648 Monroe Ave. NW
Suite 210
Grand Rapids, MI 49503
P: 616.454.9414
F: 616.454.9415
info@c2ae.com
www.c2ae.com

Transmittal

Project #: 11-0105
Project: Aleda E. Lutz Medical Center Replace Water Tower & Bulk Oxygen Tank, VA Project #655-09-109

To: Kevin Russell, COTR
Aleda E. Lutz Medical Center
1500 Weiss St
Saginaw, MI 48602

Date: March 27, 2012
C2AE Submittal #: 41R1
Specification Section: 099100
Specification Title: Painting
Project Manager: Stephen Dickerson

Distribution:

Enclosures:

- ☐ Attached
- ☐ Change Order
- ☐ Specifications
- ☐ Report
- ■ **Shop Drawings**
- ☐ Under Separate Cover
- ☐ Other _____
- ☐ Letter
- ☐ Submittal Review
- ☐ Plans

Quantity	Description/Document Title
1	Resubmittal of Tnemec paint product data and color chart per Kevin Russell review comment "exterior of water tower 15BL Tank white with the logo to be 14 BL Cadet Blue"

Action Requested:

- ■ **For Review and Approval**
- ■ **No Exception Taken**
- ☐ See Comment Sheet for Notations
- ☐ For Your Use
- ☐ Exception As Noted
- ☐ Resubmit _____ Copies for Review
- ☐ As Requested
- ☐ Rejected
- ☐ Submit _____ Copies for Distribution
- ☐ Revise and Resubmit
- ☐ Return _____ Corrected Prints
- ☐ For Bids Due _____
- ☐ Other_____

Notes:

Kristy P. Baisch, Administrative Assistant
C2AE

(If enclosures are not as noted, kindly notify us at once)

DANIELS BUILDING CO. INC.

Submittal Transmittal

Detailed, Grouped by Each Number

Aleda E. Lutz VA Medical Center Water Tower Rel Project # 718-11
Tel: Fax:

Date: 3/14/2012 Reference Number: 0156

Transmitted To:	Kelly Jo Homic C2AE 648 Monroe Ave., Ste. 210 Grand Rapids, MI 49503 Tel: 616-454-9414 Fax: 616-454-9415	**Transmitted By:**	Lori Lenz Daniels Building Company, Inc. 24317 Indoplex Circle Farmington Hills, MI 48335 Tel: 248-427-8400 Fax: 248-427-8401

Qty	Submittal Package No	Description	Due Date	Package Action
1	0041 - 09 91 00 - 1	Painting Tnemec PD & Color Chart	3/28/2012	Resubmitted

Transmitted For	Delivered Via	Tracking Number
Approval	UPS	

Items	Qty	Description	Notes	Item Action
0001	6	09 9100 - Painting Tnemec Paint PD	For Water Tower	Resubmitted
0002	1	09 9100 - Painting Tnemec Color Chart	For Water Tower	Resubmitted

Cc:	Company Name	Contact Name	Copies	Notes

Remarks

L. Lenz
Signature

3-14-12
Signed Date

Maguire Iron, Inc.

P.O. BOX 1446
SIOUX FALLS, SD 57101
PHONE (605) 334-9749
FAX (605) 334-9752
AFTER HOURS (605) 310-7862
www.maguireiron.com

WATER TOWER SPECIALISTS - ESTABLISHED 1915

March 6, 2012

Lori Lenz
Daniels Building Company
2843 Hubert Rd
Brighton, MI 48114

RE: Saginaw, MI
250,000 Gallon Elevated Water Storage Tank
Paint Resubmittal 1

Dear Lori,

Please find enclosed six (6) copies of the above referenced submittal for the above referenced project. After your review please return two (2) reviewed copies back to my office.

Please notify Brent Stansbury at your convenience if you have any questions or if you require any additional information at (605) 334-9749.

Sincerely,

Jeff Hitchcock
Project Coordinator

Enclosures

Maguire Iron, Inc.

SUBMITTAL TRANSMITTAL LETTER

MAGUIRE IRON, INC
PO BOX 1446
1610 N MINNESOTA AVE
SIOUX FALLS, SD 57104
PHONE: (605) 334-9749
FAX: (605) 334-9752

MEDICAL CENTER : ALEDA E. LUTZ VA MEDICAL CENTER
CONTRACTOR : DANIELS BUILDING COMPANY
VA PROJECT : 655-09-109
SPECIFICATION SECTION# : 09 91 00
DRAWING # : NA
MANUFACTURER / BRAND : TNEMEC COMPANY, INC.

1ST SUBMITTAL _____

RESUBMITTED SAMPLE 1

SUBMITTAL DESCRIPTION

PAINT -

Resubmitted as per Kevin S. Russell's review comment "Exterior of the water tower, 15BL Tank white with the logo to be 14BL Cadet Blue"

CONTRACTOR'S CERTIFICATION:

Contractor has determined or verified all quantities dimensions field construction criteria, materials catalog numbers and similar data, and has coordinated the information within the submittal with the require-ments of the contract documents, and assumes full responsibility for so doing.

