

BID PROPOSAL FORM BID NO.

**BID TO: CITY COMMISSION
CITY OF MARGATE**

1. The undersigned bidder proposes and agrees, if this bid is accepted, to enter into an Agreement with the OWNER in the form included in the Contract Documents to perform the WORK as specified or indicated in said Contract Documents entitled:

**BID NO. 2017-011
PAINTING OF WATER TREATMENT PLANT STORAGE
TANKS AND PIPING**

2. Bidder accepts all of the terms and conditions of the Contract Documents, including without limitation those in the "Notice Inviting Bids", and "Instructions to Bidders", dealing with the disposition of the bid security.
3. The bid will remain open for the period stated in the "Notice Inviting Bids", unless otherwise required by law. Bidder will enter into an Agreement within the time and in the manner required in the "Notice Inviting Bids" and the "Instructions to Bidders", and will furnish the insurance certificates, Payment Bond and Performance Bond required by the Contract Documents.
4. It is the Contractor's responsibility to contact the City @ (954) 935-5346 prior to the bid opening to determine if any addenda have been issued on the project. Bidder has examined copies of all the Contract Documents including the following addenda (receipt of all of which is acknowledged):

Number 1 Date 8/10/2017

5. Bidder has familiarized itself with the nature and extent of the Contract Documents, WORK, site, locality where the WORK is to be performed, the legal requirements (federal, state and local laws, ordinances, rules and regulations), and the conditions affecting cost, progress or performance of the WORK and has made such independent investigations as bidder deems necessary.
6. This bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation. Bidder has not directly or indirectly induced or solicited any other bidder to submit a false or sham bid. Bidder has not solicited or induced any person, firm or corporation to refrain from bidding and Bidder has not sought by collusion to obtain for itself any advantage over any other bidder or over Owner.

To all the foregoing, and including all Bid Schedule(s) and information required of bidder contained in this Bid Form, said Bidder further agrees to complete the Work required under the Contract Documents within the Contract Time stipulated in said Contract Documents, and to accept in full payment thereof the Contract Price based on the total bid price(s) named in the aforementioned bidding schedule(s).

BID PROPOSAL FORM BID NO. 2017-011

NAME OF FIRM SHAMROCK RESTORATION SERVICES INC

ADDRESS: 27091 OSAGE STREET, BROOKSVILLE, FL 34601

NAME OF SIGNER PANAGIOTIS SAMARTZIS
(Print or Type)

TITLE OF SIGNER ESTIMATOR/AUTHORIZED REPRESENTATIVE

SIGNATURE:  DATE: 8/18/2017

TELEPHONE NO: 813-505-7839 FACSIMILE NO: 352-754-7282

E-MAIL: PETE@SHAMROCKFL.COM

BID NO. BID NO. 2017-011

SCHEDULE OF BID PRICES – BID NO. 2017-011

Tnemec – (the specified product)

TO: CITY COMMISSION

CITY OF MARGATE

(Please fill in all blanks and return with your proposal.)

In accordance with your request for proposals and the specifications contained herein, the undersigned proposes the following:

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT COST	TOTAL COST
1	MOBILIZATION	1	LS	\$ 3,957.00	\$ 3,957.00
2	2 M GALLON CONCRETE GROUND STORAGE TANK	1	LS	\$ 96,705.00	\$ 96,705.00
3	2 M GALLON CONCRETE GROUND STORAGE TANK – CORAL GATE	1	LS	\$ 104,112.00	\$ 104,112.00
4	CLARIFIER INTERIOR ONLY	2	LS	\$ 112,348.00	\$ 112,348.00
5	LOCATION 1 – SURFACE PREPARATION, PAINTING, AND PIPE IDENTIFICATION	1	LS	\$ 5,238.00	\$ 5,238.00
6	LOCATION 2 – SURFACE PREPARATION, PAINTING, AND PIPE IDENTIFICATION	1	LS	\$ 11,531.00	\$ 11,531.00
7	LOCATION 3 – SURFACE PREPARATION, PAINTING, AND PIPE IDENTIFICATION	1	LS	\$ 822.00	\$ 822.00
8	LOCATION 4 – SURFACE PREPARATION, PAINTING, AND PIPE IDENTIFICATION	1	LS	\$ 875.00	\$ 875.00
9	LOCATION 5 – SURFACE PREPARATION, PAINTING, AND PIPE IDENTIFICATION	1	LS	\$ 1,687.00	\$ 1,687.00
10	LOCATION 6 – SURFACE PREPARATION, PAINTING, AND PIPE IDENTIFICATION	1	LS	\$ 4,387.00	\$ 4,387.00
11	LOCATION 7 – SURFACE PREPARATION, PAINTING, AND PIPE IDENTIFICATION	1	LS	\$ 15,450.00	\$ 15,450.00
12	LOCATION 8 – SURFACE PREPARATION, PAINTING, AND PIPE IDENTIFICATION	1	LS	\$ 24,920.00	\$ 24,920.00
13	LOCATION 9 – SURFACE PREPARATION, PAINTING, AND PIPE IDENTIFICATION	1	LS	\$ 1,186.00	\$ 1,186.00

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT COST	TOTAL COST
14	LOCATION 10 – SURFACE PREPARATION, PAINTING, AND PIPE IDENTIFICATION	1	LS	\$ 1,186.00	\$ 1,186.00
15	LOCATION 11 – SURFACE PREPARATION, PAINTING, AND PIPE IDENTIFICATION	1	LS	\$ 1,000.00	\$ 1,000.00
16	LOCATION 12 – SURFACE PREPARATION, PAINTING, AND PIPE IDENTIFICATION	1	LS	\$ 5,250.00	\$ 5,250.00

TOTAL BASE BID AMOUNT

(Sum of Items 1 through 16)

390,654.00

Note: City permit fees shall not be waived and should be included in your bid proposal.

DESCRIPTION

TOTAL COST

TOTAL COST OF BASE BID

\$ 390,654

ALLOWANCE

\$ 25,000.00

COST OF INDEMNIFICATION

\$ 100.00

GRAND TOTAL FOR ALL ITEMS

\$ 415,754.00

ALL BIDS MUST BE SIGNED WITH THE VENDOR NAME AND BY AN OFFICER OR EMPLOYEE HAVING THE AUTHORITY TO BIND THE COMPANY OR FIRM BY SIGNATURE.

MATERIAL SAFETY DATA SHEETS ENCLOSED?

YES ✓ NO

SPECIFICATION SHEETS/BROCHURES?

YES ✓ NO

WILL YOUR FIRM ACCEPT PAYMENT VIA A CITY OF MARGATE VISA CARD?

YES NO ✓

HAVE YOUR INSURANCE REPRESENTATIVE REVIEW THE SAMPLE INSURANCE CERTIFICATE TO ENSURE COMPLIANCE.

SCHEDULE OF BID PRICES – BID NO. 2017-011

Alternate Coating Materials¹

Note: For alternate bid, bidder must submit specification sheets for the proposed coating materials

TO: CITY COMMISSION

CITY OF MARGATE

(Please fill in all blanks and return with your proposal.)

In accordance with your request for proposals and the specifications contained herein, the undersigned proposes the following:

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT COST	TOTAL COST
1	MOBILIZATION	1	LS	\$ 3,957	\$ 3,957
2	2 M GALLON CONCRETE GROUND STORAGE TANK	1	LS	\$ 91,869	\$ 91,869
3	2 M GALLON CONCRETE GROUND STORAGE TANK – CORAL GATE	1	LS	\$ 98,906	\$ 98,906
4	CLARIFIER INTERIOR ONLY	2	LS	\$ 106,730	\$ 106,730
5	LOCATION 1 – SURFACE PREPARATION, PAINTING, AND PIPE IDENTIFICATION	1	LS	\$ 5,142	\$ 5,142
6	LOCATION 2 – SURFACE PREPARATION, PAINTING, AND PIPE IDENTIFICATION	1	LS	\$ 11,011	\$ 11,011
7	LOCATION 3 – SURFACE PREPARATION, PAINTING, AND PIPE IDENTIFICATION	1	LS	\$ 799	\$ 799
8	LOCATION 4 – SURFACE PREPARATION, PAINTING, AND PIPE IDENTIFICATION	1	LS	\$ 802	\$ 802
9	LOCATION 5 – SURFACE PREPARATION, PAINTING, AND PIPE IDENTIFICATION	1	LS	\$ 1,675	\$ 1,675
10	LOCATION 6 – SURFACE PREPARATION, PAINTING, AND PIPE IDENTIFICATION	1	LS	\$ 4,320	\$ 4,320
11	LOCATION 7 – SURFACE PREPARATION, PAINTING, AND PIPE IDENTIFICATION	1	LS	\$ 14,950	\$ 14,950
12	LOCATION 8 – SURFACE PREPARATION, PAINTING, AND PIPE IDENTIFICATION	1	LS	\$ 24,480	\$ 24,480
13	LOCATION 9 – SURFACE PREPARATION, PAINTING, AND PIPE IDENTIFICATION	1	LS	\$ 1121	\$ 1121

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT COST	TOTAL COST
14	LOCATION 10 – SURFACE PREPARATION, PAINTING, AND PIPE IDENTIFICATION	1	LS	\$ 1,121	\$ 1,121
15	LOCATION 11 – SURFACE PREPARATION, PAINTING, AND PIPE IDENTIFICATION	1	LS	\$ 1,000	\$ 1,000
16	LOCATION 12 – SURFACE PREPARATION, PAINTING, AND PIPE IDENTIFICATION	1	LS	\$ 5,125	\$ 5,125

TOTAL BASE BID AMOUNT

(Sum of Items 1 through 16)

373,008.00

¹ Item to be used only with approval from the Engineer and City

Note: City permit fees shall not be waived and should be included in your bid proposal.

DESCRIPTION

TOTAL COST

TOTAL COST OF BASE BID

\$ 373,008.00

ALLOWANCE

\$ 25,000.00

COST OF INDEMNIFICATION

\$ 100.00

GRAND TOTAL FOR ALL ITEMS

\$ 398,108.00

ALL BIDS MUST BE SIGNED WITH THE VENDOR NAME AND BY AN OFFICER OR EMPLOYEE HAVING THE AUTHORITY TO BIND THE COMPANY OR FIRM BY SIGNATURE.

MATERIAL SAFETY DATA SHEETS ENCLOSED?

YES ✓ NO

SPECIFICATION SHEETS/BROCHURES?

YES ✓ NO

WILL YOUR FIRM ACCEPT PAYMENT VIA A CITY OF MARGATE VISA CARD?

YES NO ✓

HAVE YOUR INSURANCE REPRESENTATIVE REVIEW THE SAMPLE INSURANCE CERTIFICATE TO ENSURE COMPLIANCE.

BIDDER'S GENERAL INFORMATION:

BIDDER'S GENERAL INFORMATION:

The bidder shall furnish the following information. Additional sheets shall be attached as required. Failure to complete Item Nos. 1, 3, and 8 will cause the bid to be non-responsive and may cause its rejection. In any event, no award will be made until all of the Bidder's General Information (i.e., items I through 9 inclusive) is delivered to the OWNER.

- (1) Contractor's name and address:
SHAMROCK RESTORATION SERVICES INC
27091 OSAGE STREET
BROOKSVILLE, FL 34601
- (2) Contractor's telephone number: 813-505-7839
- (3) Contractor's license: Primary classification CERTIFIED GENERAL CONTRACTOR
State License Number CGC 036127
Supplemental classifications held, if any: N/A
Name of Licensee, if different from (1) above: KELLY, JOHN JOSEPH
SHAMROCK RESTORATION SERVICES INC.
- (4) Name of person who inspected site of proposed WORK for your firm:
Name: PANAGIOTIS SAMARTZIS Date of Inspection: 8/3/2017
- (5) Name, address, and telephone number of surety company and agent who will provide the required bonds on this contract: CONTRACTORS BONDING AND INSURANCE COMPANY
9025 N. LINDBERGH DRIVE, PEORIA, IL 61615 TEL: 309-692-1000
- (6) Attach to this bid, the experience resume of the person who will be designated chief construction superintendent or on site construction manager.
- (7) Attach to this bid a financial statement, references, and other information, sufficiently comprehensive to permit an appraisal of Contractor's current financial condition.

