ST. TAMMANY PARISH

PATRICIA P. BRISTER
PARISH PRESIDENT

**December 5, 2018**

Please find the following addendum to the below mentioned BID.

**Addendum No.**: 2

**Bid#**: 323-00-18-54-2

**Project Name**: Safe Haven Facility Maintenance and Improvements – Boiler House HVAC Chiller System

**Bid Due Date**: Tuesday, December 11, 2018

## GENERAL INFORMATION:

1. The Mandatory Pre-Bid Conference was held on the Safe Haven Campus in the Boiler House located at 23592 Sparrow Road, Mandeville, LA 70448 on Wednesday, November 28, 2018 at 10:00 am. Questions from the meeting and official responses are listed in the Questions & Answers section of this addendum. The Pre-Bid Sign-In Sheet is attached.

2. Bruce Crouch, Director Facilities Management provided an overview of the project and attendees viewed the site.

3. Please delete No. 8. CHILLED WATER AND HOT WATER PIPE INSULATION REPAIR SCOPE OF WORK from Section 9, Specifications and replace with No. 8 CHILLED WATER AND HOT WATER PIPE INSULATION REPAIR SCOPE OF WORK – REVISED (attached). The insulation requirements have been clarified and updated.

4. Please delete No. 11. ACCESS DOOR REPLACEMENT SCOPE OF WORK and replace with No. 11. ACCESS DOOR REPLACEMENT SCOPE OF WORK – REVISED (attached). The three door sets and louvers will be replaced as specified.

**QUESTIONS & ANSWERS:**

**Question 1:** What about replacing the insulation on the chillers?

**Answer 1:** **The insulation on the chillers shall be replaced per Section 09 Specifications, No. 8 CHILLED WATER AND HOT WATER PIPE AND INSULATION REPAIR SCOPE OF WORK – REVISED (attached).**

**Question 2:** Is eddy current testing included?

**Answer 2:** **Yes, eddy current testing is included as a component of the annual maintenance located under "Scheduling Other Maintenance" in the Chiller Maintenance checklist per Section 09 Specifications, No. 1 CHILLER ANNUAL MAINTENANCE SCOPE OF WORK.**

**Question 3:** Will the Parish specify colors?

**Answer 3:** **Yes, the Parish has specified the colors. The colors of the pipe labels per application is specified on Figure No. 14, Section 09 Specifications, No. 9 NEW MECHANICAL ROOM PIPE JACKETING AND LABELS SCOPE OF WORK. The paint shall be suitable for the purpose and will be approved in the submittal review stage based on Contractor recommendations and Parish preference.**

**Question 4:** Are we repairing only damaged insulation on all piping? Opinion of damaged insulation and quantity is a variable that everyone will have different. If only damaged insulation gets repaired we need a linear footage quantity to bid on. We can provide a unit cost per foot.

**Answer 4:** **Yes, please refer to Section 09 Specifications, No. 8 CHILLED WATER AND HOT WATER PIPE AND INSULATION REPAIR SCOPE OF WORK - REVISED (attached).**

**Question 5:** Are we to reinsulate the 10 exterior pipes and provide aluminum jacket?

**Answer 5:** **Yes, please refer to Section 09 Specifications, No. 8 CHILLED WATER AND HOT WATER PIPE AND INSULATION REPAIR SCOPE OF WORK - REVISED (attached).**

**Question 6:** Note; the expansion tank has new insulation installed. The air separator shown in figure 13 gets reinsulated.