MAGUIRE IRON, INC

By _____ Date 3/6/12

☒ NO EXCEPTION TAKEN ☐ REVISE AND RESUBMIT
☐ EXCEPTION AS NOTED ☐ REJECTED
☐ SEE COMMENT SHEET FOR NOTATIONS

This review is only for general conformance with the design concept and the information given in the Contract Documents. Corrections or comments made on the submittal during this review do not relieve the contractor from compliance with the requirements of the plans and specifications. Review of a specific item shall not include review of an assembly of which the item is a component. The Contractor is responsible for: dimensions to be confirmed and correlated at the jobsite; information that pertains solely to the fabrication processes or to the means, methods, techniques, sequences and procedures of construction; coordination of the Work with that of all other trades and performing all Work in a safe and satisfactory manner.

C2ae

By Kelly Johnson Date 26 March 2012

Painting Re-Submittal

Company: Maguire Iron
Project Engineer: WBCM
Owner: Dept. of Veterans Affairs
Per Specifications: 09 91 00

Project: New Elevated Water Tank
Project Size: 250 MG
Paint Manufacturer: Tnemec Company, Inc.

Interior Wet:	Surface Preperation	SSPC SP-10	Near White Blast Cleaning	
	Field/Shop Prime Coat	Tnemec	Series 91 - H_20 Hydro Zinc	2.5 - 3.0 Mils DFT
	Intermediate	Tnemec	Series N140 Pota-Pox Plus - 1255 Beige	4.0 - 6.0 Mils DFT
	Field Finish	Tnemec	Series N140 Pota-Pox Plus - 15BL Tank White	4.0 - 6.0 Mils DFT
Interior Dry:	Surface Preperation	SSPC SP-6	Commercial Blast	
	Field/Shop Prime Coat	Tnemec	Series 91 - H_20 Hydro Zinc	2.5 - 3.0 Mils DFT
	Intermediate	Tnemec	Series N140 Pota-Pox Plus - 1255 Beige	4.0 - 6.0 Mils DFT
	Field Finish	Tnemec	Series N140 Pota-Pox Plus - 15BL Tank White	4.0 - 6.0 Mils DFT
Exterior:	Surface Preperation	SSPC SP-6	Commercial Blast	
	Field/Shop Prime Coat	Tnemec	Series 91 - H_20 Hydro Zinc	2.5 - 3.0 Mils DFT
	Intermediate	Tnemec	Series N140 Pota-Pox Plus - 1255 Beige	4.0 - 6.0 Mils DFT
	Field Finish	Tnemec	Series 1074 Endura Shield II - 15BL Tank White	2.5 - 3.0 Mils DFT
Logo:	Logo	Tnemec	Series 1074 Endura Shield II	2.5 - 3.0 Mils DFT

***** Fast cure paint or accelerators may be used if weather conditions require.**

Tank Color: **15BL Tank White**

Logo Color: **14BL Cadet Blue**

CONTRACTOR'S CERTIFICATION:

Contractor has determined or verified all quantities dimensions field construction criteriea, materials catalog numbers and similar data, and has coordinated the information within the submittal with the require-ments of the contract documents, and assumes full responsibility for so doing.

MAGUIRE IRON, INC

By_____ **Date**_____

TNEMEC

HYDRO-ZINC™ SERIES 91-H_2O™

PRODUCT PROFILE

GENERIC DESCRIPTION Aromatic Urethane, Zinc-Rich

COMMON USAGE A two-component, moisture-cured, zinc-rich primer for the interior and exterior of steel potable water tanks. Provides outstanding long-term corrosion resistance when used as a primer in conjunction with other Tnemec potable water tank coatings. It cures quickly and can be topcoated the same day at surface temperatures down to 35°F. Series 91-H_2O has no maximum recoat time, making it ideally suited as a primer for both sides of plate steel surfaces in water tank fabrication shops. Application methods include "dry-fall" under certain conditions (see Application). Note: When used in conjunction with cathodic protection, anodes or impressed current systems should not provide current demand more negative than –1.05 volts relative to a copper–copper sulfate reference electrode half-cell.

COLORS Greenish-gray

ZINC PIGMENT 83% by weight in dried film

SPECIAL QUALIFICATIONS Certified (with or without 44-710 Urethane Accelerator) in accordance with **NSF/ANSI Std. 61** for use on interior potable water tanks of 8,000 gallons or greater. Topcoating with Std. 61 certified Tnemec coatings is recommended. Contact your Tnemec representative for specific recommendations. Meets zinc-rich primer requirements of **AWWA D102-06** Standard for **Inside System No. 5** and **Outside System No. 4 & 6.** Series 91-H_2O uses a zinc pigment which meets the requirements of **ASTM D 520 Type III** and contains less than .002% lead. Reference the "Search Listings" section of the NSF website at www.nsf.org for details on the maximum allowable DFT.

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

COATING SYSTEM

TOPCOATS Please refer to Tnemec's Systems Guide for Water Storage Tanks for specific systems and additional information.
Interior: Series 20, FC20, 22, FC22, L140, L140F, N140, N140F, V140, V140F, 400, 406.
Exterior: Series 27, 35, 66, L69, L69F, N69, N69F, V69, V69F, 73, 115, L140, L140F, N140, N140F, V140, V140F, 161, 1028, 1029, 1074, 1074U, 1075, 1075U. **Note:** Certain topcoat colors may not provide one-coat hiding depending on method of application. Contact your Tnemec representative. **Note:** Series 115 must be used as an intermediate coat if Series 35 is the specified topcoat. **Note:** Series 91-H_2O must be exterior exposed for three days prior to topcoating with Series 1028 or 1029.