BID NO. 2017-011

- (8) List 3 projects completed as of recent date involving Work of similar type and complexity:

PROJECT NAME	CONTRACT PRICE	NAME, ADDRESS AND TELEPHONE NUMBER OF OWNER
PLEASE SEE ATTACHED		

- (9) Subcontractors: The bidder further proposes that as part of their submittal, attached is a list of subcontracting firms or businesses that will be awarded subcontracts for portions of the Work in the event the bidder is awarded the Contract:

G3 Contracting, Inc. DBA GAR Waterblasting
1271 Thoroughbred Trail,
Sanford, FL 32771

BID NO. 2017-011

BID BOND

KNOW ALL MEN BY THESE PRESENTS:

That we Shamrock Restoration Services Inc as Principal, and
Contractors Bonding and Insurance Company as Surety, are held and firmly bound unto
City of Margate, hereinafter called "City" in the sum of (\$ 22,500.00)
Twenty Two Thousand Five Hundred dollars, (not less than 5 percent of the total
amount of the bid) for the payment of which sum, well and truly to be made, we bind ourselves, our
heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these
presents.

WHEREAS, said Principal has submitted a bid to said City to perform the Work required under the
bidding schedule of the City's Contract Documents entitled:

BID NO. 2017-011
PAINTING OF WATER TREATMENT PLANT STORAGE
TANKS AND PIPING

NOW THEREFORE, if said Principal is awarded a contract by said City and, within the time and in
the manner required in the "Notice Inviting Bids" and the "Instructions to Bidders" enters into a written
Agreement on the form of the agreement bound with said Contract Documents, furnishes the
required certificates of insurance, and furnishes the required Performance Bond, then this obligation
shall be null and void, otherwise it shall remain in full force and effect. In the event suit is brought
upon this bond by said City and City prevails, said Surety shall pay all costs incurred by said City in
such suit, including a reasonable attorney's fee to be fixed by the court.

SIGNED AND SEALED, this 16th day of August, 2017

Shamrock Restoration Services, Inc.

Contractors Bonding and Insurance Company

(Principal)

(Surety)

By: [Signature]

By: [Signature]

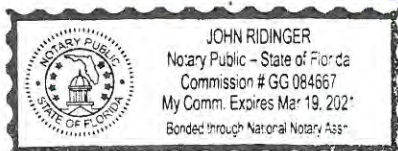
(SIGNATURE)

(SIGNATURE)

STATE OF FLORIDA, COUNTY OF BROWARD: BEFORE ME PERSONALLY APPEARED THE
ABOVE TO ME WELL KNOWN AND KNOWN TO ME TO BE THE PERSONS DESCRIBED IN AND
WHO EXECUTED THE FOREGOING INSTRUMENT, AND ACKNOWLEDGED TO AND BEFORE
ME THAT THEY EXECUTED SAID INSTRUMENT FOR THE PURPOSES THEREIN EXPRESSED.

WITNESS MY HAND AND OFFICIAL SEAL, THIS 21st DAY OF August, 2017

NOTARY PUBLIC: [Signature]





Contractors Bonding and Insurance Company
P.O. Box 3967 Peoria IL 61612-3967
Phone: (309)692-1000 Fax: (309)683-1610

POWER OF ATTORNEY

Contractors Bonding and Insurance Company

Bond No. LSM0892175

Know All Men by These Presents:

That the Contractors Bonding and Insurance Company, a corporation organized and existing under the laws of the State of Illinois, and authorized and licensed to do business in all states and the District of Columbia does hereby make, constitute and appoint: Robin Goldstein in the City of Tequesta, State of Florida, as Attorney In Fact, with full power and authority hereby conferred upon him/her to sign, execute, acknowledge and deliver for and on its behalf as Surety, in general, any and all bonds, undertakings, and recognizances in an amount not to exceed Ten Million and 00/100 Dollars (\$10,000,000.00) for any single obligation, and specifically for the following described bond.

Principal: Shamrock Restoration Services, Inc.

Obligee: City of Margate

Bond Amount: 5% of Total Amount Bid

The Contractors Bonding and Insurance Company further certifies that the following is a true and exact copy of a Resolution adopted by the Board of Directors of Contractors Bonding and Insurance Company, and now in force to-wit:

"All bonds, policies, undertakings, Powers of Attorney or other obligations of the corporation shall be executed in the corporate name of the Company by the President, Secretary, any Assistant Secretary, Treasurer, or any Vice President, or by such other officers as the Board of Directors may authorize. The President, any Vice President, Secretary, any Assistant Secretary, or the Treasurer may appoint Attorneys in Fact or Agents who shall have authority to issue bonds, policies or undertakings in the name of the Company. The corporate seal is not necessary for the validity of any bonds, policies, undertakings, Powers of Attorney or other obligations of the corporation. The signature of any such officer and the corporate seal may be printed by facsimile."

IN WITNESS WHEREOF, the Contractors Bonding and Insurance Company has caused these presents to be executed by its Vice President with its corporate seal affixed this 16th day of August, 2017.

ATTEST:

Cherie L. Montgomery
Cherie L. Montgomery Assistant Secretary



Contractors Bonding and Insurance Company

B. A. W. Davis
Barton W. Davis Vice President

On this 16th day of August, 2017 before me, a Notary Public, personally appeared Barton W. Davis and Cherie L. Montgomery, who being by me duly sworn, acknowledged that they signed the above Power of Attorney as Vice President and Assistant Secretary, respectively, of the said Contractors Bonding and Insurance Company, and acknowledged said instrument to be the voluntary act and deed of said corporation.

Jacqueline M. Bockler
Jacqueline M. Bockler Notary Public



Surety Acknowledgment

STATE OF New York

COUNTY OF Warren

The foregoing instrument was acknowledged before me this 16th day of August, by Robin. Goldstein.

Rebecca L Coon
Notary Public Signature

Rebecca L Coon
Notary Public Printed Name

REBECCA L COON
Notary Public - State of New York
NO.01CO6163542
Qualified in Warren County
My Commission Expires: 03/26/2019

(NOTARY SEAL)

Personally Known ☒ OR Produced Identification _____
Type of Identification Produced _____

Principal Acknowledgment

STATE OF Florida
COUNTY OF Pasco

The foregoing instrument was acknowledged before me this 21st day of August, 17 by Panagiotis Samartzis

John N. Ridinger
Notary Public Signature

John Ridinger
Notary Public Printed Name



Personally Known _____ OR Produced Identification ☒
Type of Identification Produced _____

FLDL

REFERENCE SHEET

In order to receive Bid Award consideration on the proposed bid, it is a mandatory requirement that the following "Information Sheet" must be completed and returned with your bid. This information may be used in determining the Bid Award for this contract.

BIDDER (COMPANY NAME): SHAMROCK RESTORATION SERVICES INC

ADDRESS: 27091 OSAGE ST, BROOKSVILLE TELEPHONE NO: 813-505-7839

CONTACT PERSON: PANAGIOTIS SAMARTZIS TITLE: ESTIMATOR

NUMBER OF YEARS IN BUSINESS: 19

ADDRESS OF NEAREST FACILITY: BROOKSVILLE

LIST THREE (3) COMPANIES OR GOVERNMENTAL AGENCIES WHERE THESE PRODUCTS AND SERVICES HAVE BEEN PROVIDED IN THE LAST YEAR.

1. Company Name: PLEASE SEE ATTACHED REFERENCES WITH PRODUCTS USED

Address: _____

Contact Person: _____ Title: _____

Phone: _____

2. Company Name: _____

Address: _____

Contact Person: _____ Title: _____

Phone: _____

3. Company Name: _____

Address: _____

Contact Person: _____ Title: _____

Phone: _____

BID NO: 2017-011



NON-COLLUSIVE AFFIDAVIT FOR BID NO. 2017-011
PAINTING OF WATER TREATMENT PLANT STORAGE TANKS AND PIPING

State of FLORIDA)

County of PASCO)

PANAGIOTIS SAMARTZIS being first duly sworn, deposes
and says that:

He/she is the AUTHORIZED REPRESENTATIVE, (Owner, Partner, Officer,
Representative or Agent) of SHAMROCK, the Offeror that has submitted the
attached Proposal; RESTORATION SERVICES INC

He/she is fully informed regarding the preparation and contents of the attached
Proposal and of all pertinent circumstances regarding such Proposal;

Such Proposal is genuine and is not a collusive or sham Proposal;

Neither the said Offeror nor any of its officers, partners, owners, agents,
representatives, employees or parties in interest, including this affiant, have in any
way colluded, conspired, connived or agreed, directly or indirectly, with any other
Offeror, firm, or person to submit a collusive or sham Proposal in connection with
the Work for which the attached Proposal has been submitted; or to refrain from
bidding in connection with such Work; or have in any manner, directly or indirectly,
sought by agreement or collusion, or communication, or conference with any
Offeror, firm, or person to fix the price or prices in the attached Proposal or of any
other Offeror, or to fix any overhead, profit, or cost elements of the Proposal price or
the Proposal price of any other Offeror, or to secure through any collusion,
conspiracy, connivance, or unlawful agreement any advantage against (Recipient),
or any person interested in the proposed Work;

The price or prices quoted in the attached Proposal are fair and proper and are not
tainted by any collusion, conspiracy, connivance, or unlawful agreement on the part
of the Offeror or any other of its agents, representatives, owners, employees or
parties in interest, including this affiant.

Signed, sealed and delivered in the presence of:

YIANNI KATECHIS
Witness

[Signature]
Witness

By [Signature]

PANAGIOTIS SAMARTZIS

Printed Name

AUTHORIZED REPRESENTATIVE

Title

ACKNOWLEDGMENT
NON-COLLUSIVE AFFIDAVIT FOR BID NO. 2017-011
PAINTING OF WATER TREATMENT PLANT STORAGE TANKS AND PIPING

State of Florida
County of PASCO

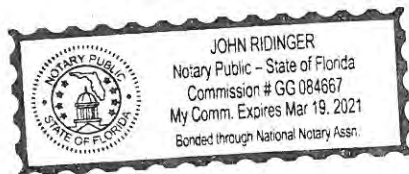
On this the 21st day of August, 2017, before me, the undersigned Notary Public of the State of Florida, personally appeared

PANAGIOTIS SAMARTZIS and
(Name(s) of individual(s) who appeared before notary)

whose name(s) is/are Subscribed to within the instrument, and he/she/they acknowledge that he/she/they executed it.

WITNESS my hand
and official seal.

NOTARY PUBLIC
SEAL OF OFFICE:



John Ridinger
NOTARY PUBLIC, STATE OF FLORIDA
John Ridinger

(Name of Notary Public: Print,
Stamp, or Type as Commissioned)

☐ Personally known to me, or
☒ Produced identification:

FLDL
(Type of Identification Produced)

☐ DID take an oath, or ☒ DID NOT take an oath

DRUG-FREE WORKPLACE PROGRAM FORM

In accordance with Section 287.087, State of Florida Statutes, preference shall be given to businesses with Drug-free Workplace Programs. Whenever two or more bids which are equal with respect to price, quality and service are received for the procurement of commodities or contractual service, a bid received from a business that certifies that it has implemented a Drug-free Workplace Program shall be given preference in the award process. In the event that none of the tied vendors have a Drug-free Workplace program in effect the City reserves the right to make final Decisions in the City's best interest. In order to have a Drug-free Workplace Program, a business shall:

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the Workplace and specifying the actions that will be taken against employees for violations of such prohibition.
2. Inform employees about the dangers of drug abuse in the Workplace, the business's policy of maintaining a drug-free Workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.
3. Give each employee engaged in providing the commodities or contractual services that are under bid a copy of the statement specified in subsection (1).
4. In the statement specified in subsection (1), notify employees that, as a condition of Working on the commodities or contractual services that are under bid, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of Chapter 893 or of any controlled substance law of the United States or of any State, for a violation occurring in the Workplace no later than five (5) days after such conviction.
5. Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community by any employee who is convicted.
6. Make a good faith effort to continue to maintain a drug-free Workplace through implementation.

