SOLICITATION ADDENDUM
City of Leesburg | Purchasing Division
204 N. 5th Street | PO Box 4906030
Leesburg, FL 34749-6030
Phone: (352) 728-9880 | purch@leesburgflorida.gov

ADDENDUM NO.3

Date Issued: May 8, 2018
Solicitation: **180161 Water Tank Rehabilitation – College Street**

The following changes are made to solicitation document 180161. Bidders shall take all information into account when preparing their bid response.

Language removed from the specifications is shown as ~~strike through~~. Language that is added or inserted show as ***bold, italic and underlined***.

REVISION TO SCOPE OF WORK

This Addendum provides a revised Section 2 – Scope of Work. Bidders shall replace in its entirety the original Section 2 – Scope of Work released in the original Invitation for Bid document with the attached revised Section 2 – Scope of Work attached to this Addendum.

ATTACHMENT ADDITION

Attached are product data sheets of the following, these attachments are now part of the solicitation document.

- TNEMEC POTA-POX Series 20 Polyamide Epoxy
- TNEMEC POTA-POX Series 20HS Polyamide Epoxy
- TNEMEC Enduratone Series 1028 HDP Acrylic Polymer

QUESTIONS AND ANSWERS

The following are answers to all questions received to date. Information shall be considered by proposers when preparing their responses. Questions 4 through 5 have been answered in Addendum No.2.

Q6. What surfaces are referred to as "interior dry"?
A6. *Item 4, Interior "Dry" painting refers to the recommended coating method outlined in AWWA standards for Painting Steel Water Storage Tanks.*

Q7. Does this bid require prevailing wage rates to be paid?
A7. *No. as per Section 1, ST-34, Contracts are required to follow the Fair Labor Standards Act.*

Q8. Is there a previous inspection report/photos available to view?
A8. *Previous inspection reports and photos are not available.*

All other elements of the Solicitation Document remain unchanged.
Please direct any questions related to this addendum to the Purchasing Office.

ACKNOWLEDGEMENT

It is the vendor's responsibility to ensure their receipt of all addenda, and to clearly acknowledge all addenda within their initial bid or proposal response in the space provided on the Certification/Addendum Acknowledgement Form included in the original solicitation document. Failure to do so may subject the bidder to disqualification.

Q9. Does this bond require a bid bond? If so, how much %?

A9. *Bonds are not required for this project*

Q10. Is there a plan holders list available?

A10. *The City of Leesburg does not maintain a plan holders list. Pre-bid attendees and sign in sheets will be listed on our bid management system Vendor Registry.com.*

SECTION 2 – SCOPE OF WORK
***** REVISED – ADDENDUM NO.3 *****

SW-1. GENERAL

The following specifications to set up minimum requirements for the cleaning and repainting both interior and exterior of a 500,000 gallon elevated water tank. The work includes interior and exterior preparation and recoating according to American Water Works Association Standard for Painting Steel Water Storage Tanks.

All equipment or material must comply with the latest safety standards and meet or exceed these specifications. Literature and product specifications must accompany the quote.

The subsequent agreement resulting from this solicitation shall include a stipulation that the work be completed in a period of 90 calendar days following receipt of a Notice to Proceed.

SW-2. REFERENCE MATERIALS

Bidders and Contractors are responsible for obtaining their own copies of referenced standards and specifications.

SW-3. SCOPE

The contractor shall provide all labor, tools, equipment, materials and supplies for cleaning, painting and renovation of the interior and exterior of the 500,000 gallon College Street elevated water tank.

SW-4. SPECIAL CONDITIONS

4.1. Definitions - For the purposes of this project, the following definitions are made.
- a. Inspector - Any person or firm contracted with or employed directly by the Contractor to inspect the work to be performed by the contractor carrying out the renovation work. The inspector shall be a licensed Florida PE.
- b. AWWA - American Water Works Association
- c. NSF – National Sanitation Foundation International
- d. SSPC – Society of Protective Coatings
- e. AWWA D102 - Standard for Painting Steel Water Storage Tanks
- f. NSF 61 - Drinking Water System Components
- g. SSPC-PAI - Paint Application Specification

4.2. The City will furnish all water and electrical power required to complete this project.

4.3. The Contractor shall provide and Inspector. The Contractor will work with the inspector to schedule any pre or post inspections that are required. At the time of completion of the project, the Contractor shall provide to the City a detailed report in a spiral bound book and an electronic version with documentation of the interior and exterior work. A Florida Professional Engineer must stamp this report.

4.4. The contractor shall furnish all labor, materials, equipment, and supervision to complete that portion or those portions of this project for which the Contractor has entered in his proposal.