SURFACE PREPARATION

Wet Interior: SSPC-SP10/NACE 2 Near-White Blast Cleaning with a minimum angular anchor profile of 2.0 mils.
Exterior or Dry Interior: SSPC-SP6/NACE 3 Commercial Blast Cleaning with a minimum angular anchor profile of 2.0 mils.

TECHNICAL DATA

VOLUME SOLIDS 63.0 ± 2.0% (mixed)

RECOMMENDED DFT 2.5 to 3.5 mils (65 to 90 microns)

CURING TIME Without 44-710

Temperature †	To Handle	To Recoat
75°F (24°C)	1 hour	4 hours
65°F (18°C)	1 1/2 hours	5 hours
55°F (11°C)	2 hours	6 hours
45°F (7°C)	2 1/2 hours	7 hours
35°F (2°C)	3 hours	8 hours

† 50% relative humidity. Curing time will vary with surface temperature, humidity and film thickness. **Ventilation:** When used as a tank lining or in enclosed areas, provide adequate ventilation during application and cure. Reference ventilation guidelines contained in the latest edition of AWWA D 102.
With 44-710: Reference the 44-710 Urethane Accelerator product data sheet. **Note:** For cure times to immersion service, reference the specified Tnemec interior topcoat product data sheet.

VOLATILE ORGANIC COMPOUNDS
Unthinned: 2.65 lbs/gallon (318 grams/litre)
Thinned 2.5%: 2.76 lbs/gallon (331 grams/litre)
Thinned 10%: 3.07 lbs/gallon (368 grams/litre)

THEORETICAL COVERAGE 1,011 mil sq ft/gal (24.8 m^2/L at 25 microns). See APPLICATION for coverage rates.

NUMBER OF COMPONENTS Two: Part A and Part B

PACKAGING Four-Gallon and One-Gallon Kits: Consist of one premeasured container of liquid (Part A) and one premeasured container of powder (Part B). When mixed, yields four gallons (15.1L) or one gallon (3.79L).

NET WEIGHT PER GALLON 23.94 ± 0.60 lbs (10.86 ± .27 kg)

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

TEMPERATURE RESISTANCE Dry (Continuous) 250°F (121°C) Intermittent 300°F (149°C)

SHELF LIFE 9 months at recommended storage temperature.

FLASH POINT - SETA Part A: 78°F (26°C) Part B: NA

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.

© June 29, 2009 by Tnemec Co., Inc.

Published technical data and instructions are subject to change without notice. The online catalog at www.tnemec.com should be referenced for the most current technical data and instructions or you may contact your Tnemec representative for current technical data and instructions.

HYDRO-ZINC™ | SERIES 91-H_2O™

APPLICATION

COVERAGE RATES

	Dry Mils (Microns)	Wet Mils (Microns)	Sq Ft/Gal (m²/Gal)
Suggested	3.0 (75)	5.0 (125)	337 (31.3)
Minimum	2.5 (65)	4.0 (100)	404 (37.5)
Maximum	3.5 (90)	5.5 (140)	289 (26.9)

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. Reference the "Search Listings" section of the NSF website at www.nsf.org for details on the maximum allowable DFT.

MIXING

Note: It is important to always use the entire contents of A and B components. Use a mechanical mixer and keep material under constant agitation while mixing. Slowly sift the entire contents of Part B zinc powder into liquid (Part A). –Do **Not Reverse This Procedure**– Adjust mixer speed to break up lumps and mix until the two components are thoroughly blended. Strain through a 35 to 50 mesh (300 to 600 microns) screen before using. For spray application, keep under low RPM agitation to prevent settling. For brush or roller application, stir frequently to prevent settling. Do not use mixed material beyond pot life limits.

THINNING

For spray, thin up to 10% or 3/4 pint (380 mL) per gallon with No. 2 Thinner if temperatures are below 80°F (27°C). Thin up to 10% or 3/4 pint (380 mL) per gallon with No. 3 Thinner if temperatures are above 80°F (27°C). For brush or roller, thin up to 10% or 3/4 pint (380 mL) with No. 3 Thinner. Do not thin more than 2.5% when air pollution regulations limit the atmospheric discharge of volatile organic compounds (VOC) in coatings to a maximum of 340 grams/litre (2.80 lbs/gal). **Caution: Series 91-H_2O certification is based on thinning with No. 2 or No. 3 Thinner. Use of any other thinner voids NSF/ANSI Std. 61 certification.**

POT LIFE

8 hours at 77°F (25°C) and 50% R.H.
Caution: This product cures with moisture acting as a catalyst. Incorporation of moisture or moisture laden air (humidity) during use will shorten pot life. Avoid continual agitation at high RPM. When feasible keep containers of mixed material covered during use.

APPLICATION EQUIPMENT

Note: When intermediate and finish coats are white or light colors, best hiding of this dark color primer can be achieved by spray application; or when roller applied, by using 1/4" nap covers.