If bidder's company has a Drug-free Workplace Program, so certify below:

AS THE PERSON AUTHORIZED TO SIGN THE STATEMENT, I CERTIFY THAT THIS FIRM COMPLIES FULLY WITH THE ABOVE REQUIREMENTS.

SIGNATURE OF BIDDER:



DATE: 8/18/2017

BID NO: 2017-011

ACKNOWLEDGEMENT FORM

ADDENDUM NO. 1

Bid No. 2017-011 Painting of Water Treatment Plant Storage Tanks and Piping

I acknowledge receipt of Addendum No. 1 for Bid No. 2017-011 - Painting of Water Treatment Plant Storage Tanks and Piping. This addendum contains seventy (70) pages. Please include the original of this form in your bid submission.

Company Name: SHAMROCK RESTORATION SERVICES INC.

Address: 27091 OSAGE STREET, BROOKSVILLE, FL 34601

Name of Signer PANAGIOTIS SAMARTZIS
(please print)

Signature:  Date: 8/10/2017

Telephone: 813-505-7839 Facsimile: 352-754-7282

Please fax your completed form to (954) 935-5258 or e-mail to purchase@margatefl.com.


Spencer Shambray, CPPB
Purchasing Manager
8/10/2017

SHAMROCK RESTORATION SERVICES, INC

27091 Osage Street, Brooksville, FL 34601

e-mail: shamrockrsinc@bellsouth.net

Tel: (813) 505 - 7839

Fax: (352) 754-7282

RESUME

Name: Pete Samartzis

Title: Sales Technician/Estimator/QC
"Sales, Estimating, Inspecting, Bidding" etc.

Education: 4 year college graduate

Special Education relating to construction:

Construction Educational Classes with the City of St. Petersburg
Certified Bridge Coating Inspector (BCI) by SSPC Level 1
Certified Quality Control Supervisor (QCS) by SSPC
Abrasive Blasting (C7)
On the Job Training
Multiple Webinars with JPL

License relating to construction:

QCS, BCI Level 1 ID#44045

Experience: Indicate Firm Name, Years Employed and Largest projects you were involved in as key individual:

Four years, Estimating Bidding, Inspecting and Consulting, Shamrock Restoration Services Inc.
Eleven years, Estimating, Bidding Inspecting and Consulting, Harry's Painting & Enterprises Inc.

Projects Involved In as Key Individual: (There are too many to name, so here are just a few recent)

SHAMROCK RESTORATION SERVICES INC.

- City of Lakeland – Fire Hydrants Painting Services
- Palm Beach County Water – Interior Exterior Painting & Coating throughout the WTP
- Seacoast Utilities Authority – Coating of Lift Stations and portion of PGA WWTP
- City of Tamarac – Surface Prep and Coating for the WTP
- City of Lakeland – Painting of Lime Silow @ Combee & Williams WTP

HARRY'S PAINTING & ENTERPRISES INC.

- City of Lakeland McIntosh Power Plant "Rail Road Trestle"
- City of Tarpon Springs – Pipeline Painting
- DOT (Florida Dept of Transportation) Mile Posts
- US Water Services - Various WWTP's
- Pinellas County Public Schools - Seminole High School
- City of Tavares – Lake County Detention Center & Prelude Bldg, Sealing and Painting
- JVA Construction – Hillsborough County, County Center Garage – Phases I & II
- City of Ocala – Waterproofing of Complex Buildings
- Hillsborough County – Lake Park and Fawn Ridge WTP
- City of Lakeland Larsen & McIntosh Power Plants "Recoating Ext. of Units 1, 5 and 8 (Stack and Misc.)
- Pasco County Various Locations: Painting of WWTP's.
- City of Tampa- Howard F. Curren Misc. Pipe Painting



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

3/28/2017

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Killingsworth Agency Inc. 19259 Cortez Boulevard P.O. Box 1750 Brooksville FL 34605-1750	CONTACT NAME: Tiffany Wilkes PHONE (A/C, No, Ext): (352) 796-1451 E-MAIL: tiffany@kworthins.com ADDRESS: INSURER(S) AFFORDING COVERAGE INSURER A: Ohio Security Insurance Company INSURER B: Ohio Casualty Insurance Company INSURER C: FL Citrus, Business & Ind. Fund INSURER D: Zurich American Insurance Company INSURER E: INSURER F:	NAIC # 24082 24074 N/A 16535
--	---	---

COVERAGES**CERTIFICATE NUMBER:** 16-17**REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL SUBR INSD WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	☒ COMMERCIAL GENERAL LIABILITY ☐ CLAIMS-MADE ☒ OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: ☒ POLICY ☐ PRO-JECT ☐ LOC OTHER:		BKS56309638	09/18/2016	09/18/2017	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 300,000 MED EXP (Any one person) \$ 15,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 Package Modification Factor 1 \$
A	AUTOMOBILE LIABILITY ☒ ANY AUTO ALL OWNED AUTOS ☐ SCHEDULED AUTOS HIRED AUTOS ☐ NON-OWNED AUTOS ☒ \$10,000 PIP		BAS56309638	09/18/2016	09/18/2017	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
B	☒ UMBRELLA LIAB ☒ OCCUR ☐ EXCESS LIAB ☐ CLAIMS-MADE DED ☒ RETENTION \$ 10,000		US056309638	11/16/2016	09/18/2017	EACH OCCURRENCE \$ 2,000,000 AGGREGATE \$ 2,000,000 \$
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N ☐ N/A	10649437	04/06/2017	04/06/2018	PER STATUTE ☒ OTH-ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000
D	INLAND MARINE		EC08031579	08/19/2016	08/19/2017	Rental Equipment - \$100,000 Deductible - \$1000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Limits shown are those in effect at policy inception date.

John Joseph Kelly #CGC036127

Account #PLC2279, Contract 16063R

Certificate holder is listed as additional insured in reference to General Liability and 30 day notice of cancellation applies, 10 days for nonpayment of premium.

CERTIFICATE HOLDER**CANCELLATION**

FOR INFORMATION PURPOSES ONLY

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

GTy7FBrendan
McAuley/CLARE

© 1988-2014 ACORD CORPORATION. All rights reserved.

ACORD 25 (2014/01)

The ACORD name and logo are registered marks of ACORD

INS025 (201401)



STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

CONSTRUCTION INDUSTRY LICENSING BOARD
2601 BLAIR STONE ROAD
TALLAHASSEE FL 32399-0783

(850) 487-1395

KELLY, JOHN JOSEPH
SHAMROCK RESTORATION SERVICES, INC.
13303 N ROME AVENUE
TAMPA FL 33612-1848

Congratulations! With this license you become one of the nearly one million Floridians licensed by the Department of Business and Professional Regulation. Our professionals and businesses range from architects to yacht brokers, from boxers to barbeque restaurants, and they keep Florida's economy strong.

Every day we work to improve the way we do business in order to serve you better. For information about our services, please log onto www.myfloridalicense.com. There you can find more information about our divisions and the regulations that impact you, subscribe to department newsletters and learn more about the Department's initiatives.

Our mission at the Department is: License Efficiently, Regulate Fairly. We constantly strive to serve you better so that you can serve your customers. Thank you for doing business in Florida, and congratulations on your new license!



STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND
PROFESSIONAL REGULATION

CGC036127

ISSUED: 08/16/2016

CERTIFIED GENERAL CONTRACTOR
KELLY, JOHN JOSEPH
SHAMROCK RESTORATION SERVICES, INC

IS CERTIFIED under the provisions of Ch 489 FS.
Expiration date: AUG 31, 2018 L1608160002479

DETACH HERE

RICK SCOTT, GOVERNOR

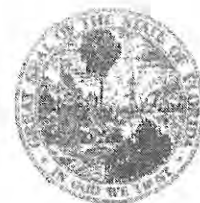
KEN LAWSON, SECRETARY

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION
CONSTRUCTION INDUSTRY LICENSING BOARD

LICENSE NUMBER	
CGC036127	

The GENERAL CONTRACTOR
Named below IS CERTIFIED
Under the provisions of Chapter 489 FS.
Expiration date: AUG 31, 2018

KELLY, JOHN JOSEPH
SHAMROCK RESTORATION SERVICES, INC
27091 OSAGE ST
BROOKSVILLE FL 34601



ISSUED: 08/16/2016

DISPLAY AS REQUIRED BY LAW

SEQ # L1608160002479

SHAMROCK RESTORATION SERVICES, INC

27091 Osage Street, Brooksville, FL 34601

Tel: (813)505-7839 Fax: (352)754-7282

Web: www.shamrockrestorationservices.com

e-mail: michael@shamrockrestorationservices.com

References

Project name: Moss Bluff Dam (S-251) Gate Rehabilitation
Description: Sandblast clean and recoat 2 Water Gates
Prep as per SSPC-SP10 all surfaces and Recoat 2 gates and all associated structures
System: Wasser mc-zinc, Mc-Tar (red), Wasser Silver #100
Address: 16255 SE 96th Lane Rd, Ocklawaha, FL 32179
Client: ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
4049 Reid Street, Palatka, Florida 32177-2571.
Phone: 321 409-2156 Fax: 321-722-5357
Contact: Jim Rider Phone: 321-984-4941 Email: jrider@sjrwmd.com
Value: \$ 35,783.00
Completed: 7/21/17

Project name: S-253 Weir Rehabilitation
Description: Sandblast clean and recoat 250' weir
Prep as per SSPC-SP10 all rusted surfaces and Recoat the weir S-253
System: Wasser mc-zinc, Mc-Tar (red), Wasser Silver #100
Address: 16 Miles West of I-95 on SR-60
Client: ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
4049 Reid Street, Palatka, Florida 32177-2571.
Phone: 321 409-2156 Fax: 321-722-5357
Contact: Jim Rider Phone: 321-984-4941 Email: jrider@sjrwmd.com
Value: \$ 48,130.00
Completed: 6/2/17

Project name: Interior and Exterior Painting and Coating Services. Two Projects
Description: Remove insulation and recoating of interior pump station and 2nd floor Filter bldg @ WTP #8,
Prep as per SSPC-SP3/SP7 and Recoat exterior of WTP #9
System: Tnemec, Tneme-Tufcoat 114 HB, Enduratone 1026, Epoxoline N69, Endura-Shield 1074U
Address: 1500 North Jog Road, West Palm Beach, FL 33417
Client: Palm Beach County
50 South Military Trail, Suite 110, West Palm Beach, FL 33415-3199
Tel: (561) 616-6800 Fax: (561) 616-6811
Contact: Richard Gallant rgallant@pbcwater.com cell: (561) 707-5973
Value: \$ 184,694.00
Completed: 6/4/17

SHAMROCK RESTORATION SERVICES, INC

Project name: Coating of Lift Stations and Portions of the PGA WWTP - 2016
Description: Sandblast as per SSPC-SP10 and recoat 6 lift stations, prep as per SSPC-SP3 and recoat multiple pipe systems for PGA WWTP
System: Tnemec Chembuild 135, Endura-Shield 1074U
Address: 11498 Nursery Lane, Palm Beach Gardens, FL 33418
Client: Seacoast Utility Authority
4200 Hood Road, Palm Beach Gardens, Florida 33410
Contact: Brent Weidenhamer rwatts@sua.com
Tel: (561)627-2900X367 cell: (561) 876-4563 fax: (561) 6242839
Value: \$ 57,049.00
Completed: 1/19/2017

Project name: Coating of Lift Stations and Portions of the PGA WWTP - 2016
Description: Sandblast as per SSPC-SP10 and recoat 6 lift stations, prep as per SSPC-SP3 and recoat multiple pipe systems for PGA WWTP
System: Tnemec Chembuild 135, Endura-Shield 1074U
Address: 11498 Nursery Lane, Palm Beach Gardens, FL 33418
Client: Seacoast Utility Authority
4200 Hood Road, Palm Beach Gardens, Florida 33410
Contact: Brent Weidenhamer rwatts@sua.com
Tel: (561)627-2900X367 cell: (561) 876-4563 fax: (561) 6242839
Value: \$ 57,049.00
Completed: 1/19/2017

Project name: Surface Prep & Coating system for the WTP
Description: Prep as per SSPC-SP3 & Recoat concrete tanks, buildings, metal package filters, clarifiers, silos, pipes, tanks, accelators, clearwells etc.
System: Tnemec, Typoxy 27, Elastogrip 151, Enviro-Crete 156, Enduratone 1028/1029
Address: Three different locations in Tamarac, Fl
Client: City of Tamarac
7525 NW 88th avenue, Tamarac, Fl
Contact: James T. Moore james.moore@tamarac.org
Tel: Direct: (954)597-3758 Fax: (954)597-3760
Value: \$ 202,645.00
Completed: May 2016

Project name: Repainting the Lime Silos @ Combee & Williams WTP
Description: Prep and Paint 2 Metal Silos, Canopies & 2 stucco bldgs.
System: PPG Amerlock 2, Amercoat 450, Pitt-Tech 90,
Address: 2450 Old Combee Road, Lakeland Fl 33805
1501 Kendrick Ln, Lakeland, FL 33805
Client: City of Lakeland
1140 East Parker Street, Lakeland Fl. 33801
Contact: Ricky Jaynes ricky.jaynes@lakaleandgov.net
Tel: office: (863)834-6720 Fax: (863)834-7347 Cell: (803)327-7359
Value: \$ 28,449.00
Completed: September 2015

SHAMROCK RESTORATION SERVICES, INC

27091 Osage Street, Brooksville, FL 3460

e-mail: shamrockrsinc@bellsouth.net

Tel: (813) 505 - 783

Fax: (352) 754-728

DATE: 05/04/2015

To whom it may concern:

I the undersigned, hereby authorize Panagiotis Samartzis to sign on my behalf in all manners relating to bids, including signing of all documents relating to these matters.