4.5. The Contractor shall comply with all applicable requirements of AWWA Standard D102 for Painting Steel Water-Storage Tanks.
4.6. The Contractor shall haul from the site and dispose of all trash, rubbish, and dirt incidental to the execution of this contract, burning at the site is prohibited. The Contractor shall restore, to the satisfaction of the Inspector/Consultant, all private and public property damaged during the execution of this contract.
4.7. The Contractor shall conform to all applicable AWWA Standards for potable water storage tanks. Reference to a standard includes it; omission of reference does not exclude an applicable standard.
4.8. The Contractor is responsible for maintaining security at the tank site. All stored materials and equipment must be secured against unauthorized use.
4.9. The Contractor shall take precautions necessary to prevent paint splatter from falling on adjacent equipment, homes, vehicles and all other related items and shall be solely responsible for any damage resulting therefrom.
4.10. The Contractor shall provide and maintain adequate sanitary conveniences for the use of persons employed on the work site. These conveniences shall be maintained at all times without nuisance, and their use shall be strictly enforced.

SW-5. TECHNICAL SPECIFICATIONS

5.1. Cleaning and painting of water tank (interior and exterior), including balcony, sway bars, ladder, cage, and columns overall.
5.2. Prior to the application of any paint or coating material, contractor shall present to the City a manufacturers or supplier's affidavit stating that the paint or coating material supplied complies with AWWA Standard D102.
5.3. Conform to AWWA Standard D102 for Painting Steel Water Storage Tanks, including requirements for surface preparation and painting. There are some areas of rust that will require more aggressive cleaning before painting. The Inspector of record shall approve the method and degree of aggressive cleaning.
5.4. Remove and replace all deteriorated bolts and nuts as deemed necessary by the Inspector, with like kind, at the expense of the contractor.
~~5.5. All interior and exterior surfaces of the tank and supporting structure shall be cleaned by high-pressure water cleaning (3,500 PSI or higher) to remove all loose paint and debris.~~
5.6. All exterior surfaces of the tank and supporting structure shall be cleaned with United Weather-Zyme 727 cleaner in order to kill mildew spores and remove atmospheric carbons.
5.7. ***All interior surfaces of the tank shall be cleaned by high pressure water cleaning (3,500 psi or higher) to remove all loose paint and debris. The exterior shall be cleaned to a Wj4 standard by using a minimum 3,500 psi to 5,000 psi water with a 00 rotating nozzle. Coat before any contamination occurs.***

SW-6. INTERIOR RENOVATION

6.1. The complete interior (100 0/0) shall be abrasive blast cleaned to SSPC-SP No. 10 "Near White" finish. After abrasive cleaning, all surfaces shall be cleaned of any dust residue or foreign debris. ***The surface profile should be a minimum 1.5mil***

angular profile. Apply all coatings the same day and before rust bloom occurs.

6.2. A high build epoxy liner manufactured by the Tnemec Company shall be applied as follows:

5.1.1. Primer Coat - One (1) complete coat of Tnemec Series 20 epoxy shall be applied to achieve a dry film thickness (DFT) of ~~3 to 4 mils~~ ***4 to 6 mils dry film thickness (DFT).***

5.1.2. Finish Coat - ~~One (1) complete finish coat of Tnemec Series 20 epoxy shall be applied to achieve a dry film thickness of 4 to 6 mils.~~ ***One (1) complete finish coat of Tnemec Series 20HS Pota-Pox and the film thickness increased to 5 to 7 mils. The total dry film thickness should be no less than 10 mils DFT and a minimum millage of 12 mils.***

5.1.3. Contrasting Color - Each coat of epoxy paint shall be of contrasting color.

5.1.4. Stripe Coat - One (1) additional coat of Tnemec Series 20 epoxy shall be applied by brush and roller to achieve a dry film thickness of 3 to 5 mils to all weld seams. ***The stripe coat shall be applied after the primer has been applied.***

5.1.5. ***Tnemec will be phasing out Tnemec Series 20 Pota-Pox for Tnemec Series 20HS Pota-Pox. Tnemec Series 20HS Pota-Pox shall be used in the event that Tnemec no longer supplies the Series 20 Pota-Pox.***

6.3. After the liner has properly cured, the interior surfaces shall be disinfected per A.W.W.A. spray method No. 2 to 200 ppm).

6.4. The spent abrasive media shall be tested per TCI-P-8 Heavy Metals as mandated by the State of Florida.

6.5. Once the test results confirm the non-hazardous status of the wastes, the spent abrasive shall be disposed of properly.

6.6. The tanks shall be sealed and made ready for service.

6.7. During the project, a National Association of Corrosion Engineers (N.A.C.E.) Certification number must be provided prior to execution of the contract.