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)	50-70 psi (3.4-4.8 bar)	10-20 psi (0.7-1.4 bar)

† (with heavy mastic spring) Low temperatures or longer hoses will require additional pressure. Use pressure pot equipped with an agitator and keep pressure pot at same level or higher than the spray gun. Compressed air must be dry.

Airless Spray

Tip Orifice	Atomizing Pressure	Mat'l Hose ID	Manifold Filter
0.017"-0.021" (430-535 microns) Reversible Tip	3500-4500 psi (241-310 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.
Roller: Use a 1/4" or 3/8" (6.4 mm or 9.5 mm) synthetic woven nap cover. Stir material frequently or keep under agitation to prevent settling.
Brush: Use high quality natural or synthetic bristle brushes. Stir material frequently or keep under agitation to prevent settling.

SURFACE TEMPERATURE

Minimum 35°F (2°C) Maximum 120°F (49°C) Maximum for Brush & Roller 100°F (38°C)
The surface should be dry and at least 5°F (3°C) above the dew point.

AMBIENT HUMIDITY

Minimum 20% Maximum 90%
Note: For ambient humidity between 20% and 30%, the ambient and surface temperature must be 55°F (11°C) or greater. Reference Technical Bulletin 98-14.

CLEANUP

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

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 is 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.

WARRANTY & LIMITATION OF SELLER'S LIABILITY: Tnemec Company, Inc. warrants only that its coatings represented herein meet the formulation standards of Tnemec Company, Inc. THE WARRANTY DESCRIBED IN THE ABOVE PARAGRAPH SHALL BE IN LIEU OF ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. The buyer's sole and exclusive remedy against Tnemec Company, Inc. shall be for replacement of the product in the event a defective condition of the product should be found to exist and the exclusive remedy shall not have failed its essential purpose as long as Tnemec is willing to provide comparable replacement product to the buyer. NO OTHER REMEDY (INCLUDING, BUT NOT LIMITED TO, INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR LOST PROFITS, LOST SALES, INJURY TO PERSON OR PROPERTY, ENVIRONMENTAL INJURIES OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL LOSS) SHALL BE AVAILABLE TO THE BUYER. Technical and application information herein is provided for the purpose of establishing a general profile of the coating and proper coating application procedures. Test performance results were obtained in a controlled environment and Tnemec Company makes no claim that these tests or any other tests, accurately represent all environments. As application, environmental and design factors can vary significantly, due care should be exercised in the selection and use of the coating.

Tnemec Company Incorporated 6800 Corporate Drive Kansas City, Missouri 64120-1372 1-800-TNEMEC1 Fax: 1-816-483-3969 www.tnemec.com

© June 29, 2009 by Tnemec Co., Inc.

TNEMEC

POTA-POX® PLUS N140 or V140

PRODUCT PROFILE

GENERIC DESCRIPTION Polyamidoamine Epoxy

COMMON USAGE Innovative potable water coating which offers high-build edge protection and allows for application at a wide range of temperatures (down to 35°F or 2°C with 44-700 Accelerator). For use on the interior and exterior of steel or concrete tanks, reservoirs, pipes, valves, pumps and equipment in potable water service. **Note:** Series V140 conforms with air pollution regulations limiting Volatile Organic Compounds (VOC) to a maximum of 250 grams/litre (2.08 lbs/gal). In areas requiring less than 100 grams/litre VOC, please refer to the Series L140 data sheet.

COLORS 1211 Red, 1255 Beige, 00WH Tnemec White, 15BL Tank White, 35GR Black and 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 N140 (with or without 44-700 Epoxy Accelerator) is qualified for use on tanks and reservoirs of 1,000 gallons (3,785L) capacity or greater, pipes 14 inches (30 cm) in diameter or greater, valves four (4) inches (10 cm) in diameter or greater and fittings four (4) inches (10 cm) in diameter or greater. Series V140 is qualified for use on tanks of 20,000 gallons (75,708L) capacity or greater, valves two (2) inches (5 cm) in diameter or greater and fittings 1/2 inch (1 cm) in diameter or greater. **Note:** NSF certification for Series V140 applies to colors 1255 Beige, 1211 Red, 00WH Tnemec White and 15BL Tank White only. Conforms to **AWWA D 102 Inside Systems No. 1 and No. 2** (with or without 44-700). Conforms to **AWWA C 210** (without 44-700). Contact your Tnemec representative for systems and additional information. A two-coat system at 4.0-6.0 dry mils (100-150 dry microns) per coat passes the performance requirements of MIL-PRF-4556F for fuel storage. Reference the "Search Listings" section of the NSF website at www.nsf.org for details on the maximum allowable DFT.

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

COATING SYSTEM

PRIMERS Self-priming, 22, 91-H_2O, H91-H_2O, 94-H_2O, L140, L140F, N140F, V140F, 141

TOPCOATS **Interior:** Series 22, FC22, L140, L140F, N140, N140F, V140, V140F, 141.
Exterior: Series 27, 66, L69, L69F, N69, N69F, V69, V69F, 72, 73, L140, L140F, N140, N140F, V140, V140F, 156, 157, 161, 175, 180, 181, 446, 740, 750, 1028, 1029, 1074, 1074U, 1075, 1075U, 1077, 1078, 1080, 1081. Refer to COLORS on applicable topcoat data sheets for additional information. **Note:** The following recoat times apply for Series N140: Immersion Service—Surface must be scarified after 60 days. Atmospheric Service—After 60 days, scarification or an epoxy tie-coat is required. When topcoating with Series 740 or 750, recoat time for N140/V140 is 30 days. Contact your Tnemec representative for specific recommendations.

