plastic floats. Material may be spray transferred using low-pressure grout pumps or high-pressure wet-mix shotcrete equipment. Contact Tnemec Technical Services for additional information.

Spray Application Equipment

Pump	Fluid Line	Spray Gun	Fluid Tips	Fluid Pressure	Atomizing Pressure	Hopper
Graco M680 10:1 Ratio	25' 1" Diameter 10' 3/4" Diameter	Flex Hose	No. 5 Nozzle	300 psi (Adjust as necessary)	Adjust at gun for proper atomization	10 Gallons Stainless Steel

Refer to the operation manual for application instructions. **Atomization air must be dry, the use of an after cooler is recommended.**

TEMPERATURE REQUIREMENT

Minimum substrate and ambient application temperature 45°F (7°C) and rising. Do not apply if expected to fall below this temperature within 24 hours of application.

CLEANUP

Uncured material can be removed with water. Cured material can only be removed mechanically.

TNEMEC

PRODUCT DATA SHEET

EPOXOPRIME® SERIES 201

PRODUCT PROFILE

GENERIC DESCRIPTION Modified Polyamine Epoxy

COMMON USAGE High-solids moisture tolerant epoxy used for priming concrete, wood and drywall. Also as a stand-alone one-coat clear floor sealer.

COLORS Clear. Can be field-tinted (Series 820 Field Tint) in 16 StrataShield colors and certain custom colors. **Note:** Epoxies chalk with extended exposure to sunlight. Lack of ventilation, incomplete mixing, miscatalyzation or the use of heaters that emit carbon dioxide and carbon monoxide during application and initial stages of curing may cause yellowing to occur.

COATING SYSTEM

SURFACER/FILLER/PATCHER Series 130, 215, 217, 218
Note: A repair kit of 201, with Part C fumed silica, is available for small patching/surfacing repairs. For more extensive repairs and additional information, contact your Tnemec representative or Tnemec Technical Services.

TOPCOATS Series 201, 206, 206SC, 210, 222, 223, 224, 237, 237SC, 238, 239, 239SC, 270, 273, 280, 281, 282, 434, 435, 436.
Note: Refer to the applicable topcoat data sheet for color availability and additional information.

SURFACE PREPARATION

Prepare surfaces by method suitable for exposure and service.

HORIZONTAL CONCRETE Allow new cast-in-place concrete to cure a minimum of 28 days at 75°F (24°C). Verify concrete dryness and prepare concrete surfaces in accordance with NACE No. 6/SSPC-SP13 Joint Surface Preparation Standards and ICRI Technical Guidelines. Moisture vapor transmission should not exceed three lbs per 1,000 sq ft in a 24 hour period. (Reference ASTM F 1869 "Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride.") Relative humidity should not exceed 80%. (Reference ASTM F 2170 "Standard Test Method for Determining Relative Humidity in Concrete using in situ Probes.") **Note:** For moisture content up to 10 lbs per 1,000 sq ft or relative humidity up to 90%, Series 241 may be substituted for the primer. Refer to the Series 241 product data sheet for more information.

Abrasive blast, shot-blast or mechanically abrade concrete surfaces to remove laitance, curing compounds, hardeners, sealers and other contaminants and to provide a minimum ICRI-CSP 3 or greater surface profile. Large cracks, voids and other surface imperfections should be filled with a recommended filler or surfacer.

VERTICAL CONCRETE Allow new concrete to cure 28 days. Abrasive blast or mechanically abrade concrete to remove laitance, form release agents, curing compounds, hardeners, sealers and other contaminants and to provide surface profile (Reference SSPC-SP13).

CMU Allow new mortar to cure 28 days. Surfaces must be clean, dry, sound and free of all contaminants. Level all protrusions and mortar spatter.

DRYWALL Sand joint compound smooth and feather edge.

WOOD Sand rough areas. Seal knots and pitch pockets. Fill cracks and nail holes before primer is topcoated.

PAINTED SURFACES Contact your Tnemec representative.

ALL SURFACES Must be clean, relatively dry and free of oil, grease, curing compounds/sealers, hardeners and other contaminants. Application will tolerate residual dampness from surface preparation process but not puddled water, glistening concrete or inherently wet concrete.

TECHNICAL DATA

VOLUME SOLIDS 100% (mixed)

RECOMMENDED DFT **Concrete: Horizontal:** 6.0 to 12.0 mils (150 to 305 microns) per coat. **Vertical** - 4.0 to 6.0 mils (100 to 150 microns) per coat.
Drywall & Wood: 4.0 to 6.0 mils (100 to 150 microns) per coat—two coats applied at 30 to 45 minute intervals.

CURING TIME

Temperature	Maximum Recoat Time	To Place in Service
75°F (24°C)	24 hours	24 hours

Curing time varies with surface temperature, air movement, humidity and film thickness.
Ventilation: When spray-applied, provide adequate ventilation during application and cure. Reference ventilation guidelines contained in the latest edition of AWWA D 102. **Note:** If Series 201 is used as the primer for a mortar system, the mortar application should take place while the Series 201 is still tacky, typically up to four hours, otherwise, aggregate should be lightly broadcast into the primer so to provide tooth to hold the mortar in place when spread. When the Series 201 is used as a vertical or horizontal primer for a thin film system, the 201 should be allowed to dry hard without exceeding the 24 hour recoat window. If Series 201 is used as the primer for the Series 270 Stranlok system, the Series 201 should be allowed to tack up for approximately one to four hours depending upon temperature but not allowed to dry hard.