SW-7. EXTERIOR CLEANING

7.1. Spot Cleaning - All exterior surfaces of the tank, including the balcony, sway bars, ladder, cage, columns and supporting structure, shall be spot cleaned according to SSPC Surface Preparation Number 2 (hand tool cleaning, removing all loose rust, loose mill scale and loose paint) and shall be approved by the inspector.

7.2. Spot Prime - All areas cleaned by SSPC Surface Preparation Number 2 along with any other area needing priming will be spot painted with Tnemec Series 118, 6-8 millimeters DFT epoxy. All cleaned areas will be primed the same day as cleaned.

7.3. Intermediate Barrier Coat - All exterior surfaces of the tank including balcony, sway bars, ladders, cage, columns and supporting structure will be painted with one full intermediate barrier coat of Tnemec Series 118, 6-8 DFT's epoxy.

7.4. Finish Coat - All exterior surfaces of the tank including balcony, sway bars, ladder, cage, columns, and supporting will be painted with one coat of ~~Tnemec series 28 Dryfall, 3-4 millimeters DFT epoxy coating~~ ***Tnemec Series 1028 Enduatone. The film thickness should be a 2 to 3 mils DFT per coat.***

7.5. All coaxial cable attached to the tower will be coated with Tnemec Series 30 spray safe coating. Such coating should provide a uniform appearance with the rest of the structure.

SW-8. LETTERING & LOGO

8.1. The new logo shall be installed on one side of the tank facing Highway 27/441.

8.2. ~~The lettering and logo will be created by applying a 2-millimeter DFT finish coat of compatible coating.~~ *Tnemec Series 1028 Enduratone for the lettering and logo.*

8.3. The logo and lettering shall be sized proportionally with the existing tank size, located in the same area as the existing logo with maximum visibility by the tank lighting system. Site visits will be required to determine the actual sizing of letters and logo.

8.4. It shall be the responsibility of the Contractor to furnish a detailed drawing and stencil to be approved by the City of Leesburg.

8.5. All colors shall match the City of Leesburg Logo and shall be approved by the City. Color codes can be provided by the City.

SW-9. TOTAL DRY FILM THICKNESS

9.1. Total dry film thickness, after adequate drying time of the primer, barrier coat, and finish topcoats, shall not be less than 9.0 mils of new coating. Measurements shall be taken and approved by the Inspector in various locations throughout the tank and supporting structure. Any areas that do not meet these specifications shall be repaired, repainted, or refinished at the cost to the contractor.

9.2. Thinning - All coatings can normally be applied without thinning. In the event thinning is necessary, use the thinning agents and rates specified by the manufacturer. All thinning agents shall be inspected, and approved for use by the Inspector prior to use.

9.3. Minimum Temperature - No painting shall take place when the atmospheric temperature is below 50 degrees F or when the temperature is within 5 degrees of the dew point, or when relative humidity is above 85%, unless approved by the Inspector/Consultant.

SW-10. NOTIFICATION, AFFIDAVIT AND CLEAN UP

10.1. As soon as the date of the renovation is initiated, notify the City of Leesburg Public Works/Water Treatment Division and Inspector so an inspection schedule can be established.

10.2. After the painting work is completed, present to the City of Leesburg an affidavit stating that all work specified is in accordance with AWWA Standard D102, and all work performed is in compliance with the specifications. The City will not approve final payment until the City receives this affidavit and the Inspector verifies compliance.

10.3. After the painting work is completed, the Contractor shall completely clean the project area of all spilled paint, debris, rubbish, or other materials incidental to the execution of the work, and restore to the same or better condition to the satisfaction of the City all property damaged during the execution of the work.

SW-11. **FIRST ANNIVERSARY INSPECTION**

Approximately 11 months after the completion of the work, the Contractor and City or the City's representative shall inspect the inside and outside surfaces of the tank, in accordance with Section 5.2 of AWWA Standard D102 to determine whether any repair work is necessary.

[END OF SECTION]

TNEMEC

PRODUCT DATA SHEET

POTA-POX® SERIES 20

PRODUCT PROFILE

GENERIC DESCRIPTION Polyamide Epoxy

COMMON USAGE Industry standard for potable water epoxy coatings for nearly 30 years. Known for its forgiving application characteristics in adverse and varied conditions, and for its benchmark performance.

COLORS 1211 Red, 1255 Beige, 11WH White, 15BL Tank White, 39BL Delft Blue.
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.

SPECIAL QUALIFICATIONS Certified by **NSF International** in accordance with **ANSI/NSF Std. 61.** Ambient air cured Series 20 is qualified for use on the interior of potable water storage tanks and reservoirs of 5,000 gallons (18,927 L) capacity or greater. Conforms to **AWWA D 102 Inside Systems No. 1 and 2.** Contact your Tnemec representative for approved systems and additional information on potential uses.

PERFORMANCE CRITERIA Extensive test data available. Contact your Tnemec representative for specific test results.