SURFACE PREPARATION

PRIMED STEEL **Immersion Service:** Scarify the Series N140, 20 or FC20 prime coat surface by blasting with fine abrasive before topcoating if it has been exterior exposed for 60 days or longer and N140 is the specified topcoat.

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, ICRI-CSP 2-4 Surface Preparation of Concrete and Tnemec's Surface Preparation and Application Guide. Fill all holes, pits, voids and cracks with 215 or 218.

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

TECHNICAL DATA

VOLUME SOLIDS 67.0 ± 2.0% (mixed—A, B & 44-700 Epoxy Accelerator) †

RECOMMENDED DFT 2.0 to 10.0 mils (50 to 225 microns) per coat. **Note:** MIL-PRF-4556F applications require two coats at 4.0-6.0 mils (100-150 microns) per coat. Otherwise, the number of coats and thickness requirements will vary with substrate, application method and exposure. Contact your Tnemec representative.

CURING TIME AT 5 MILS DFT

Without 44-700 Accelerator:

Temperature	To Handle	To Recoat	Immersion
75°F (24°C)	6 hours	9 hours	7 days

With 44-700 Accelerator:

Temperature	To Handle	To Recoat	Immersion
75°F (24°C)	4 hours	5 hours	7 days
65°F (18°C)	7-8 hours	9-11 hours	8 days
55°F (13°C)	12-14 hours	16-20 hours	9-10 days
45°F (7°C)	18-22 hours	28-32 hours	12-13 days
35°F (2°C)	28-32 hours	46-50 hours	16-18 days

Curing time varies with surface temperature, air movement, humidity and film thickness. **Note:** For valve applications allow 14 days cure at 75°F (24°C) prior to immersion. For pipe applications allow 30 days cure at 75°F (24°C) prior to immersion. **Ventilation:** When used in enclosed areas, provide adequate ventilation during application and cure.

VOLATILE ORGANIC COMPOUNDS N140: **Unthinned:** 2.4 lbs/gallon (285 grams/litre)
Thinned 5% (#60): 2.6 lbs/gallon (311 grams/litre)
Thinned 10% (#4): 2.8 lbs/gallon (334 grams/litre) †
V140: **Unthinned:** 1.95 lbs/gallon (234 grams/litre)
Thinned 2.5% (#4): 2.08 lbs/gallon (250 grams/litre)

HAPS N140: **Unthinned:** 2.4 lbs/gal solids **Thinned 5% (#60):** 2.4 lbs/gal solids **Thinned 10% (#4):** 3.3 lbs/gal solids
V140: **Unthinned:** 2.1 lbs/gal solids **Thinned 2.5% (#4):** 2.3 lbs/gal solids

© September 23, 2011 by Tnemec Co., Inc.

Published technical data and instructions are subject to change without notice. The online catalog at www.tnemec.com should be referenced for the most current technical data and instructions or you may contact your Tnemec representative for current technical data and instructions.

POTA-POX® PLUS | N140 or V140

THEORETICAL COVERAGE 1,070 mil sq ft/gal (27.2 m²/L at 25 microns). See APPLICATION for coverage rates. †

NUMBER OF COMPONENTS Two: Part A (amine) and Part B (epoxy) — One (Part A) to one (Part B) by volume.

PACKAGING 5 gallon (18.9L) pails and 1 gallon (3.79L) cans - Order in multiples of 2.
Reference 44-700 Epoxy Accelerator product data sheet for its packaging information.

NET WEIGHT PER GALLON N140: 12.66 ± 0.25 lbs (5.82 ± .11 kg) (mixed) V140: 13.00 ± 0.25 lbs (5.90 ± .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 24 months at recommended storage temperature.

FLASH POINT - SETA N140 & V140 Part A: 82°F (28°C) N140 Part B: 80°F (27°C) V140 Part B: 86°F (30°C) 44-700: None

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 reach of children.

APPLICATION

COVERAGE RATES

	Dry Mils (Microns)	Wet Mils (Microns)	Sq Ft/Gal (m²/Gal)
Suggested	6.0 (150)	9.0 (230)	179 (16.6)
Minimum	2.0 (50)	3.0 (75)	537 (49.9)
Maximum	10.0 (225)	15.0 (375)	107 (10.0)

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. Reference the "Search Listings" section of the NSF website at www.nsf.org for details on the maximum allowable DFT. †

MIXING
1. Start with equal amounts of both Parts A & B.
2. Using a power mixer, separately stir Parts A & B.
3. (For accelerated version. If not using 44-700, skip to No. 4.)
Add four (4) fluid ounces of 44-700 per gallon of Part A while Part A is under agitation.
4. Add Part A to Part B under agitation, stir until thoroughly mixed.
5. Both components must be above 50°F (10°C) prior to mixing. For application of the unaccelerated version to surfaces between 50°F to 60°F (10°C to 16°C) or the accelerated version to surfaces between 35°F to 50°F (2°C to 10°C), allow mixed material to stand 30 minutes and restir before using.
6. For optimum application properties, the material temperature should be above 60°F (16°C).
Note: The use of more than the recommended amount of 44-700 will adversely affect performance.