This authorization is valid until further written notice from SHAMROCK RESTORATION SERVICES INC.

Sincerely,



Michael Reynolds
President



NOTARY



PRODUCT DATA SHEET

TYPOXY® SERIES 27WB

PRODUCT PROFILE

GENERIC DESCRIPTION

Inorganic Hybrid Water-Based Epoxy

COMMON USAGE

A unique, low odor, low VOC, water-based epoxy coating featuring HydroLink curing technology for exceptional durability and corrosion resistance. Used for the protection and finishing of steel and concrete structures including structural steel, tanks, pipes, and equipment. Superior wetting for marginally prepared steel and tightly adhered existing coatings. This coating is ideally suited for steel fabrication and OEM applications, with fast-curing and rapid handling properties. Series 27WB exhibits low yellowing and good color stability in whites and light tone colors. Formula protected under U.S. patent.

COLORS

1255 Beige, 00WH Tnemec White, 39BL Delft Blue, 35GR Black, 33GR Gray. Other colors may be available, contact your Tnemec representative. **Note:** This coating can exhibit color change when subjected to sunlight. If this coating is being used as a finish coat, and exposed to UV light in exterior exposure, caution should be taken when selecting colors. Contact your Tnemec representative for more information.

FINISH

Satin

PERFORMANCE CRITERIA

Contact your Tnemec representative for specific test results.

COATING SYSTEM

PRIMERS

Steel: Self-priming or Series 1, 66, L69, L69F, N69, N69F, V69, V69F, 90G-1K97, 90-97, H90-97, 91-H₂O, 94-H₂O, 161, 394. **Note:** Series 1, 90G-1K97, 90-97, H90-97, 91-H₂O, 94-H₂O and 394 must be exterior exposed for 24 hours prior to topcoating.
Galvanized Steel: Self-priming
Concrete: Self-priming, 215, 217, 218, 1254
CMU: Self-priming, 130, 215, 1254
Drywall: Self-priming, 151

TOPCOATS

Series 30, 72, 73, 113, 114, 115, 156, 157, 158, 180, 181, 270, 273, 280, 281, 287, 290, 291, 297*, 406, 435, 436, 446, 710, 750, 1028, 1029, 1070, 1070V, 1071, 1071V, 1072, 1072V, 1074, 1074U, 1075, 1075U, 1077, 1078, 1080*, 1081*. **Note:** When topcoating with Series 740 or 750 over 27WB, a 90 day maximum recoat time applies. * An extended cure time is needed when topcoating with Series 297, 1080 or 1081. Reference additional recoat times listed below the cure table.
Note: More than one finish coat may be required to achieve uniform and desired gloss level.

SURFACE PREPARATION

STEEL

Immersion Service: SSPC-SP10/NACE 2 Near-White Blast Cleaning. **Note:** For immersion service, must be primed with either Series 1, 66, L69, L69F, N69, N69F, V69, V69F, 90G-1K97, 90-97, H90-97, 91-H₂O, 94-H₂O or 161.
Non-Immersion Service: SSPC-SP6/NACE 3 Commercial Blast Cleaning
Note: Abrasive blast cleaning generally produces the best coating performance. If conditions will not permit this, Series 27WB may be applied to SSPC-SP2 or SP3 Hand or Power Tool Cleaned surfaces.

GALVANIZED STEEL

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.

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.

CMU

Allow mortar to cure for 28 days. Prepare in accordance with SSPC-SP13/NACE 6 to level protrusions and mortar spatter and remove other contaminants.

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

100% (mixed) †

RECOMMENDED DFT

3.0 to 14.0 mils (75 to 350 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†
120°F (49°C)	15 minutes	1 hour	2 hours
95°F (35°C)	30 minutes	2 hours	3 hours
75°F (24°C)	1 hour	6 hours	8 hours
55°F (13°C)	2 hours	8 hours	16 hours
45°F (7°C)	3 hours	10 hours	24 hours
35°F (2°C)	4 hours	3 days	4 days

Curing time varies with surface temperature, air movement, humidity and film thickness. For immersion service cure a minimum of 24 hours at 75°F (24°C). † The following minimum recoat times apply when topcoating with Series 297, 1080 or 1081: 95°F (35°C) 12 hours, 75°F (24°C) and 55°F (13°C) 24 hours, 45°F (7°C) 4 days, 35°F (2°C) 7 days. **Note:** For faster curing and low temperature applications, add No. 44-700 Epoxy Accelerator, see separate product data sheet for cure information. **Note:** The use of Series 44-700 Accelerator is not recommended when temperatures exceed 75°F (24°C).

VOLATILE ORGANIC COMPOUNDS

Unthinned: 0.01 lbs/gallon (0.9 grams/litre) †

HAPS

0 lbs/gal solids



ENDURA-SHIELD® SERIES 1095

PRODUCT DATA SHEET

PRODUCT PROFILE

GENERIC DESCRIPTION	Aliphatic Acrylic Polyurethane
COMMON USAGE	A user friendly, low VOC, aliphatic polyurethane coating that provides excellent color and gloss retention for exterior applications to steel, concrete and other miscellaneous substrates.
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	Semi-gloss

COATING SYSTEM

PRIMERS	Steel: Series 27WB, 66, 66HS, L69, L69F, N69, N69F, V69, V69F, 90-97, 90G-1K97, 91-H ₂ O, 94-H ₂ O, 135, L140, L140F, N140, N140F, V140, V140F, 161, 161HS, 1224 Concrete: Series 27WB, 66, 66HS, L69, L69F, N69, N69F, V69, V69F, L140, L140F, N140, N140F, V140, V140F, 161, 161HS, 1224, 1254 Note: A maximum recoat time of 30 days applies to the listed primers.
----------------	---

SURFACE PREPARATION

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

TECHNICAL DATA

VOLUME SOLIDS	66.0 ± 2.0% (mixed) †												
RECOMMENDED DFT	2.5 to 5.0 mils (65 to 127 microns) per coat Note: Number of coats and thickness requirements will vary with substrate, application method and exposure.												
CURING TIME	<table><tr><th>Temperature</th><th>To Touch</th><th>To Handle</th><th>To Recoat</th></tr><tr><td>75°F (24°C)</td><td>1-2 hours</td><td>6-8 hours</td><td>8-10 hours</td></tr></table> To resist moisture: 5 hours. Curing time varies with surface temperature, air movement, humidity and film thickness. Note: For faster curing and low-temperature applications, add No. 44-710 Urethane Accelerator.	Temperature	To Touch	To Handle	To Recoat	75°F (24°C)	1-2 hours	6-8 hours	8-10 hours				
Temperature	To Touch	To Handle	To Recoat										
75°F (24°C)	1-2 hours	6-8 hours	8-10 hours										
VOLATILE ORGANIC COMPOUNDS	Unthinned: 0.74 lbs./gallon (89 grams/litre) Thinned 5% (No. 24 Thinner): 1.13 lbs./gallon (135 grams/litre) † Thinned 5% (No. 49 Thinner): 0.74 lbs./gallon (89 grams/litre) † Thinned 10% (No. 78 Thinner): 0.83 lbs./gallon (99 grams/litre) †												
HAPS	Unthinned: 0.00 lbs./gal Thinned: 0.00 lbs./gal												
THEORETICAL COVERAGE	1,058 mil sq ft/gal (26.0 m ² /L at 25 microns). See APPLICATION for coverage rates. †												
NUMBER OF COMPONENTS	Two: Part A and Part B												
MIXING RATIO	By volume: Four (Part A) to one (Part B)												
PACKAGING	<table><tr><th></th><th>PART A (Partially filled)</th><th>PART B (Partially filled)</th><th>Yield (Mixed)</th></tr><tr><td>Large Kit</td><td>5 gallon pail</td><td>1 gallon can</td><td>5 gallons (18.9L)</td></tr><tr><td>Small Kit</td><td>1 gallon can</td><td>1 quart can</td><td>1 gallon (3.79L)</td></tr></table>		PART A (Partially filled)	PART B (Partially filled)	Yield (Mixed)	Large Kit	5 gallon pail	1 gallon can	5 gallons (18.9L)	Small Kit	1 gallon can	1 quart can	1 gallon (3.79L)
	PART A (Partially filled)	PART B (Partially filled)	Yield (Mixed)										
Large Kit	5 gallon pail	1 gallon can	5 gallons (18.9L)										
Small Kit	1 gallon can	1 quart can	1 gallon (3.79L)										
NET WEIGHT PER GALLON	12.71 ± 0.25 lbs (5.76 ± .11 kg) †												
STORAGE TEMPERATURE	Minimum 40°F (4°C) Maximum 110°F (43°C)												
TEMPERATURE RESISTANCE	(Dry) Continuous 250°F (121°C) Intermittent 275°F (135°C)												
SHELF LIFE	12 months at recommended storage temperature.												
FLASH POINT - SETA	Part A: 78°F (25°C) Part B: 40°F (4°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® (FAST CURE) SERIES FC20

PRODUCT DATA SHEET

PRODUCT PROFILE

GENERIC DESCRIPTION	Polyamide Epoxy
COMMON USAGE	Fast-curing protective coating for use in steel and concrete potable water storage facilities. Contact your Tnemec representative for other systems and additional information on potential uses.
COLORS	1211 Red, 1255 Beige, 00WH 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 for use on the interior of potable water storage tanks and reservoirs of 6,000 gallons (22,710 L) capacity or greater. Conforms to AWWA D 102 Inside Systems No. 1 and No. 2 . Contact your Tnemec representative for approved systems and additional information on potential uses. 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, 20, 91-H ₂ O, 94-H ₂ O, N140, N140F. Note: 91-H ₂ O is ANSI/NSF Std. 61 certified by UL as a primer for Series FC20. Refer to the 91-H ₂ O product data sheet for additional information.
TOPCOATS	Interior: Series 20, FC20, N140, N140F, 264, 265 Exterior: Series 20, FC20, 66, N69, 73, 104, N140, N140F, 161, 700, 701, 1074, 1074U, 1075, 1075U. 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 28 days. For optimum results and/or immersion service, abrasive blast referencing SSPC-SP15/NACE 6, ICRI CSP 2-4 Surface Preparation of Concrete and Tnemec's Surface Preparation and Application Guide.
PRIMED SURFACES	Immersion Service: Scarify the Series FC20 prime coat surface by abrasive-blasting with fine abrasive before topcoating, if it has been exposed to sunlight for 60 days or longer.
ALL SURFACES	Must be clean, dry and free of oil, grease, chalk and other contaminants.