COATING SYSTEM

PRIMERS Self-priming, 1, FC20, N140, N140F, 91-H_2O, 94-H_2O. **Note:** 91-H_2O is ANSI/NSF Std. 61 certified by UL as a primer for Series 20. Refer to the 91-H_2O product data sheet for additional information.

TOPCOATS **Interior:** Series 20, FC20, N140, N140F, 264, 265
Exterior: Series 20, FC20, 66, N69, N69F, 73, N140, N140F, 161, 700, 701, 1074, 1075. **Note:** When topcoating with Series 700 or 701, an intermediate coat of Series 73 or 1075 is required.
Refer to COLORS on applicable topcoat data sheets for additional information.

SURFACE PREPARATION

STEEL **Immersion Service:** SSPC-SP10/NACE 2 Near-White Blast Cleaning with a minimum angular anchor profile of 1.5 mils.
Non-Immersion Service: SSPC-SP6/NACE 3 Commercial Blast Cleaning with a minimum angular anchor profile of 1.5 mils.

CAST/DUCTILE IRON Contact your Tnemec representative or Tnemec Technical Services.

CONCRETE Allow new concrete to cure for 28 days. Abrasive blast referencing SSPC-SP13/NACE 6, ICRI CSP 2-3 Surface Preparation of Concrete and Tnemec's Surface Preparation and Application Guide. Holes, pits, voids and cracks should be filled with 63-1500 Filler and Surfacer.

PRIMED SURFACES **Immersion Service:** Scarify the Series 20 or FC20 prime coat by brush-blasting with fine abrasive before topcoating if it has been exterior exposed for 60 days or longer.

ALL SURFACES Must be clean, dry and free of oil, grease, chalk and other contaminants.

TECHNICAL DATA

VOLUME SOLIDS 57.0 ± 2.0% (mixed) †

RECOMMENDED DFT 2.0 to 6.0 mils (50 to 150 microns) per coat. **Note:** Number of coats and thickness requirements will vary with substrate, application method and exposure. Contact your Tnemec representative.

CURING TIME

Temperature	To Handle	To Recoat	Immersion
75°F (24°C)	10 hours	12 hours	7 days

Curing time varies with surface temperature, air movement, humidity and film thickness.
Ventilation: When used in enclosed areas, provide adequate ventilation during application and cure.

VOLATILE ORGANIC COMPOUNDS **Unthinned:** 3.02 lbs/gallon (362 grams/litre)
Thinned 10%: 3.37 lbs/gallon (404 grams/litre) †

HAPS **Unthinned:** 4.18 lbs/gal solids
Thinned 10%: 5.16 lbs/gal solids

THEORETICAL COVERAGE 898 mil sq ft/gal (22.0 m²/L at 25 microns). See APPLICATION for coverage rates. †

NUMBER OF COMPONENTS Two: Part A and Part B

PACKAGING 5 gallon (18.9L) pails and 1 gallon (3.79L) cans — Order in multiples of 2.

NET WEIGHT PER GALLON 12.50 ± 0.25 lbs (5.7 ± .11 kg) (mixed) †

STORAGE TEMPERATURE Minimum 20°F (-7°C) Maximum 110°F (43°C)

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

SHELF LIFE Part A: 24 months at recommended storage temperature.
Part B: 12 months at recommended storage temperature.

FLASH POINT - SETA Part A: 82°F (28°C) Part B: 64°F (18°C)

HEALTH & SAFETY Paint products contain 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.

POTA-POX® | SERIES 20

APPLICATION

COVERAGE RATES

	Dry Mils (Microns)	Wet Mils (Microns)	Sq Ft/Gal (m²/Gal)
Suggested	4.0 (100)	7.0 (180)	225 (20.9)
Minimum	2.0 (50)	3.5 (90)	450 (41.8)
Maximum	6.0 (150)	10.5 (265)	150 (13.9)

Note: The above reflects the total range to which Series 20 can be applied for specific applications. To insure the proper thickness and number of coats is specified for certain substrates and exposures, consult the Tnemec Guide Specifications and/or contact your Tnemec representative. **Note:** Roller or brush application requires two or more coats to obtain recommended film thickness. Allow for overspray and surface irregularities. 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

Power mix contents of each container, making sure no pigment remains on the bottom. Pour a measured amount of Part B into a clean container large enough to hold both components. Add an equal volume of Part A to Part B while under agitation. Continue agitation until the two components are thoroughly mixed. Do not use mixed material beyond pot life limits. **Note:** Both components must be above 50°F (10°C) prior to mixing. For application to surfaces between 50°F to 60°F (10°C to 16°C), allow mixed material to stand thirty (30) minutes and restir before using. For optimum application properties, blended components should be above 60°F (16°C). Mixing ratio is one (Part A) to one (Part B) by volume.