VOLATILE ORGANIC COMPOUNDS **Unthinned:** 0.24 lbs/gallon (28 grams/litre)
Thinned 5% (No. 2 Thinner): 0.57 lbs/gallon (68 grams/litre)
Thinned 5% (No. 42 Thinner): 0.55 lbs/gallon (65 grams/litre)

HAPS **Unthinned:** 0.0 lbs/gal solids
Thinned 5% (No. 2 Thinner): 0.37 lbs/gal solids
Thinned 5% (No. 42 Thinner): 0.0 lbs/gal solids

THEORETICAL COVERAGE 1,604 mil sq ft/gal (39.4 m²/L at 25 micons). See APPLICATION for coverage rates.

NUMBER OF COMPONENTS Two: Part A and Part B (2 Parts A to 1 Part B by volume)

EPOXOPRIME® | SERIES 201

PACKAGING

	PART A	PART B	Yield (mixed)
Extra Large Kit	2-55 gallon drums	1-55 gallon drum	165 gallons
Large Kit	2-5 gallon pails	1-5 gallon pail	15 gallons
Small Kit	2-1 gallon cans	1-1 gallon can	3 gallons

NET WEIGHT PER GALLON
9.50 ± 0.25 lbs (4.31 ± .11 kg) (mixed)

STORAGE TEMPERATURE
Minimum 40°F (4°C) Maximum 90°F (32°C)
Note: Material should be stored at temperatures between 70°F and 90°F (21°C and 32°C) for at least 48 hours prior to use.

TEMPERATURE RESISTANCE
(Dry) Continuous 250°F (121°C) Intermittent 275°F (135°C)

SHELF LIFE
12 months at recommended storage temperature.

FLASH POINT - SETA
N/A

HEALTH & SAFETY
This product contains chemical ingredients which are considered hazardous. Read container label warning and Material Safety Data Sheet for important health and safety information prior to the use of this product.
Keep out of the reach of children.

APPLICATION

COVERAGE RATES
Before commencing, obtain and thoroughly read the StrataShield Installation and Application Guide for floors.

	Dry Mils (Microns)	Wet Mils (Microns)	Sq Ft/Gal (m²/Gal)
Horizontal	6.0-12.0 (150-305)	6.0-12.0 (150-305)	134-267 (12.2-24.8)
Vertical	4.0-6.0 (100-150)	4.0-6.0 (100-150)	267-401 (24.8-37.3)

Allow for overspray and surface irregularities and waste. Film thickness is rounded to the nearest 0.5 mil or 5 microns. Application of coating below minimum or above maximum recommended dry film thicknesses may adversely affect coating performance.

MIXING
Use a variable speed drill with a PS Jiffy blade. Slowly mix 2 parts A component, and while under agitation add 1 part B component and mix for a minimum of two minutes. Ensure that all Part B is blended with Part A by scraping the pail walls with a flexible spatula.
Note: A large volume of material will set up quickly if not applied or reduced in volume.
Caution: Do not reseal mixed material. An explosion hazard may be created.

THINNING
Normally not required. May thin up to 5% or 1/4 pint (190 mL) to improve application properties. Brush and roll applications use No. 2 Thinner. Spray applications use No. 42 Thinner.

POT LIFE
25 to 30 minutes at 75°F (24°C)
Material temperatures above 90°F (32°C) will significantly reduce the pot life.

APPLICATION EQUIPMENT
Brush, roller, squeegee and airless spray.

Airless Spray

Pump	Tip Orifice	Atomizing Pressure	Mat'l Hose ID	Manifold Filter
Graco "King" 45:1 or 56:1	0.019"-0.033" (485-840 microns)	80-90 psi (5.5-6.2 bar)	3/8" to 1/2" (9.5 to 12.7 mm)	60 mesh

Roller: Use high quality 3/8" to 1/2" woven nap, shed resistant, roller cover.
Brush: Use high quality synthetic or nylon bristle brush.
Horizontal: Squeegee and backroll. Brush small areas only.
Vertical: Roll, spray and backroll or airless spray based on substrate conditions. Brush small areas only. **Spraying should be considered as a means to transfer the material to the surface and should be followed by backrolling.**

SURFACE TEMPERATURE
Minimum of 55°F (13°C), optimum 65°F to 80°F (18°C to 27°C), maximum of 90°F (32°C). The substrate temperature should be at least 5°F (3°C) above the dew point.

MATERIAL TEMPERATURE
For optimum application, handling and performance the material temperature during application should be between 70°F and 90°F (21°C and 32°C). Temperature will affect the workability. Cool temperatures increase viscosity and decrease workability. Warm temperatures will decrease viscosity and shorten pot life.

CLEANUP
Flush and clean all equipment immediately after use with xylene or MEK.