TECHNICAL DATA

VOLUME SOLIDS	58.0 ± 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	<table><tr><th>Temperature</th><th>To Touch</th><th>To Handle</th><th>To Recoat</th><th>Immersion</th></tr><tr><td>75°F (24°C)</td><td>1 hour</td><td>2 hours</td><td>3 hours</td><td>6 days</td></tr><tr><td>65°F (18°C)</td><td>2 hours</td><td>4 hours</td><td>5-6 hours</td><td>8 days</td></tr><tr><td>55°F (13°C)</td><td>3-4 hours</td><td>6-8 hours</td><td>10-12 hours</td><td>12 days</td></tr><tr><td>45°F (7°C)</td><td>6-7 hours</td><td>12-14 hours</td><td>16-18 hours</td><td>20 days</td></tr><tr><td>35°F (2°C)</td><td>8-10 hours</td><td>16-18 hours</td><td>20-22 hours</td><td>25 days</td></tr></table>	Temperature	To Touch	To Handle	To Recoat	Immersion	75°F (24°C)	1 hour	2 hours	3 hours	6 days	65°F (18°C)	2 hours	4 hours	5-6 hours	8 days	55°F (13°C)	3-4 hours	6-8 hours	10-12 hours	12 days	45°F (7°C)	6-7 hours	12-14 hours	16-18 hours	20 days	35°F (2°C)	8-10 hours	16-18 hours	20-22 hours	25 days
Temperature	To Touch	To Handle	To Recoat	Immersion																											
75°F (24°C)	1 hour	2 hours	3 hours	6 days																											
65°F (18°C)	2 hours	4 hours	5-6 hours	8 days																											
55°F (13°C)	3-4 hours	6-8 hours	10-12 hours	12 days																											
45°F (7°C)	6-7 hours	12-14 hours	16-18 hours	20 days																											
35°F (2°C)	8-10 hours	16-18 hours	20-22 hours	25 days																											

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

VOLATILE ORGANIC COMPOUNDS	Unthinned: 2.94 lbs/gallon (352 grams/litre) Thinned 10%: 3.30 lbs/gallon (395 grams/litre) †
THEORETICAL COVERAGE	950 mil sq ft/gal (22.8 m ² /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 ± 1.1 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: 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.

**ENVIRO-CRETE®**

PRODUCT DATA SHEET

SERIES 156**PRODUCT PROFILE****GENERIC DESCRIPTION**

Modified Waterborne Acrylate

COMMON USAGE

Flexible, breathable coating primarily for concrete and masonry that can fill and bridge minor hairline cracks. Excellent elastomeric protection against driving rain, alternate freezing-thawing and UV light. Series 156 can also be used as a low cohesive stress overcoat for aged oil or alkyd systems.

COLORS

Refer to Tnemec Color Guide. Series 156 is also available in 01AB Air Barrier Beige.

FINISH

Matte — Smooth

SPECIAL QUALIFICATIONS

Series 156 meets air barrier (A.B.) requirements of Massachusetts' Energy Code, 780 CMR Chapter 13.

PERFORMANCE CRITERIA

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

COATING SYSTEM**PRIMERS****Concrete, Masonry and Wood:** Self-priming or Series 151-1051, 287**Plaster and Stucco:** Series 151-1051, 287**Split-Face and Split-Fluted Block:** Self-priming or Series 150-6602**Steel:** Series 37H, 66, N69, N69F, L69, L69F, 90-97, 94-H₂O, 135, L140, L140F**Galvanized Steel & Non-Ferrous Metal:** Series 66, L69, L69F, N69, N69F, 135**Other:** Series 151 on treated or stained wood, drywall, highly absorbent surfaces and recommended sound existing coatings.**SURFACE PREPARATION****STEEL**

Refer to primer product data sheets for surface preparation recommendations.

GALVANIZED STEEL & NON-FERROUS METAL

Surface preparation recommendations will vary depending on substrate and exposure conditions. Contact your Tnemec representative or Tnemec Technical Services.

CRACKSFill hairline cracks less than 1/64 inch (4 mm) wide by brushing Series 156 into them prior to applying Series 156 over the entire area to be coated. Most business cards are about 1/64 inch (4 mm) thick. For cracks wider than 1/64 inch (4 mm) and/or moving cracks, gaps and expansion joints use Series 152 Tnemec-Tape. Refer to Series 152 product data sheet for details. **Note:** Use Series 156 to embed Tnemec-Tape prior to topcoating with 156.**PAINTED SURFACES**

Remove chalk and old paint not tightly bonded to the surface. Apply test patch to check adhesion.

ALL SURFACES

Must be clean, dry and free of oil, grease, form release agents and other contaminants. Allow new concrete, plaster, stucco and masonry to cure 14 days. Level protrusions and mortar spatter. Bare cementitious surfaces can be slightly dampened with clean water if product is drying too rapidly during application. Series 151 may improve adhesion on smooth surfaces. Reference SSPC-SP13/NACE 6.

TECHNICAL DATA**VOLUME SOLIDS**

50.9 ± 2.0% †

RECOMMENDED DFT

4.0 to 8.0 mils (100 to 205 microns) per coat.

CURING TIME

Temperature	To Touch	To Handle	To Recoat
75°F (24°C) 50% Relative Humidity	1/2 hour	1-2 hours	1 1/4 hours

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

VOLATILE ORGANIC COMPOUNDS**Unthinned:** 0.41 lbs/gallon (49 grams/litre) †**THEORETICAL COVERAGE**816 mil sq ft/gal (19.9 m² L at 25 microns).Actual coverage will vary from about 100 to 200 sq ft (9.3 to 18.6 m²) per gallon dependent upon product, substrate and coating thickness. †**NUMBER OF COMPONENTS**

One

PACKAGING

5 gallon (18.9L) pails and 1 gallon (3.79L) cans. Yield: 5 gallons and 1 gallon respectively.

NET WEIGHT PER GALLON

11.77 ± 0.25 lbs (5.34 ± .23 kg) †

STORAGE TEMPERATURE

Minimum 35°F (2°C) Maximum 110°F (43°C)

TEMPERATURE RESISTANCE

(Dry) Continuous 175°F (79°C) Intermittent 185°F (85°C)

SHELF LIFE

24 months at recommended storage temperature.

FLASH POINT - SETA

N/A

HEALTH & SAFETYPaint 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.



PRODUCT PROFILE

GENERIC DESCRIPTION

Epoxy Modified Cementitious Mortar

COMMON USAGE

A high-performance, aggregate reinforced material for surfacing, patching and filling voids and bugholes in concrete substrates. Generally topcoated with a variety of high-performance epoxies and polyurethanes for use in mild to aggressive exposures.

COLORS

Greenish Gray

COATING SYSTEM

PRIMERS

Concrete: Self-priming
CMU: Self-priming

TOPCOATS

Series 1, 20, 22, FC22, 30, 46H-413, 61, 66, L69, N69, 84, 104, 120, L140, N140, 151-1051, 161, 201, 205, 222, 223, 224, 237, 238, 239, 262, 264, 270, 273, 280, 281, 282, 406, 434, 435, 436, 446.

Note: Refer to the applicable topcoat data sheet for color availability and additional information.

SURFACE PREPARATION

CONCRETE

Prepare surfaces by method suitable for exposure and service. Refer to the appropriate topcoat product data sheet for specific surface preparation recommendations.

Allow new cast-in-place concrete to cure a minimum of 28 days at 75°F (24°C). Verify concrete dryness in accordance with ASTM F 1869 "Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride" (moisture vapor transmission should not exceed three pounds per 1,000 square feet in a 24 hour period), F 2170 "Standard Test Method for Determining Relative Humidity in Concrete using in situ Probes" (relative humidity should not exceed 80%), or D 1265 "Standard Test Method for Indicating Moisture in Concrete by the Plastic Sheet Method" (no moisture present). Prepare concrete surfaces in accordance with NACE No. 6/SSPC-SP13 Joint Surface Preparation Standards and ICRI Technical Guidelines. Abrasive blast, shot-blast, water jet or mechanically abrade concrete surfaces to remove laitance, curing compounds, hardeners, sealers and other contaminants and to provide a minimum ICRI-CSP 5 surface profile. Large cracks, voids and other surface imperfections should be filled with a recommended filler or surface.

CMU

Allow mortar to cure for 28 days. Level protrusions and mortar spatter.

PAINTED SURFACES

Not recommended.

ALL SURFACES

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

TECHNICAL DATA

VOLUME SOLIDS

100% (mixed)

RECOMMENDED DFT

Parge Coat: 1/16"-1/4" per lift; maximum 1/2" thickness
Feather-edge Capable: 1/32"

CURING TIME

Temperature	To Touch	To Recoat with Itself	To Topcoat
75°F (24°C) & 50% R.H.	3-4 hours	unlimited †	15 hours minimum

† **Note:** When the first application is equal to or greater than 1/4", or the second application is equal to or greater than 1/4", then the maximum recoat window with itself is 2 hours.

VOLATILE ORGANIC COMPOUNDS

NUMBER OF COMPONENTS

Unthinned: 0.15 lbs./gallon (19 grams/litre)

PACKAGING

Three—Liquid: Part A and Part B Powder: Part C

KIT CONSIST OF:

	PART A (Liquid)	PART B (Liquid)	PART C (Cement-Sand)	When Mixed
Large Kit	1 gal plastic jug	1 qt can	42.75 lb bag	2.8 gallons (10.6 L)

NET WEIGHT

Large Kit: 51.53 lbs (23.37 kg)

STORAGE TEMPERATURE

Minimum 40°F (4°C) Maximum 110°F (43°C)

For optimum handling and application characteristics, all material components should be stored or conditioned between 70°F to 90°F (21°C to 32°C) 48 hours prior to use. Protect Parts A & B from freezing; discard if frozen. Protect Part C from moisture; store in dry environment off ground.

TEMPERATURE RESISTANCE

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

SHELF LIFE

12 months at recommended storage temperature

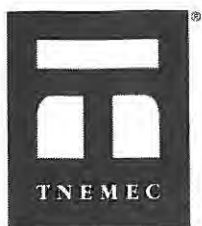
FLASH POINT - SETA

N/A

HEALTH & SAFETY

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.



Safety Data Sheet

Issue Date No data available

Revision Date 30-Mar-2015

Revision Number 5

1. IDENTIFICATION

Product identifier

Product Code FC20-00WHA
Product Name POTA-POX FC TNEMEC WHITE

Other means of identification

Common Name SERIES FC20, PART A
UN/ID no. 1263

Recommended use of the chemical and restrictions on use

Recommended Use industrial paint.
Uses advised against Consumer use, For professional use only. Not for residential use.

Details of the supplier of the safety data sheet

Manufacturer Address
Tnemec Company, Inc. 6800 Corporate Drive, Kansas City, MO 64120-1372

Emergency telephone number

Company Phone Number Tnemec Regulatory Dept: 816-474-3400
24 Hour Emergency Phone Number 800-535-5053 (Infotrac)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

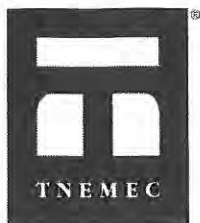
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1
Carcinogenicity	Category 2
Reproductive Toxicity	Category 2
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 1
Flammable Liquids	Category 3

Label elements

EMERGENCY OVERVIEW

Danger



Safety Data Sheet

Issue Date 28-Sep-2015

Revision Date 28-Sep-2015

Revision Number 7

1. IDENTIFICATION

Product identifier

Product Code F027-00WHA
Product Name F. C. TYPOXY TNEMEC WHITE

Other means of identification

Common Name SERIES 27 PART A
UN/ID no. 1263

Recommended use of the chemical and restrictions on use

Recommended Use industrial paint.
Uses advised against Consumer use, For professional use only. Not for residential use.