THINNING

Use No. 4 Thinner. For air spray, thin up to 10% or 3/4 pint (380 mL) per gallon. For airless spray, roller or brush, thin up to 5% or 1/4 pint (190 mL) per gallon. **Caution: Series 20 NSF certification is based on thinning with No. 4 Thinner. Use of any other thinner voids ANSI/NSF Std. 61 certification.**

POT LIFE

20 hours at 50°F (10°C) 10 hours at 77°F (25°C) 4 hours at 100°F (38°C)

APPLICATION EQUIPMENT

Air Spray

Gun	Fluid Tip	Air Cap	Air Hose ID	Mat'l Hose ID	Atomizing Pressure	Pot Pressure
DeVilbiss JGA	E .070"	765 or 704	5/16" or 3/8" (7.9 or 9.5 mm)	3/8" or 1/2" (9.5 or 12.7 mm)	75-100 psi (5.2-6.9 bar)	10-20 psi (0.7-1.4 bar)

Low temperatures or longer hoses require higher pot pressure.

Airless Spray

Tip Orifice	Atomizing Pressure	Mat'l Hose ID	Manifold Filter
0.015"-0.019" (380-485 microns)	1800-3000 psi (124-207 bar)	1/4" or 3/8" (6.4 or 9.5 mm)	60 mesh (250 microns)

Use appropriate tip/atomizing pressure for equipment, applicator technique and weather conditions.
Plural Component Spray: Contact your Tnemec representative or Tnemec Technical Services.
Roller: Roller application optional when environmental restrictions do not allow spraying. Use 3/8" or 1/2" (9.5 mm to 12.7 mm) synthetic woven nap covers.
Brush: Recommended for small areas only. Use high quality natural or synthetic bristle brushes.

SURFACE TEMPERATURE

Minimum 50°F (10°C) Maximum 135°F (57°C)
The surface should be dry and at least 5°F (3°C) above the dew point. Coating won't cure below minimum surface temperature.

CLEANUP

Flush and clean all equipment immediately after use with the recommended thinner or MEK.

† Values may vary with color.

TNEMEC

PRODUCT DATA SHEET

POTA-POX® SERIES 20HS

PRODUCT PROFILE

GENERIC DESCRIPTION Polyamide Epoxy

COMMON USAGE A high-solids, lower VOC version of Tnemec's proven polyamide epoxy technology. Provides excellent protection to steel and concrete substrates, and is certified for use in potable water immersion. Excellent choice for tanks, valves, and pipes.

COLORS 1255 Beige, 00WH Tnemec White, 15BL Tank White, 39BL Delft Blue. **Note:** Epoxies chalk with extended exposure to sunlight and may yellow on aging. 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 accelerate any potential yellowing.

FINISH Satin

SPECIAL QUALIFICATIONS Certified by **NSF International** in accordance with **NSF/ANSI Std. 61.** Seven day ambient air cured Series 20HS is qualified for use on tanks and reservoirs of 300 gallons (1,135 L) capacity or greater, pipes 18 inches (46 cm) in diameter or greater, valves 3.5 inches (9 cm) in diameter or greater, fittings 1 inch (3 cm) in diameter or greater and pumps 3.5 inches (9 cm) in diameter or greater. Reference the "Search Listings" section of the NSF website at www.nsf.org for details on the maximum allowable DFT. Conforms to **AWWA D102 Inside Systems No. 1 and No. 2**. Conforms to **AWWA C210** (without 44-705). Contact your Tnemec representative for systems and additional information.

COATING SYSTEM

SURFACER/FILLER/PATCHER 215, 217, 218

PRIMERS **Steel:** Self-priming or Series 1, 20, FC20, FC20HS, 91-H_2O, 94-H_2O, L140, L140F, N140, N140F, V140, V140F
Concrete: Self-priming, 20, FC20HS

TOPCOATS **Interior:** 20, FC20, 20HS, 22, FC22, L140, L140F, N140, N140F, V140, V140F
Exterior: 20, FC20, 20HS, FC20HS, 66HS, L69, L69F, N69, N69F, 72, 73, L140, L140F, N140, N140F, V140, V140F, 161HS, 700, V700, 701, V701, 1074, 1074U, 1075, 1075U.
Note: When topcoating Series 20HS, the following maximum recoat times apply: with itself, 20, FC20, FC20HS, 22, FC22, L140, L140F, N140, N140F, V140, V140F, 161HS, 700, V700, 701 and V701, 60 days; with 72, 73, 1074, 1074U, 1075 and 1075U, 90 days. Scarify the Series 20HS surface before topcoating if maximum recoat time has elapsed.