THINNING Use No. 4 or No. 60 Thinner for N140. Use No. 4 Thinner for V140. For air spray, thin up to 10% or 3/4 pint (380 mL) per gallon with No. 4 Thinner or thin up to 5% or 1/4 pint (190 mL) per gallon with No. 60 Thinner. For airless spray, roller or brush, thin up to 5% or 1/4 pint (190 mL) per gallon. **Caution: Series N140 NSF certification is based on thinning with No. 4 or No. 60 Thinner for tanks and only No. 60 Thinner for pipe, valves and fittings. Series V140 NSF certification is based on thinning with No. 4 Thinner only.** Use of any other thinner voids ANSI/NSF Std. 61 certification. **Note:** When using Series V140, a maximum of 2.5% of No. 4 Thinner may be used to comply with VOC regulations.

POT LIFE Without 44-700 15 hours at 50°F (10°C) 4 hours at 75°F (24°C) 3 hours at 100°F (38°C)
With 44-700 4 hours at 50°F (10°C) 2 hours at 75°F (24°C) 1 hour at 100°F (38°C)

SPRAY LIFE Without 44-700: 1 hour at 75°F (24°C) With 44-700: 30 minutes at 75°F (24°C)
Note: Spray application after listed times will adversely affect ability to achieve recommended dry film thickness.

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)	75-100 psi (5.2-6.9 bar)	10-20 psi (0.7-1.4 bar)

Airless Spray

Tip Orifice	Atomizing Pressure	Mat'l Hose ID	Manifold Filter
0.015"-0.019" (380-485 microns)	3000-4800 psi (207-330 bar)	1/4" or 3/8" (6.4 or 9.5 mm)	60 mesh (250 microns)

Low temperatures or longer hoses require higher pot pressure. Use appropriate tip/atomizing pressure for equipment, applicator technique and weather conditions.
Roller: Use 3/8" or 1/2" (9.5 mm to 12.7 mm) synthetic woven nap roller cover. Use longer nap to obtain penetration on rough or porous surfaces.
Brush: Recommended for small areas only. Use high quality natural or synthetic bristle brushes.

SURFACE TEMPERATURE Without 44-700: Min. 50°F (10°C), Max. 135°F (57°C) With 44-700: Min. 35°F (2°C), Max. 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 the recommended thinner or MEK.
† Values may vary with color.

WARRANTY & LIMITATION OF SELLER'S LIABILITY: Tnemec Company, Inc. warrants only that its coatings represented herein meet the formulation standards of Tnemec Company, Inc. THE WARRANTY DESCRIBED IN THE ABOVE PARAGRAPH SHALL BE IN LIEU OF ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. The buyer's sole and exclusive remedy against Tnemec Company, Inc. shall be for replacement of the product in the event a defective condition of the product should be found to exist and the exclusive remedy shall not have failed its essential purpose as long as Tnemec is willing to provide comparable replacement product to the buyer. NO OTHER REMEDY (INCLUDING, BUT NOT LIMITED TO, INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR LOST PROFITS, LOST SALES, INJURY TO PERSON OR PROPERTY, ENVIRONMENTAL INJURIES OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL LOSS) SHALL BE AVAILABLE TO THE BUYER. Technical and application information herein is provided for the purpose of establishing a general profile of the coating and proper coating application procedures. Test performance results were obtained in a controlled environment and Tnemec Company makes no claim that these tests or any other tests, accurately represent all environments. As application, environmental and design factors can vary significantly, due care should be exercised in the selection and use of the coating.

Tnemec Company Incorporated 6800 Corporate Drive Kansas City, Missouri 64120-1372 1-800-TNEMEC1 Fax: 1-816-483-3969 www.tnemec.com

© September 23, 2011 by Tnemec Co., Inc.

TNEMEC

ENDURA-SHIELD® II 1074 & 1074U

PRODUCT PROFILE

GENERIC DESCRIPTION Aliphatic Acrylic Polyurethane

COMMON USAGE A coating highly resistant to abrasion, wet conditions, corrosive fumes and exterior weathering. High build quality combines with project specific primers for two-coat, labor saving systems. Fast curing options are available; see Curing Time below. For additional protection from ultra-violet light, Series 1074U is available. NOT FOR IMMERSION SERVICE.

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, but noticeably different.

FINISH Gloss

SPECIAL QUALIFICATIONS Series 1074 meets the requirements of SSPC-36 Paint Standard.

PERFORMANCE CRITERIA Contact your Tnemec representative for specific test results.

COATING SYSTEM

PRIMERS

Steel: Series 1, 20, FC20, 27, 66, L69, L69F, N69, N69F, 90-97, 91-H_2O, 94-H_2O, 104, 135, L140, L140F, N140, N140F, 161, 394, 530

Galvanized Steel and Non-Ferrous Metal: Series 27, 66, L69, L69F, N69, N69F, 135, 161

Concrete: Series 66, L69, L69F, N69, N69F, 84, 104, 161

CMU: 54-660, 130. Intermediate coat required.