Details of the supplier of the safety data sheet

Manufacturer Address	Distributor
Tnemec Company, Inc. 6800 Corporate Drive, Kansas City, MO 64120-1372	Tnemec Company, Inc. 86 Boul, des Entreprises, Ste. 203 Boisbriand, Quebec Canada J7G 2T3

Emergency telephone number

Company Phone Number Tnemec Regulatory Dept: 816-474-3400
24 Hour Emergency Phone Number 800-535-5053 (Infotrac)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

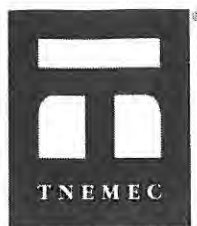
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Skin sensitization	Category 1
Germ cell mutagenicity	Category 1B
Carcinogenicity	Category 1B
Reproductive Toxicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 1
Flammable Liquids	Category 3

Label elements

EMERGENCY OVERVIEW

Danger



Safety Data Sheet

Issue Date 28-Jul-2015

Revision Date 28-Jul-2015

Revision Number 6

1. IDENTIFICATION

Product identifier

Product Code F156-00WH
Product Name ENVIRO-CRETE TNEMEC WHITE

Other means of identification

Common Name SERIES 156

Recommended use of the chemical and restrictions on use

Recommended Use industrial paint.
Uses advised against Consumer use, For professional use only. Not for residential use.

Details of the supplier of the safety data sheet

Manufacturer Address

Tnemec Company, Inc. 6800 Corporate Drive, Kansas City, MO 64120-1372

Distributor

Tnemec Company, Inc. 86 Boul, des Entreprises, Ste. 203
Boisbriand, Quebec Canada J7G 2T3

Emergency telephone number

Company Phone Number Tnemec Regulatory Dept: 816-474-3400
24 Hour Emergency Phone Number 800-535-5053 (Infotrac)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Serious eye damage/eye irritation	Category 2B
Skin sensitization	Category 1
Carcinogenicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 1

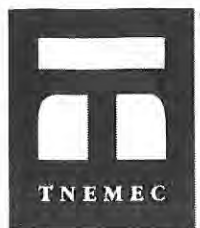
Label elements

EMERGENCY OVERVIEW

Danger

Hazard statements

Causes eye irritation
May cause an allergic skin reaction
Suspected of causing cancer
Causes damage to organs through prolonged or repeated exposure



Safety Data Sheet

Issue Date No data available

Revision Date 06-Apr-2015

Revision Number 4

1. IDENTIFICATION

Product identifier

Product Code F218-0218A
Product Name MORTARCLAD CLEAR

Other means of identification

Common Name SERIES 218 PART A

Recommended use of the chemical and restrictions on use

Recommended Use industrial paint.
Uses advised against Consumer use, For professional use only. Not for residential use.

Details of the supplier of the safety data sheet

Manufacturer Address
Tnemec Company, Inc. 6800 Corporate Drive, Kansas City, MO 64120-1372

Emergency telephone number

Company Phone Number Tnemec Regulatory Dept: 816-474-3400
24 Hour Emergency Phone Number 800-535-5053 (Infotrac)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Label elements

EMERGENCY OVERVIEW

Hazard statements

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Appearance yellow white

Physical state liquid

Odor Slight

Precautionary Statements

Response

Get medical advice/attention if you feel unwell

Storage

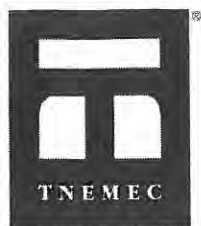
Keep away from children

Hazards not otherwise classified (HNOC)

May cause skin and eye irritation
May be harmful if swallowed

Other information

Acute Toxicity 32.4745 % of the mixture consists of ingredient(s) of unknown toxicity.



Safety Data Sheet

Issue Date 08-Jul-2015

Revision Date 08-Jul-2015

Revision Number 3

1. IDENTIFICATION

Product identifier

Product Code 1095-00WHA
Product Name ENDURA-SHIELD TNEMEC WHITE

Other means of identification

Common Name SERIES 1095, PART A
UN/ID no. 1263

Recommended use of the chemical and restrictions on use

Recommended Use industrial paint.
Uses advised against Consumer use, For professional use only. Not for residential use.

Details of the supplier of the safety data sheet

Manufacturer Address Tnemec Company, Inc. 6800 Corporate Drive, Kansas City, MO 64120-1372
Distributor Tnemec Company, Inc. 86 Boul. des Entreprises, Ste. 203 Boisbriand, Quebec Canada J7G 2T3

Emergency telephone number

Company Phone Number Tnemec Regulatory Dept: 816-474-3400
24 Hour Emergency Phone Number 800-535-5053 (Infotrac)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Inhalation (Vapors)	Category 4
Serious eye damage/eye irritation	Category 2B
Skin sensitization	Category 1
Germ cell mutagenicity	Category 1B
Carcinogenicity	Category 1A
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 1
Flammable Liquids	Category 3

Label elements

EMERGENCY OVERVIEW

Danger

Hazard statements

Harmful if inhaled
Causes eye irritation
May cause an allergic skin reaction
May cause genetic defects
May cause cancer
May cause respiratory irritation. May cause drowsiness or dizziness
Causes damage to organs through prolonged or repeated exposure



**SHERWIN
WILLIAMS.**

As of 11/21/2016, Complies with:			
OTC	Yes	LEED® 09 NC CI	N/A
OTC Phase II	Yes	LEED® 09 CS	N/A
SCAQMD	Yes	LEED® 09 H	N/A
CARB	Yes	LEED® v4 Emissions	N/A
CARB SCM 2007	Yes	LEED® v4 VOC	Yes
MPI	Yes		

102.39

LOXON® XP

Waterproofing System

A24-1400 Series

CHARACTERISTICS

Loxon XP is an exterior, high build coating that provides excellent flexibility, durability and weather resistance. This product will protect against wind-driven rain when used on concrete, CMU, stucco and shotcrete/gunite. It is highly alkali and efflorescence resistant. This may be applied to a surface with a pH of 6 to 13.

- Apply directly to fresh concrete (at least 7 days old)
- Shotcrete/gunite surfaces may be painted after 3 days
- Can be applied over high pH (up to 13) substrates
- No primer required
- Improved roller appearance
- Can be applied down to 35°F

PHYSICAL PROPERTIES

Wind-Driven Rain Test Passes
ASTM D6904-03

2 cts Loxon XP @ 6.4-8.3 mils dft/ct
Water Vapor Permeance ... 17.96 perms
Based on ASTM D1653

2 cts Loxon XP at 6.5 mils dft/ct
14 day cure @ 77°F & 50% RH

Elongation 275%
ASTM D2370

1 ct Loxon XP at 9.4 mils dft
14 day cure @ 77°F & 50% RH

Tensile Strength 285 psi
ASTM D2370

1 ct Loxon XP at 9.4 mils dft
14 day cure @ 77°F & 50% RH

Flexibility Passes
ASTM D522

Alkali Resistance Passes
Based on ASTM D1308

Mildew Resistance Passes
ASTM D3273/D3274

CO₂ Diffusion (anti-carbonation)
ASTM F2476..... 344 meters
Equivalent Air Thickness >50 meters to pass

..... 8.0g/m²/24 hrs
Chloride Ion Permeability 243 coulombs
"Very Low" Permeability Class

Crack Bridging.....Class A5
EN 1062-7 Method A.....up to 2.5 mm @ -10°C

SPECIFICATIONS

Color: Most colors
1 coat system, brush, roller, or spray applied, coverage per coat:

14-18 mils wet 6.5- 8.4 mils dry
90 - 115 sq ft/gal

Can be applied up to 40 mils wet.

Coverage will vary with the substrate and the texture.

Coverage on porous & rough stucco 80 square feet per gallon.

Drying Time, @ 50% RH:
temperature and humidity dependent

@ 35-45°F @ 45°F+

Touch: 6 hour 4 hours
Recoat: 24-48 hours 24 hours

Drying and recoat times are temperature, humidity, and film thickness dependent.

Flash Point: N/A
Finish: 0-10 units @ 85°

Tinting with CCE only:

Base	oz/gal	Strength
Extra White	0-5	100%
Deep Base	4-12	100%
Ultradeep	4-12	100%
Light Yellow	4-12	100%

Vehicle Type: Styrene Acrylic
A24W01451

VOC (less exempt solvents):
<50 g/L; <0.42 lb/gal

As per 40 CFR 59.406 and SOR/2009-264, s.12

Volume Solids: 47 ± 2%

Weight Solids: 61 ± 2%

Weight per Gallon: 11.47 lb

Mildew Resistant

This coating contains agents which inhibit the growth of mildew on the surface of this coating film.

SPECIFICATIONS

For proper waterproofing performance and to resist alkalis, 2 coats of the coating **MUST** be applied between 14.0 - 18.0 mils wet per coat.

A total dry film thickness of 13 - 16.8 mils of topcoat and a surface with 10 or less pinholes per square foot is required for a waterproofing system.

For extremely porous block a coat of Loxon Block Surfacer may be required to achieve a pinhole free surface.

For rehabilitating existing concrete water tanks, additional products may be used.

Concrete, Stucco, Concrete Block, CMU, Split-face Block, and other Cementitious surfaces

1 ct. Loxon Block Surfacer (if needed)
or
1 ct. Loxon Conditioner (if needed)
1-2 cts Loxon XP

Spray and backroll on porous & rough stucco to achieve required film build and a pin-hole free surface.

Previously Coated in good condition

After power washing, apply 1 coat of Loxon XP over the surface.

Waterproofing System

- Two coats of topcoat
- 6.5 to 8.4 mils dft per coat
- 13 to 16.8 mils total dry film thickness
- 10 or less pinholes per square foot

Incidental Wood:

1 ct. Exterior Latex Wood Primer
1-2 cts Loxon XP

Incidental Metal:

(steel, galvanized, or aluminum):

1 ct. Pro Industrial Pro-Cryl Primer
1-2 cts Loxon XP



Protective
&
Marine
Coatings



Certified to
NSF/ANSI 61

MACROPOXY® 5500

LOW VOC EPOXY

PART A B58-X740
PART B B58VX740
PART B B58VX745

SERIES
HARDENER
OAP HARDENER

Revised: March 16, 2017

PRODUCT INFORMATION

4.86

PRODUCT DESCRIPTION

MACROPOXY 5500 is a high solids, polyamidoamine epoxy tank lining developed for potable water storage tanks. Superior spray and performance properties make MACROPOXY 5500 ideal for field or shop applications.

- Low odor, Low VOC
- Outstanding application properties
- Recommended for potable water

PRODUCT CHARACTERISTICS

Finish: Semi-Gloss
Color: Red Primer, White, Light Blue and Beige Topcoats
Volume Solids: 74% ± 2%, mixed
Weight Solids: 82% ± 2%, mixed
VOC (EPA Method 24): <100 g/L; 0.83 lb/gal
Mix Ratio: 1:1 by volume

Primer Recommended Spreading Rate per coat:

	B58RX740	Minimum	Maximum
Wet mils (microns)		3.0 (75)	8.0 (200)
Dry mils (microns)		2.0 (50)	6.0 (150)
~Coverage sq ft/gal (m ² /L)		197 (4.8)	593 (14.4)
Theoretical coverage sq ft/gal (m ² /L) @ 1 mil / 25 microns dft		1187 (29.1)	

NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

Primer Drying Schedule @ 6.0 mils wet (150 microns):

	B58RX740	@ 50°F/10°C	@ 77°F/25°C	@ 100°F/38°C
			50% RH	
To touch:		2 hours	1.5 hours	1 hour
To handle:		24 hours	16 hours	5 hours
To recoat:				
minimum:		48 hours	16 hours	5 hours
maximum:		2 months	2 months	7 days
Cure for:				
immersion:		14 days*	7 days	7 days
If maximum recoat time is exceeded, abrade surface before recoating. Drying time is temperature, humidity, and film thickness dependent.				
Pot Life:		3 hours	1.5 hours	1 hour
Sweat-in-time:		None	None	None
*For Potable Water Service, allow a minimum of 7 days at/above 77°F (25°C) cure to service. Sterilize and rinse per AWWA C652.				

Topcoats Recommended Spreading Rate per coat:

		Minimum	Maximum
Wet mils (microns)		8.0 (200)	18.0 (400)
Dry mils (microns)		6.0 (150)	14.0 (350)
~Coverage sq ft/gal (m ² /L)		79 (1.9)	197 (4.8)
Theoretical coverage sq ft/gal (m ² /L) @ 1 mil / 25 microns dft		1187 (29.1)	

NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

PRODUCT CHARACTERISTICS (CONT'D)

Topcoats Drying Schedule @ 10.0 mils wet (250 microns):

	@ 50°F/10°C	@ 77°F/25°C	@ 100°F/38°C
		50% RH	
To touch:	2 hours	1.5 hours	1 hour
To handle:	24 hours	16 hours	5 hours
To recoat:			
minimum:	48 hours	16 hours	5 hours
maximum:	2 months	2 months	7 days

Cure for:

immersion:	14 days*	7 days	7 days
------------	----------	--------	--------

If maximum recoat time is exceeded, abrade surface before recoating.
Drying time is temperature, humidity, and film thickness dependent.