SURFACE PREPARATION

PRIMED STEEL **Immersion Service:** Scarify the epoxy prime coat surface by abrasive-blasting with a fine abrasive before topcoating if more than 60 days has elapsed since initial application.

STEEL **Immersion Service:** SSPC-SP10/NACE 2 Near-White Blast Cleaning with a minimum angular anchor profile of 1.5 mils.
Non-Immersion Service: SSPC-SP6/NACE 3 Commercial Blast Cleaning with a minimum angular anchor profile of 1.5 mils.

CAST/DUCTILE IRON Contact your Tnemec representative or Tnemec Technical Services.

CONCRETE Allow new concrete to cure 28 days. For optimum results and/or immersion service, abrasive blast referencing SSPC-SP13/NACE 6 Surface Preparation of Concrete and Tnemec's Surface Preparation and Application Guide.

PAINTED SURFACES **Non-Immersion Service:** Ask your Tnemec representative for specific recommendations.

ALL SURFACES Must be clean, dry and free of oil, grease and other contaminants.

TECHNICAL DATA

VOLUME SOLIDS 78% ± 2.0% (mixed) †

RECOMMENDED DFT 2.0 to 10.0 mils (50 to 254 microns) per coat.
Note: Number of coats and thickness requirements will vary with substrate, application method and exposure. Contact your Tnemec representative.

CURING TIME

Temperature	To Touch	To Handle	To Recoat	Immersion
95°F (35°C)	1 hour	3 hours	6-7 hours	7 days
75°F (24°C)	2 hours	8 hours	12-16 hours	7 days
55°F (13°C)	4 hours	22-24 hours	30-34 hours	12-14 days

Curing time varies with surface temperature, air movement, humidity and film thickness. **Note:** For faster curing and low temperature applications, add No. 44-705 Epoxy Accelerator, see separate product data sheet for cure information.
Ventilation: When used as a tank lining or in enclosed areas, provide adequate ventilation during application and cure.

VOLATILE ORGANIC COMPOUNDS **Unthinned:** 1.54 lbs/gal (184 grams/litre)
Thinned 10% (No. 4 Thinner): 2.02 lbs/gal (243 grams/litre)

HAPS **Unthinned:** 1.17 lbs/gal solids
Thinned 10% (No. 4 Thinner): 1.88 lbs/gal solids

THEORETICAL COVERAGE 1,249 mil sq ft/gal (30.7 m²/L at 25 microns). See APPLICATION for coverage rates. †

NUMBER OF COMPONENTS Two: Part A (epoxy) and Part B (polyamide)

MIXING RATIO One (Part A) to one (Part B) by volume.

POTA-POX® | SERIES 20HS

PACKAGING

	Part A	Part B	When Mixed Yield
Large Kit	5 gallon pail	5 gallon pail	10 gallons (37.9 L)
Small Kit	1 gallon can	1 gallon can	2 gallons (7.57 L)

NET WEIGHT PER GALLON 13.11 lbs ± 0.25 lbs (5.95 ± .11 kg) (mixed) †

STORAGE TEMPERATURE Minimum 20°F (-7°C) Maximum 110°F (43°C)

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

SHELF LIFE Part A: 24 months; Part B: 24 months at recommended storage temperature.

FLASH POINT - SETA Part A: 80°F (27°C) Part B: 105°F (41°C)

HEALTH & SAFETY Paint products contain chemical ingredients which are considered hazardous. Read container label warning and 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

	Dry Mils (Microns)	Wet Mils (Microns)	Sq Ft/Gal (m²/Gal)
Suggested	5.0 (125)	6.5 (163)	250 (23.2)
Minimum	2.0 (50)	2.5 (63)	625 (58.0)
Maximum	10.0 (254)	13.0 (330)	125 (11.6)

Note: Roller or brush application requires two or more coats to obtain recommended film thickness. Allow for overspray and surface irregularities. Wet 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 Power mix contents of each container, making sure no pigment remains on the bottom. Pour a measured amount of Part B into a clean container large enough to hold both components. Add an equal volume of Part A to Part B while under agitation. Continue agitation until the two components are thoroughly mixed. If using Series 44-705 accelerator, slowly add three (3) fluid ounces per gallon to the Series 20HS material while under agitation. **Note:** The use of more than the recommended amount of 44-705 will adversely affect performance.

Thin by volume and thoroughly mix. Failure to thoroughly mix the Part A and Part B components prior to thinning can affect product's gloss and performance. Do not use mixed material beyond pot life limits. **Note:** For applications between 50°F to 60°F (10°C to 16°C), allow mixed material to stand thirty (30) minutes and restir before using. To avoid this induction time, both components should be above 60°F (16°C) prior to mixing. Mixing ratio is one to one by volume.