Note: Before topcoating with Series 1074, Series 530 exterior exposed for more than 24 hours must first be scarified or receive an intermediate coat of Tnemec polyamide epoxy. Recoat windows for other primers may apply. See those data sheets for additional information.

SURFACE PREPARATION

ALL SURFACES Must be clean, dry and free of oil, grease and other contaminants. See primer product data sheet for surface preparation recommendation.

TECHNICAL DATA

VOLUME SOLIDS 66 ± 2.0% (mixed) †

RECOMMENDED DFT 2.0 to 5.0 mils (50 to 125 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	Resist Moisture
95°F (35°C)	4 hours	5 hours	3 hours
75°F (24°C)	6 hours	8 hours	5 hours
55°F (13°C)	12 hours	16 hours	9 hours
35°F (2°C)	36 hours	48 hours	20 hours

Curing time varies with surface temperature, air movement, humidity and film thickness. If coating is exposed to moisture before the applicable cure parameters are met, dull, flat or spotty appearing areas may develop. Note: For faster curing and low-temperature applications, add No. 44-710 Urethane Accelerator; see separate product data sheet. Contact Tnemec Technical Services for force curing times and temperatures.

VOLITILE ORGANIC COMPOUNDS EPA Method 24 †

	Unthinned	Max 10% (No. 39 Thin.)	Max 9% (No. 42 Thin.)	Max 8% (No. 48 Thin.)	Max 7% (No. 39 Thin.)	Max 6% (No. 42 Thin.)	Max 5% (No. 48 Thin.)
1074	2.24 lbs/gal (269 g/l)	2.83 lbs/gal (339 g/l)	2.83 lbs/gal (339 g/l)	2.84 lbs/gal (340 g/l)			
1074U	2.59 lbs/gal (310 g/l)				2.83 lbs/gal (339 g/l)	2.82 lbs/gal (338 g/l)	2.81 lbs/gal (337 g/l)

HAPS

	Unthinned	Max 10% (No. 39 Thin.)	Max 9% (No.42 Thin.)	Max 8% (No. 48 Thin.)	Max 7% (No. 39 Thin.)	Max 6% (No.42 Thin.)	Max 5% (No. 48 Thin.)
1074	0.0 lbs/gal solids	0.0 lbs/gal solids	0.0 lbs/gal solids	0.0 lbs/gal solids			
1074U	0.19 lbs/gal solids				0.19 lbs/gal solids	0.19 lbs/gal solids	0.19 lbs/gal solids

THEORETICAL COVERAGE 1,051 mil sq ft/gal (25.8 m²/L at 25 microns). See APPLICATION for coverage rates. †

NUMBER OF COMPONENTS Two: Part A and Part B

MIXING RATIO By volume: Eight (Part A) to one (Part B)

PACKAGING

	PART A (Partially filled)	PART B (Partially filled)	When Mixed
3 Gallon Kit	5 gallon pail	1/2 gallon can	3 gallons (11.35L)
1 Gallon Kit	1 gallon pail	1 pint can	1 gallon (3.79L)

NET WEIGHT PER GALLON 11.03 ± 0.25 lbs (5.00 ± .11 kg) (mixed) †

© June 10, 2010 by Tnemec Co., Inc.

Published technical data and instructions are subject to change without notice. The online catalog at www.tnemec.com should be referenced for the most current technical data and instructions or you may contact your Tnemec representative for current technical data and instructions.

ENDURA-SHIELD® II | 1074 & 1074U

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: 12 months at recommended storage temperature.

FLASH POINT - SETA Part A: 95°F (35°C) Part B: 135°F (57°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.**

APPLICATION

COVERAGE RATES

Conventional Build (Spray, Brush or Roller)

	Dry Mils (Microns)	Wet Mils (Microns)	Sq Ft/Gal (m²/Gal)
Suggested	2.5 (65)	4.0 (100)	423 (39.3)
Minimum	2.0 (50)	3.0 (75)	529 (49.2)
Maximum	3.0 (75)	4.5 (115)	353 (32.8)

High-Build (Spray Only)

	Dry Mils (Microns)	Wet Mils (Microns)	Sq Ft/Gal (m²/Gal)
Suggested	4.0 (100)	6.0 (150)	265 (24.6)
Minimum	3.0 (75)	4.5 (115)	353 (32.8)
Maximum	5.0 (125)	7.5 (190)	212 (19.7)

Note: Can be spray applied at 3.0 to 5.0 mils (75 to 125 microns) DFT per coat when extra protection or the elimination of a coat is desired. 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 contents of the container marked Part A, making sure no pigment remains on the bottom. Add the contents of the can marked Part B to Part A while under agitation. Continue agitation until the two components are thoroughly mixed. When used with 44-710 Urethane Accelerator, first blend 44-710 into Part A under agitation; continue as above. Do not use mixed material beyond pot life limits. **Caution: Part B is moisture-sensitive and will react with atmospheric moisture. Unused material must be kept tightly closed at all times.**