Pot Life: 3 hours 1.5 hours 1 hour
Sweat-in-time: None None None

*For Potable Water Service, allow a minimum of 7 days at/above 77°F (25°C) cure to service. Sterilize and rinse per AWWA C652.

Shelf Life: 36 months, unopened
Store indoors at 40°F (4.5°C) to 100°F (38°C)

Flash Point: 93°F (34°C), Seta Flash, mixed

Reducer/Clean Up: Reducer R7K111

RECOMMENDED USES

- For potable water service, consult WWW.NSF.ORG
- Water treatment plants
- Complies with AWWA D102 for ICS #1, #2, & #5; for OCS #5 & #6
- Complies with AWWA D102 Meets the requirements of AWWA C210

PERFORMANCE CHARACTERISTICS

Substrate*: Steel

Surface Preparation*: SSPC-SP10/NACE 2

System Tested*:

1 ct. MacroPOxy 5500 @ 6.0 mils (150 microns) dft

*unless otherwise noted below

Test Name	Test Method	Results
Abrasion Resistance	ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load	120 mg loss
Adhesion	ASTM D4541	>1700 psi
Corrosion Weathering	ASTM D5894, 36 cycles, 12,000 hours	Rating 10 per ASTM D714 for blistering; Rating 9 per ASTM D616 for rusting
Direct Impact Resistance	ASTM D2794	30 in. lb.
Dry Heat Resistance	ASTM D2485	250°F (121°C)
Flexibility	ASTM D522, 180° bend, 1" mandrel	Pass
Humidity Resistance	ASTM D4585, 6000 hours	No blistering, cracking or rusting
Immersion	18 months fresh and salt water	Rating 10 per ASTM D714 for blistering; Rating 10 per ASTM D610 for rusting
Pencil Hardness	ASTM D3363	4H

Epoxy coatings may darken or discolor following application and curing.
Above are typical results and should not be construed as a specification.



Protective & Marine Coatings

MACROPOXY® 646 FAST CURE EPOXY

PART A
PART B

B58-600
B58V600

SERIES
HARDENER

Revised: July 11, 2017

PRODUCT INFORMATION

4.53

PRODUCT DESCRIPTION

MACROPOXY 646 FAST CURE EPOXY is a high solids, high build, fast drying, polyamide epoxy designed to protect steel and concrete in industrial exposures. Ideal for maintenance painting and fabrication shop applications. The high solids content ensures adequate protection of sharp edges, corners, and welds. This product can be applied directly to marginally prepared steel surfaces.

- Low VOC
- Low odor
- Outstanding application properties
- Meets Class A requirements for Slip Coefficient, 0.36 @ 6 mils / 150 microns dft (Mill White only)
- Chemical resistant
- Abrasion resistant

PRODUCT CHARACTERISTICS

Finish:	Semi-Gloss
Color:	Mill White, Black and a wide range of colors available through tinting
Volume Solids:	72% ± 2%, mixed, Mill White
Weight Solids:	85% ± 2%, mixed, Mill White
VOC (EPA Method 24):	Unreduced: <250 g/L; 2.08 lb/gal mixed Reduced 10%: <300 g/L; 2.50 lb/gal
Mix Ratio:	1:1 by volume

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	7.0 (175)	13.5 (338)
Dry mils (microns)	5.0* (125)	10.0* (250)
~Coverage sq ft/gal (m²/L)	116 (2.8)	232 (5.7)
Theoretical coverage sq ft/gal (m²/L) @ 1 mil / 25 microns dft	1152 (28.2)	

*May be applied at 3.0-10.0 mils (75-250 microns) dft in a multi-coat system. Refer to Recommended Systems and Performance Tips Sections.

NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

Drying Schedule @ 7.0 mils wet (175 microns):

	@ 35°F/1.7°C	@ 77°F/25°C 50% RH	@ 100°F/38°C
To touch:	4-5 hours	2 hours	1.5 hours
To handle:	48 hours	8 hours	4.5 hours
To recoat:			
minimum:	48 hours	8 hours	4.5 hours
maximum:	1 year	1 year	1 year
To cure:			
Service:	10 days	7 days	4 days
Immersion:	14 days	7 days	4 days

If maximum recoat time is exceeded, abrade surface before recoating.
Drying time is temperature, humidity, and film thickness dependent.
Paint temperature must be at least 40°F (4.5°C) minimum.

Pot Life:	10 hours	4 hours	2 hours
Sweat-in-time:	30 minutes	30 minutes	15 minutes

When used as an intermediate coat as part of a multi-coat system:

Drying Schedule @ 5.0 mils wet (125 microns):

	@ 35°F/1.7°C	@ 77°F/25°C 50% RH	@ 100°F/38°C
To touch:	3 hours	1 hour	1 hour
To handle:	48 hours	4 hours	2 hours
To recoat:			
minimum:	16 hours	4 hours	2 hours
maximum:	1 year	1 year	1 year

PRODUCT CHARACTERISTICS (Cont'd)

Shelf Life:	36 months, unopened Store indoors at 40°F (4.5°C) to 110°F (43°C).
Flash Point:	91°F (33°C), TCC, mixed
Reducer/Clean Up:	Reducer, R7K15
In California:	Reducer R7K111 or Oxsol 100

PERFORMANCE CHARACTERISTICS

Substrate*: Steel

Surface Preparation*: SSPC-SP10/NACE 2

System Tested*:

1 ct. Macropoxy 646 Fast Cure @ 6.0 mils (150 microns) dft

*unless otherwise noted below

Test Name	Test Method	Results
Abrasion Resistance	ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load	84 mg loss
Accelerated Weathering-QUV¹	ASTM D4587, QUV-A, 12,000 hours	Passes
Adhesion	ASTM D4541	1.037 psi
Corrosion Weathering¹	ASTM D5894, 36 cycles, 12,000 hours	Rating 10 per ASTM D714 for blistering; Rating 9 per ASTM D610 per rusting
Nuclear Decontamination	ASTM D4256/ANSI N 5.12	99% Water Wash; 95% Overall
Direct Impact Resistance²	ASTM D2794 Modified	**120 in. lb.
Dry Heat Resistance	ASTM D2485	250°F (121°C)
Exterior Durability	1 year at 45° South	Excellent, chalks
Flexibility	ASTM D522, 180° bend, 3/4" mandrel	Passes
Fuel Contribution	NEPA 259	5764 btu/lb
Humidity Resistance	ASTM D4585, 6000 hours	No blistering, cracking, or rusting
Immersion	1 year fresh and salt water	Passes, no rusting, blistering, or loss of adhesion
Radiation Tolerance	ASTM D4082 / ANSI 5.12	Pass at 21 mils (525 microns)
Pencil Hardness	ASTM D3363	3H
Salt Fog Resistance¹	ASTM B117, 6,500 hours	Rating 10 per ASTM D610 for rusting; Rating 9 per ASTM D1654 for corrosion
Slip Coefficient, Mill White³	AISC Specification for Structural Joints Using ASTM A325 or ASTM A490 Bolts	Class A, 0.36
Surface Burning	ASTM E84/NFPA 255	Flame Spread Index 20; Smoke Development Index 35 (at 18 mils or 450 microns)
Water Vapor Permeance	ASTM D1653, Method B	1.16 US perms

Epoxy coatings may darken or discolor following application and curing.

*Refer to Slip Certification document

** Performed on 1/16 inch blasted steel

¹Footnotes:

²Zinc Clad II Plus Primer

³Two coats of Macropoxy 646 Fast Cure Epoxy

DISCLAIMER

The information and recommendations set forth in this Product Data Sheet are based upon tests conducted by or on behalf of The Sherwin-Williams Company. Such information and recommendations set forth herein are subject to change and pertain to the product offered at the time of publication. Consult your Sherwin-Williams representative to obtain the most recent Product Data Information and Application Bulletin.



Protective & Marine Coatings

ACROLON™ 218 HS ACRYLIC POLYURETHANE

PART A	B65-600	GLOSS SERIES
PART A	B65-650	SEMI-GLOSS SERIES
PART B	B65V600	HARDENER

Revised: July 19, 2016

PRODUCT INFORMATION

5.22

PRODUCT DESCRIPTION

ACROLON 218 HS is a polyester modified, aliphatic, acrylic polyurethane formulated specifically for in-shop applications. Also suitable for industrial applications. A fast drying, urethane that provides color and gloss retention for exterior exposure.

- Can be used directly over organic zinc rich primers (epoxy zinc primer and moisture cure urethane zinc primer)
- Color and gloss retention for exterior exposure
- Fast dry
- Outstanding application properties

PRODUCT CHARACTERISTICS

Finish:	Gloss or Semi-Gloss
Color:	Wide range of colors available
Volume Solids:	65% ± 2%, mixed, may vary by color
Weight Solids:	78% ± 2%, mixed, may vary by color
VOC (EPA Method 24):	Unreduced: <300 g/L; 2.5 lb/gal mixed Reduced 10% with R7K15: <340 g/L; 2.8 lb/gal mixed Reduced 9% with MEK, R6K10: <340 g/L; 2.8 lb/gal
Mix Ratio:	6:1 by volume, 1 gallon or 5 gallon mixes premeasured components

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	4.5 (112.5)	9.0 (225)
Dry mils (microns)	3.0 (75)	6.0 (150)
~Coverage sq ft/gal (m²/L)	175 (4.3)	346 (8.5)
Theoretical coverage sq ft/gal (m²/L) @ 1 mil / 25 microns dft	1040 (25.5)	

NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

Drying Schedule @ 6.0 mils wet (150 microns):

	@ 35°F/1.7°C	@ 77°F/25°C	@ 120°F/49°C
		50% RH	
To touch:	4 hours	30 minutes	20 minutes
To handle:	18 hours	6 hours	4 hours
To recoat:			
minimum:	18 hours	8 hours	6 hours
maximum:	3 months	3 months	3 months
To cure:	14 days	7 days	5 days
Pot Life:	4 hours	2 hours	45 minutes
(reduced 5% with Reducer R7K15)			
Sweat-in-Time:	None		

If maximum recoat time is exceeded, abrade surface before recoating. Drying time is temperature, humidity, and film thickness dependent. Paint temperature must be at least 40°F (4.5°C) minimum.

Shelf Life:	Part A* - 36 months, unopened Part B - 24 months, unopened Store indoors at 40°F (4.5°C) to 100°F (38°C).
*Aluminum (Part A, Rex # B65SW655) has a shelf life of 24 months.	
Flash Point:	55°F (13°C), Seta, mixed
Reducer/Clean Up:	
Spray:	Reducer R7K15, MEK R6K10, or R7K111
Brush / Roll:	Reducer #132, R7K132 or R7K111

RECOMMENDED USES

Specifically formulated for in-shop applications. For use over prepared metal and masonry surfaces in industrial environments such as:

- Structural steel
- Rail cars and locomotives
- Conveyors
- Bridges
- Wind Towers - onshore and offshore
- Offshore platforms - exploration and production
- Suitable for use in USDA inspected facilities
- Conforms to AWWA D102 Outside Coating Systems #4 (OCS-4), #5 (OCS-5) & #6 (OCS-6)
- Acceptable for use in high performance architectural applications
- Acceptable for use over and/or under Loxon S1 and Loxon H1 Caulking
- A component of INFINITANK
- Over FIRETEX® hydrocarbon systems
- Suitable for use in the Mining & Minerals Industry
- Tank exteriors
- Pipelines
- Ships

PERFORMANCE CHARACTERISTICS

Substrate*: Steel

Surface Preparation*: SSPC-SP10/NACE 2

System Tested*:

- 1 ct. Macropoxy 646 @ 6.0 mils (150 microns) dft
- 1 ct. Acrolon 218 HS Gloss @ 4.0 mils (100 microns) dft

*unless otherwise noted below

Test Name	Test Method	Results
Abrasion Resistance¹	ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load	43 mg loss
Adhesion²	ASTM D4541	1976 psi
Corrosion Weathering³	ASTM D5894, 27 cycles, 9072 hours	Rating 10 per ASTM D610, for rusting; Rating 10 per ASTM D714, for blistering
Direct Impact Resistance¹	ASTM D2794	50 in. lb.
Dry Heat Resistance¹	ASTM D2485, Method A	200°F (93°C)
Flexibility¹	ASTM D522, 180° bend, 1/8" mandrel	Passes
Humidity Resistance²	ASTM D4585, 100°F (38°C), 1500 hours	Rating 10 per ASTM D610, for rusting; Rating 10 per ASTM D714, for blistering
Pencil Hardness	ASTM D3363	3H
Salt Fog Resistance³	ASTM B117, 15,000 hours	Rating 10 per ASTM D610, for rusting; Rating 10 per ASTM D714, for blistering

Meets the requirements of SSPC Paint No. 36, Level 3 for white and light colors. Dark colors may require a clear coat.