THINNING For air, airless spray, roller or brush applications thin up to 10% with No. 4 Thinner. **Caution: Series 20HS NSF/ANSI Std. 61 certification is based on thinning with No. 4 Thinner.** Use of any other thinner voids NSF/ANSI Std. 61 certification.

POT LIFE & SPRAY LIFE

10% Thinning:

Temperature	Pot Life	Spray Life
55°F (13°C)	4 hours	1.5 hours
75°F (24°C)	2.5 hours	1.5 hours
95°F (35°F)	2 hours	75 minutes

APPLICATION EQUIPMENT

Air Spray

Gun	Fluid Tip	Air Cap	Air Hose ID	Mat'l Hose ID	Atomizing Pressure	Pot Pressure
DeVilbiss JGA	E	765 or 704	5/16" or 3/8" (7.9 or 9.5 mm)	3/8" or 1/2" (9.5 to 12.7 mm)	50-80 psi (3.4-5.5 bar)	20-25 psi (1.4-1.7 bar)

Low temperature or longer hoses require higher pot pressure.

Airless Spray

Tip Orifice	Atomizing Pressure	Mat'l Hose ID	Manifold Filter
0.015"-0.021" (380-530 microns)	3000-4500 psi (207-310 bar)	3/8"or 1/2" (9.5 or 12.7 mm)	60 mesh (250 microns)

Use appropriate tip/atomizing pressure for equipment, applicator technique and weather conditions.
Note: A minimum pump size of 45:1 is required for proper airless spray application.
Roller: Use 3/8" or 1/2" (9.5 mm to 12.7 mm) high quality synthetic woven nap covers.
Brush: Recommended for small areas only. Use high quality natural or synthetic bristle brushes.

SURFACE TEMPERATURE Minimum 50°F (10°C) Maximum 135°F (57°C)
The surface should be dry and at least 5°F (3°C) above the dew point. Coating will not cure below minimum surface temperature.

CLEANUP Flush and clean all equipment immediately after use with No. 4 thinner or MEK.
† Values may vary with color.

TNEMEC

PRODUCT DATA SHEET

ENDURATONE® SERIES 1028

PRODUCT PROFILE

GENERIC DESCRIPTION HDP Acrylic Polymer

COMMON USAGE Water-based, low VOC, High Dispersion Pure acrylic polymer coating providing excellent long term protection in both interior/exterior exposures. May be applied by spray, brush or roller over a variety of solvent and waterborne steel primers. May also be used over many aged coatings. It is mildew resistant and exhibits very good gloss and color stability. Application methods include "dry-fall" under certain conditions (See Application). **Note:** Series 1028's "dry-fall" characteristics help to reduce the potential for overspray problems on buildings and surrounding property.

COLORS Refer to Tnemec Color Guide. **Note:** Certain colors may require multiple coats depending on method of application and finish coat color. When feasible, the preceding coat should be in the same color family (blue, gray, etc.), but noticeably different.

FINISH Gloss - **Note:** Final gloss level of topcoat can vary depending on number of coats applied. One coat will generally result in a lower sheen than two coats of the material.

COATING SYSTEM

PRIMERS
Wood: Series 10-99W, V10-99W or 151-1051
Steel: Series 1, 10, 22, 30, 37H, 66, L69, L69F, N69, N69F, V69, V69F, 90-97, 90G-1K97, 91-H_2O, 94-H_2O, 113, 115, 135, L140, L140F, N140, N140F, V140, V140F, 141, 161, 287, 394. **Note:** Allow Series 10, V10 and 37H to cure three days before topcoating. Additionally, Series 1, 90-97, 90G-1K97, 91-H_2O, 94-H_2O and 394 must be exterior exposed for three days prior to topcoating. **Note:** This product exhibits direct-to-metal capabilities for dry interior environments. Contact Tnemec Technical Service for more information.
Aluminum & Galvanized: Series 66, L69, L69F, N69, N69F, V69, V69F, 115, 135
Concrete: Self-priming or Series 6, 54, 66, L69, L69F, N69, N69F, V69, V69F, 130, 151, 156, 180, 287, 1254
CMU: Series 54, 130, 1254
Drywall: Series 51, 151-1051, 287

TOPCOATS Series 1029, 1080, 1081

SURFACE PREPARATION

STEEL
Weather Exposed: SSPC-SP6 Commercial Blast Cleaning.
Enclosed, Protected & Mild Environments: SSPC-SP2 Hand Tool or SSPC-SP3 Power Tool Cleaning.

GALVANIZED STEEL & ALUMINUM Surface preparation recommendations will vary depending on substrate and exposure conditions. Consult the latest version of Tnemec Technical Bulletin 10-78 or contact your Tnemec representative or Tnemec Technical Services.

PAINTED SURFACES Remove chalk and old paint not tightly bonded to the surface. Clean all visible rust using SSPC-SP3 Power Tool Cleaning (interior dry) or to bare metal using SSPC-SP11 Power Tool Cleaning to Bare Metal (weather exposed).