THINNING **For 1074:** For air or airless spray, thin 9% or 7/10 pint (340 mL) per gallon with No. 42 Thinner if temperatures are below 80°F (27°C), use 8% of No. 48 Thinner for temperatures above 80°F (27°C). For brush and roller, thin 10% or 3/4 pint (380 mL) per gallon with No. 39 Thinner. **Note:** Thinning is required for proper application. When using 1074U, maximum thinning is 7% for No. 39 Thinner, 6% for No. 42 Thinner, and 5% for No. 48 Thinner. **Caution: Do not add thinner if more than 30 minutes have elapsed after mixing.**

POT LIFE 1 1/2 hours at 77°F (25°C) unthinned 2 hours at 77°F (25°C) thinned

APPLICATION EQUIPMENT

Air Spray

Gun	Fluid Tip	Air Cap	Air Hose ID	Mat'l Hose ID	Atomizing Pressure	Pot Pressure
DeVilbiss JGA	E	704 or 765	5/16" or 3/8" (7.9 or 9.5 mm)	3/8" or 1/2" (9.5 or 12.7 mm)	75-90 psi (5.2-6.2 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
0.009-0.013" (230-330 microns)	3000-3500 psi (207-241 bar)	1/4" or 3/8" (6.4 or 9.5 mm)	100 mesh (150 microns)

Use appropriate tip/atomizing pressure for equipment, applicator technique and weather conditions.
Roller: Use 1/4" or 3/8" (6.4 mm or 9.5 mm) synthetic woven nap roller covers. Do not use long nap roller covers. Two coats are required to obtain dry film thickness above 3.0 mils (75 microns).
Brush: Recommended for small areas only. Use high quality natural or synthetic bristle brushes. Two coats are required to obtain recommended film thickness above 3.0 mils (75 microns).

SURFACE TEMPERATURE Minimum 35°F (2°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 the recommended thinner or MEK.

† Values may vary with color.

WARRANTY & LIMITATION OF SELLER'S LIABILITY. Tnemec Company, Inc. warrants only that its coatings represented herein meet the formulation standards of Tnemec Company, Inc. THE WARRANTY DESCRIBED IN THE ABOVE PARAGRAPH SHALL BE IN LIEU OF ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. The buyer's sole and exclusive remedy against Tnemec Company, Inc. shall be for replacement of the product in the event a defective condition of the product should be found to exist and the exclusive remedy shall not have failed its essential purpose as long as Tnemec is willing to provide comparable replacement product to the buyer. NO OTHER REMEDY (INCLUDING, BUT NOT LIMITED TO, INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR LOST PROFITS, LOST SALES, INJURY TO PERSON OR PROPERTY, ENVIRONMENTAL INJURIES OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL LOSS) SHALL BE AVAILABLE TO THE BUYER. Technical and application information herein is provided for the purpose of establishing a general profile of the coating and proper coating application procedures. Test performance results were obtained in a controlled environment and Tnemec Company makes no claim that these tests or any other tests, accurately represent all environments. As application, environmental and design factors can vary significantly, due care should be exercised in the selection and use of the coating.

Tnemec Company Incorporated 6800 Corporate Drive Kansas City, Missouri 64120-1372 1-800-TNEMEC1 Fax: 1-816-483-3969 www.tnemec.com

© June 10, 2010 by Tnemec Co., Inc.

BLUES

57BL Steam ▲
LRV 76%

15BL Tank White ▲
LRV 83%

22BL Spring Rain ▲
LRV 76%

37BL Teardrop ▲
LRV 70%

59BL Seaspray ▲
LRV 55%

29BL Springwater ▲
LRV 75%

23BL Robin's Egg ▲
LRV 72%

39BL Delft Blue ▲
LRV 60%

61BL Blue Ribbon ▲
LRV 32%

09BL Cold Wind ▲
LRV 65%

25BL Fountainbleu ▲
LRV 50%

40BL Pika Blue ▲
LRV 41%

55BL Mysterious ▲
LRV 15%

11BL Canal Blue ▲
LRV 45%

26BL Clear Sky ▲
LRV 40%

41BL Lagoon ▲
LRV 24%

63BL Navy Blue ▲
LRV 9%

14BL Cadet Blue ▲
LRV 11%

28BL Pond
LRV 18%

42BL Blue Channel ▲
LRV 19%

BEIGES, TANS AND REDS

01BR Warm Sun ▲
LRV 78%

64BR Bisque ▲
LRV 82%

1255 Beige ▲
LRV 66%

10RD Barely Blush
LRV 64%

22YW Barbados ▲
LRV 72%

65BR Rock Slide ▲
LRV 67%

46BR Stable Brown ▲
LRV 46%

12RD Desert Rose
LRV 27%

03BR Washed Khaki ▲
LRV 61%

66BR Dust Bowl ▲
LRV 61%

05RD Hometown ▲
LRV 33%

14RD Red Clay ▲
LRV 14%

04BR Desert Sands ▲
LRV 51%

68BR Twine ▲
LRV 42%

23BR Sahara ▲
LRV 65%

07RD Terra Cotta ▲
LRV 11%

06BR Amber Canyon ▲
LRV 32%

70BR Worn Path ▲
LRV 16%

25BR Honey Roast ▲
LRV 48%

28RD Monterrey Tile
LRV 8%