**Answer 6:** **It is the responsibility of the Contractor to determine if insulation is in good physical and operational condition. Please bring the appearance and performance back to like new condition Section 09 Specifications, No. 8 CHILLED WATER AND HOT WATER PIPE AND INSULATION REPAIR SCOPE OF WORK - REVISED (attached).**

**Question 7**: The spec says to install the standard pipe insulation. It looks like below is existing. Will this be acceptable? Please confirm.

a. Insulation 1.5" rigid fiberglass w/ F.R.J. jacket
b. elbows only. Provide 20 mil colored PVC Jacket
c. Fittings and valves. Same as pipe w/ (2) coats of white vapor barrier w/ mesh reinforcing

**Answer 7:** **Please repair and replace the insulation to match the existing insulation where size appropriate and meets industry standards.**

**Question 8:** In the mechanical yard is the contractor responsible for removal of the overgrown vegetation?

**Answer 8:** **Parish will clear the vegetation in the mechanical yard.**

**Question 9:** Because we are replacing pumps. Testing and balancing of the hydronics should be required.

**Answer 9:** **Yes, testing and balancing is required per Section 09 Specifications, No. 3 CHILLED WATER PUMP REPLACEMENT SCOPE OF WORK.**

**Question 10:** Does the contractor have any time constraints with system shut downs?

**Answer 10:** **Yes, shut downs will be scheduled with Parish Facilities Management Department.**

**Question 11**: Will the chill water piping require new jacketing?

**Answer 11:** **Yes, please refer to Section 9 Specifications, No. 8 CHILLED WATER AND HOT WATER PIPE INSULATION REPAIR SCOPE OF WORK – REVISED (attached) and per the Section 09 Specifications, MECHANICAL INSULATION AND JACKETING notes.**

**Question 12**: The bid documents state to "repair/replace" insulation. Who will make determination on what needs to be repaired or replaced? Or is all insulation to be replaced?

**Answer 12:** **A physical and visible inspection will be performed by the Contractor to determine the condition, effectiveness, and appearance of the existing insulation. The insulation is to be repaired or replaced so that appears and performs like new per Section 9 Specifications, No. 8 "CHILLED WATER AND HOT WATER PIPE INSULATION REPAIR SCOPE OF WORK – REVISED (attached).**

**Question 13**: Does steam pipe need to be replaced?

**Answer 13:** **No, the steam pipes will not be replaced.**

**Question 14**: Heating water valves are currently not insulated, do they require insulation?

**Answer 14:** **Yes, please refer to Section 9 Specifications, No.8 CHILLED WATER AND HOT WATER PIPE INSULATION REPAIR SCOPE OF WORK – REVISED (attached).**

**Question 15**: Does the domestic water require insulation?

**Answer 15:** **Yes, please refer to Section 9 Specifications, No.8 CHILLED WATER AND HOT WATER PIPE INSULATION REPAIR SCOPE OF WORK – REVISED (attached) and per the Section 09 Specifications, MECHANICAL INSULATION AND JACKETING notes.**

**Question 16**: The CHWP-11 pump to be replaced – Please provide the RPM and Motor HP

**Answer 16:** **The CHWP-11 is 75 HP and 1800 RPM.**

**Question 17**: The CDWP-H1 – Please provide the RPM and Motor HP.

**Answer 17: The CDWP-H1 is 25 HP and 1800 RPM.**

**Question 18**: The two Aurora Condensate receivers and pumps – Please provide the RPM and Motor HP. We are Not finding any information based on the model number in the picture on the Aurora Pump.

**Answer 18: The pumps are 3 HP and 1775 RPM.**

**Question 19**: Please see attach our proposed products and coating systems to be applied on the above listed project that bids on 12-11-18. We respectfully request that the proposed products be accepted as equals for the products specified. Please advise.