PRIMED SURFACES Must be clean, dry and free of dust, dirt, oil, grease and other contaminants. Existing water soluble stains in the substrate or upon the surface must be removed or sealed. Allow new concrete to cure 28 days.

TECHNICAL DATA

VOLUME SOLIDS 40.0 ± 2.0% †

RECOMMENDED DFT 2.0 to 3.0 mils (50 to 75 microns) per coat.

CURING TIME

Temperature	To Touch	To Handle	To Recoat	To Resist Moisture
75°F (24°C)	30 minutes	2 hours	2 hours	6 hours

Curing time varies with surface temperature, air movement, humidity and film thickness.

VOLATILE ORGANIC COMPOUNDS
Unthinned: 0.79 lbs/gallon (94 grams/litre)
Thinned 5%: 0.79 lbs/gallon (94 grams/litre) †

HAPS
Unthinned: 0.35 lbs/gal solids
Thinned 5%: 0.35 lbs/gal solids

THEORETICAL COVERAGE 633 mil sq ft/gal (15.5 m²/L at 25 microns). See APPLICATION for coverage rates. †

NUMBER OF COMPONENTS One

PACKAGING 5 gallon (18.9L) pails and 1 gallon (3.79L) cans.

NET WEIGHT PER GALLON 10.16 ± 0.25 lbs (4.61 ± .11 kg) †

STORAGE TEMPERATURE Minimum 35°F (2°C) Maximum 120°F (49°C)
Protect from freezing.

TEMPERATURE RESISTANCE (Dry) Continuous 170°F (77°C) Intermittent 200°F (93°C)

SHELF LIFE 12 months at recommended storage temperature.

FLASH POINT - SETA N/A

HEALTH & SAFETY Paint products contain 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.

ENDURATONE® | SERIES 1028

APPLICATION

COVERAGE RATES

	Dry Mils (Microns)	Wet Mils (Microns)	Sq Ft/Gal (m²/Gal)
Suggested	2.5 (65)	6.5 (165)	257 (23.9)
Minimum	2.0 (50)	5.0 (125)	321 (29.8)
Maximum	3.0 (75)	7.5 (190)	214 (19.9)

Allow for overspray and surface irregularities. Wet 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

Stir to uniform consistency without creating air bubbles or foam. Avoid vigorous agitation, boxing or shaking.

THINNING

Thinning is not normally required, but when needed, thin up to 5% or 1/4 pint (190 mL) per gallon with clean tap water.

APPLICATION EQUIPMENT

Air Spray

Gun	Fluid Tip	Air Cap	Air Hose ID	Mat'l Hose ID	Atomizing Pressure	Pot Pressure
DeVilbiss JGA	E	765 or 704	5/16" or 3/8" (7.9 or 9.5 mm)	3/8" or 1/2" (9.5 or 12.7 mm)	65-75 psi (4.5-5.2 bar)	15-25 psi (1.0-1.7 bar)

Low temperatures or longer hoses require higher pot pressure.

Airless Spray

Tip Orifice	Atomizing Pressure	Mat'l Hose ID	Manifold Filter
0.013"-0.017" (330-430 microns)	2200-3000 psi (152-207 bar)	1/4" or 3/8" (6.4 or 9.5 mm)	60 mesh (250 microns)

Use appropriate tip/atomizing pressure for equipment, applicator technique and weather conditions.

Note: On projects involving spray equipment being used over consecutive days, follow Cleanup Instructions below and then leave xylol in the system overnight, flushing thoroughly with clean water before each start-up.
Roller: Use 3/8" (9.5 mm) synthetic woven nap roller cover.
Brush: Use high quality nylon or synthetic bristle brushes.
Note: Floetrol may be used at up to 32 ounces per gallon for improved application properties. Dry-fall and cure properties may be affected. For more information, contact Tnemec Technical Service.

SURFACE TEMPERATURE

Minimum 40°F (4°C) Maximum 120°F (49°C)
The surface should be dry and at least 5°F (3°C) above the dew point.

CLEANUP

Flush and clean all equipment immediately after use with water, then use alcohol or Methyl Ethyl Ketone (MEK) on any dried portions.

CAUTION

Dry overspray can be wiped or washed from most surfaces. Satisfactory dry-fall performance depends upon height of work, weather conditions and equipment adjustment. Low temperature and high humidity are of particular concern. Test for each application as follows: Spray from 15 to 25 feet towards paint container. The material then should readily wipe off. **Note:** Heat can fuse-dry overspray to surfaces. Always clean dry overspray from hot surfaces before fusing occurs. Be aware that exterior surface temperatures can be higher than air temperature.

† Values may vary with color.