Complies with ISO 12944-5 C5I and C5M requirements.

Footnotes:

¹ Finish coat only tested

² Primer	Zinc-Clad II Plus
Intermediate	Macropoxy 646
Finish	Acrolon 218 HS
³ Primer	Zinc-Clad III HS

ENVIRONMENTAL DATA SHEET

(Certified Product Data Sheet)

20 00 [1227]

Date of Preparation
May 2, 2017

PRODUCT NUMBER

A24W1451

PRODUCT NAME

LOXON XP™ Acrylic Waterproofing Masonry Coating, Extra White

MANUFACTURER'S NAME

THE SHERWIN-WILLIAMS COMPANY
101 W. Prospect Avenue
Cleveland, OH 44115

This document includes all data required by 40 CFR 63.801(a) for a Certified Product Data Sheet under criteria specified in 40 CFR 63.805(a). All data given below are MAXIMUM THEORETICAL VALUES based on the product AS CURRENTLY FORMULATED. Variations may occur on individual batches due to adjustments made during production.

Product Weight

11.47 lb/gal

Specific Gravity

1.38

FLASH POINT

N.A.

Hazard Category (for SARA 311.312)

| Acute | Chronic |

Volatile Ingredients

Chemical / Compound	SARA 302 EHS	CERCLA	SARA 313 TC	HAPS 112	% by Weight	% by Volume
Water	N	N	N	N	39	53
7732-18-5	N	N	N	N	39	53

Regulated Compounds

	SARA 302 EHS	CERCLA	SARA 313 TC	HAPS 112	% by Weight	% by Volume
Zinc (as Zn)	N	Y	Y	N	2	
Zinc Compound	N	N	Y	N	2	

Volatile Organic Compounds - U.S. EPA

A.	Coating Density	11.47 lb/gal	1374 g/l	
B.	Total Volatiles	38.8% by wt.	53.5% by vol.	
	4966:			
	Ammonium Hydroxide	0.2% by wt.	0.3% by vol.	
C.	Federally exempt solvents:			
	Water	38.7% by wt.	53.2% by vol.	
D.	Organic Volatiles	0.0% by wt.	0.0% by vol.	
E.	Percent Non-Volatile	61.2% by wt.	46.5% by vol.	
F.	VOC Content	0.00 lb/gal	0 g/l	total
		0.00 lb/gal	0 g/l	less exempt solvents
		0.00 lb/gal	0 g/l	of solids
		0.00 lb/lb	0.00 kg/kg	of solids
		0.0%		by wt LVP-VOC
	Maximum Incremental Reactivity (MIR) (per US EPA Aerosol Ctg Rule, MIR Values 2009)			
		0.00		

ENVIRONMENTAL DATA SHEET

(Certified Product Data Sheet)

Date of Preparation
Aug 15, 2016

03 00 [1316]

PRODUCT NUMBER

B58VX740

PRODUCT NAME

MACROPOXY® 5500 Epoxy (Part B), Standard Hardener

MANUFACTURER'S NAME

THE SHERWIN-WILLIAMS COMPANY
101 W. Prospect Avenue
Cleveland, OH 44115

This document includes all data required by 40 CFR 63.801(a) for a Certified Product Data Sheet under criteria specified in 40 CFR 63.805(a). All data given below are MAXIMUM THEORETICAL VALUES based on the product AS CURRENTLY FORMULATED. Variations may occur on individual batches due to adjustments made during production.

Product Weight

13.27 lb/gal

Specific Gravity

1.60

FLASH POINT

76 °F PMCC

Hazard Category (for SARA 311.312)

| Acute | Chronic | Fire |

Volatile Ingredients

Chemical / Compound	SARA 302 EHS	CERCLA	SARA 313 TC	HAPS 112	% by Weight	% by Volume
Ethylbenzene 100-41-4	N	Y	Y	Y	0.3	< 1
Xylene 1330-20-7	N	Y	Y	Y	2	3
Acetone 67-64-1	N	Y	N	N	6	12
Methyl Isobutyl Ketone 108-10-1	N	Y	Y	Y	4	9

Volatile Organic Compounds (follows U.S. EPA VOC Data Sheet)

A.	Coating Density		13.27 lb/gal	1589 g/l
B.	Total Volatiles		12.6 % by wt.	25.1 % by vol.
C.	Federally exempt solvents:			
	Water		0.0 % by wt.	0.0 % by vol.
	Acetone		5.7 % by wt.	11.5 % by vol.
D.	Organic Volatiles		6.9 % by wt.	13.5 % by vol.
E.	Percent Non-Volatile		87.4 % by wt.	74.9 % by vol.
F.	VOC Content	0.91 lb/gal	109 g/l	total
	1.	1.03 lb/gal	124 g/l	less exempt solvents
	2.	1.22 lb/gal	146 g/l	of solids
		0.07 lb/lb	0.07 kg/kg	of solids

Hazardous Air Pollutants (Clean Air Act, Section 112(b))

Volatile HAPS	0.85	lb/gal	0.102	kg/l
	1.13	lb/gal	0.136	kg/l of solids
	0.07	lb/lb	0.07	kg/kg of solids

Air Quality Data

Density of Organic Solvent Blend

6.69 lb/gal

Photochemically Reactive

Yes

Maximum Incremental Reactivity (MIR) (per California Air Resources Board Aerosol Products Regulation, MIR Values 2010)

0.35

ENVIRONMENTAL DATA SHEET

(Certified Product Data Sheet)

Date of Preparation
Jun 20, 2017

19 00 [1717]

PRODUCT NUMBER

B58V600

PRODUCT NAME

MACROPOXY® 646 Fast Cure Epoxy (Part B), Hardener

MANUFACTURER'S NAME

THE SHERWIN-WILLIAMS COMPANY
101 W. Prospect Avenue
Cleveland, OH 44115

This document includes all data required by 40 CFR 63.801(a) for a Certified Product Data Sheet under criteria specified in 40 CFR 63.805(a). All data given below are MAXIMUM THEORETICAL VALUES based on the product AS CURRENTLY FORMULATED. Variations may occur on individual batches due to adjustments made during production.

Product Weight

13.46 lb/gal

Specific Gravity

1.62

FLASH POINT

73 °F PMCC

Hazard Category (for SARA 311.312)

| Acute | Chronic | Fire |

Volatile Ingredients

Chemical / Compound	SARA 302 EHS	CERCLA	SARA 313 TC	HAPS 112	% by Weight	% by Volume
Ethylbenzene 100-41-4	N	Y	Y	Y	0.3	< 1
Xylene 1330-20-7	N	Y	Y	Y	2	3
Methyl Isobutyl Ketone 108-10-1	N	Y	Y	Y	10	19

Volatile Organic Compounds - U.S. EPA

A.	Coating Density	13.46 lb/gal	1612 g/l	
B.	Total Volatiles	12.2% by wt.	24.4% by vol.	
C.	Federally exempt solvents:			
	Water	0.0% by wt.	0.0% by vol.	
D.	Organic Volatiles	12.2% by wt.	24.4% by vol.	
E.	Percent Non-Volatile	87.8% by wt.	75.6% by vol.	
F.	VOC Content	1.63 lb/gal	196 g/l	total
		1.63 lb/gal	196 g/l	less exempt solvents
		2.16 lb/gal	259 g/l	of solids
		0.13 lb/lb	0.13 kg/kg	of solids
		12.2%		by wt LVP-VOC
	Maximum Incremental Reactivity (MIR) (per US EPA Aerosol Ctg Rule, MIR Values 2009)	0.53		

Volatile Organic Compounds - California

A.	Coating Density	13.46 lb/gal	1612 g/l	
B.	Total Volatiles	12.2% by wt.	24.4% by vol.	
C.	Exempt solvents:			
	Water	0.0% by wt.	0.0% by vol.	
D.	Organic Volatiles	12.2% by wt.	24.4% by vol.	
E.	Percent Non-Volatile	87.8% by wt.	75.6% by vol.	
F.	VOC Content	1.63 lb/gal	196 g/l	total
		1.63 lb/gal	196 g/l	less exempt solvents
		2.16 lb/gal	259 g/l	of solids
		0.13 lb/lb	0.13 kg/kg	of solids
		12.2%		by wt LVP-VOC
	Maximum Incremental Reactivity (MIR) (per California Air Resources Board Aerosol Products Regulation, MIR Values 2010)	0.53		

ENVIRONMENTAL DATA SHEET

(Certified Product Data Sheet)

15 00 [1347]

Date of Preparation
May 14, 2017

PRODUCT NUMBER

B65V600

PRODUCT NAME

ACROLON™ 218 HS Polyurethane (Part B), Hardener

MANUFACTURER'S NAME

THE SHERWIN-WILLIAMS COMPANY
101 W. Prospect Avenue
Cleveland, OH 44115

This document includes all data required by 40 CFR 63.801(a) for a Certified Product Data Sheet under criteria specified in 40 CFR 63.805(a). All data given below are MAXIMUM THEORETICAL VALUES based on the product AS CURRENTLY FORMULATED. Variations may occur on individual batches due to adjustments made during production.

Product Weight

9.41 lb/gal

Specific Gravity

1.13

FLASH POINT

> 200 °F PMCC

Hazard Category (for SARA 311.312)

| Acute | Chronic |

Volatile Ingredients

Not Applicable

Volatile Organic Compounds - U.S. EPA

A.	Coating Density	9.41 lb/gal	1127 g/l	
B.	Total Volatiles	0.0% by wt.	0.0% by vol.	
C.	Federally exempt solvents:			
	Water	0.0% by wt.	0.0% by vol.	
D.	Organic Volatiles	0.0% by wt.	0.0% by vol.	
E.	Percent Non-Volatile	100.0% by wt.	100.0% by vol.	
F.	VOC Content	0.00 lb/gal	0 g/l	total
		0.00 lb/gal	0 g/l	less exempt solvents
		0.00 lb/gal	0 g/l	of solids
		0.00 lb/lb	0.00 kg/kg	of solids
		0.0%		by wt LVP-VOC
	As-Applied	< 2.94 lb/gal	< 352 g/l	by wt less exempt solvents
	Maximum Incremental Reactivity (MIR) (per US EPA Aerosol Ctg Rule, MIR Values 2009)	0.00		

Volatile Organic Compounds - California

A.	Coating Density	9.41 lb/gal	1127 g/l	
B.	Total Volatiles	0.0% by wt.	0.0% by vol.	
C.	Exempt solvents:			
	Water	0.0% by wt.	0.0% by vol.	
D.	Organic Volatiles	0.0% by wt.	0.0% by vol.	
E.	Percent Non-Volatile	100.0% by wt.	100.0% by vol.	
F.	VOC Content	0.00 lb/gal	0 g/l	total
		0.00 lb/gal	0 g/l	less exempt solvents
		0.00 lb/gal	0 g/l	of solids
		0.00 lb/lb	0.00 kg/kg	of solids
		0.0%		by wt LVP-VOC
	As-Applied	< 2.94 lb/gal	< 352 g/l	by wt less exempt solvents
	Maximum Incremental Reactivity (MIR) (per California Air Resources Board Aerosol Products Regulation, MIR Values 2010)	0.00		