**Answer 19: The Safe Haven Boiler House – Field Coatings Proposal by Professional Application Services, Inc. (attached) is a prior approved equal to Sherwin Williams Armorseal Epoxy specified in Section 9 Specifications, No. 12 CLEAN AND PAINT INTERIOR OF BOILER HOUSE HVAC CHILLER SYSTEM BUILDING SCOPE OF WORK.**

**ATTACHMENTS:**

1. Pre-Bid Sign-In Sheet.pdf
2. No. 8 CHILLED WATER AND HOT WATER PIPE INSULATION REPAIR SCOPE OF WORK – REVISED.pdf
3. No. 11. ACCESS DOOR REPLACEMENT SCOPE OF WORK – REVISED.pdf
4. Safe Haven Boiler House – Field Coatings Proposal by Professional Application Services, Inc.pdf

**<< End of Addendum # 2>>**

Wednesday, November 28, 2018
10:00 AM

**Location:** Safe Haven Campus-Boiler House
23592 Sparrow Road, Mandeville, LA 70448

# Pre-Bid Sign-In Sheet

**Safe Haven Facility Maintenance and Improvements – Boiler House HVAC Chiller - Bid #323-00-18-54-2**

| | Name | Company | Email | Phone | Time In | Time Out |
|---|---|---|---|---|---|---|
| 1 | KARL GOTTFRIED | GOTTFRIED | kg3@gottfried-us.com | 985-853-3773 | 9:55 | 10:35 |
| 2 | Gordon Gottfried | Gottfried | gordon@gottfried-us.com | " " | 9:55 | 10:35 |
| 3 | CHAD PIOT | BERNHARD MCC | cpiot@bernhardmcc.com | 504 451-4938 | 9:55 | 10:33 |
| 4 | Don Ferguson | CCS/Prosource | don@ccsboilers.ca | 8888100918 | 9:40 | 10:32 |
| 5 | Chuck Roussel | STAR Service | CRoussel@STARSERVICE.com | 504 416-1158 | 9:50 | 10:35 |
| 6 | Brandon Schaefer | CM Combs Const. | bschaefer@cmcombsconstruction.com | 985-867-4460 | 9:58 | 10:35 |
| 7 | Richard Fields | STPG | rsfields@STPGOV.ORG | 9858932792 | 9:58 | 10:40 |
| 8 | Thomas Mathies | STPG | TMathies@stpgov.org | 985-898-2792 | 10:00 | 10:35 |
| 9 | Valerie Talley | STPG Procurement | vmtalley@stpgov.org | 985-898-2520 | 10:00 | 10:40 |
| 10 | | | | | | |
| 11 | | | | | | |
| 12 | | | | | | |
| 13 | | | | | | |

# Safe Haven Facility Maintenance and Improvements
# Boiler House HVAC Chiller System

**8. CHILLED WATER AND HOT WATER PIPE INSULATION REPAIR SCOPE OF WORK – REVISED:**

Provide labor and materials ***to REPLACE (not repair)*** the insulation on each of the two (2) Trane Chillers (CH-H1 and CH-H2) and one (1) expansion tank. Provide labor and materials to ***REPAIR or REPLACE*** the pipe insulation for the Chilled Water Lines, Hot Water Lines, Domestic Water lines, Chill Water Pumps and Hot Water Pumps located in the Boiler House HVAC Chiller System Building and exterior to the Building adjacent to the Cooling Towers. Install new insulation and jacketing as required for the new pumps and piping.

**ALL REPAIRED OR REPLACED HYDRONIC PIPING INSULATION IS EXPECTED TO APPEAR AND PERFORM LIKE NEW.**

Report any issues to the STP Facilities Manager.

*Figure 11: Damaged Pipe Insulation*

# Safe Haven Facility Maintenance and Improvements
# Boiler House HVAC Chiller System

*Figure 12: Chiller Insulation to Replace*

*Figure 13: Expansion Tank Insulation to Replace*

# Safe Haven Facility Maintenance and Improvements
# Boiler House HVAC Chiller System

**11. ACCESS DOOR REPLACEMENT SCOPE OF WORK – REVISED:**

Provide labor and materials to replace three (3) Door Sets and Louvers. Report any structural or repair issues to the STP Facilities Manager.

- Heavy Duty, Exterior Doors, SDI Level 2 - 18 Gauge Steel
- Double Metal Door
- Lever set, Closer, & Double Cylinder Deadbolt
- All locks and door sets to be keyed alike
- Rigid Honeycomb Core
- Non-Handed Design; Reversible Hinge Plates
- Door weatherize kits
- Seamless Filled Edges
- Prime Painted Gray; Factory Applied, Baked On
- Finish paint (top coat) be applied after installation
- Standard Lock Preps Include 161 (cylindrical lock), 86 Edge (mortise lock), Deadbolt
- Meets or Exceeds Standards for ANSI 250.4 and ANSI 250.8
- Each door to have 24x24 louvers at lower section, self-attaching, Vandal-Proof Design; 18 gauge Cold Rolled Steel Frame, 20 ga. Blades, Mitered and Welded Corners, Gray Powder Coat Finish; Free Air Flow: <50% Free Area

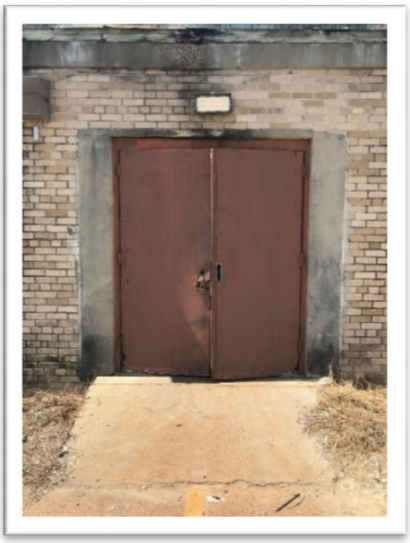

*Figure 11: Door Set 1*

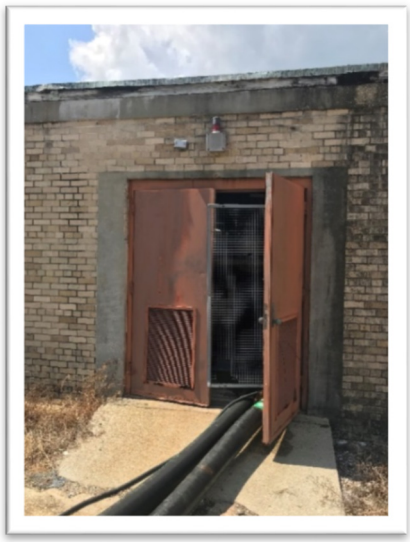

*Figure 12: Door Set 2*

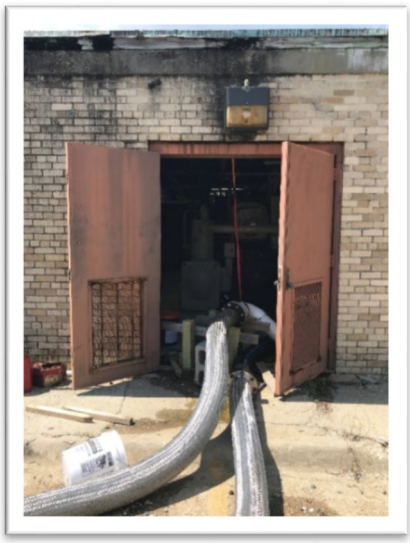

*Figure 13: Door Set 3*

## Safe Haven Boiler House - Field Coatings Proposal

Professional Application Services, Inc.

| Substrate | Exposure | Surface Preparation | Coat | Product | DFT, mils |
|---|---|---|---|---|---|
| Concrete Floors | Interior | CSP 2-3<br>Remove all existing paint & debris | Primer/Sealer | Ceilcote 680M | 3.0 - 5.0 |
| | | | Finish | Devran 124 | 8.0 - 10.0 |
| | | | | | |
| Brick Walls | Interior | Clean & Dry | Filler/Sealer | Tru-Glaze WB 4015 | As Needed |
| | | | Intermediate | Devran 224 HS | 3.0 - 5.0 |
| | | | Finish | Devran 224 HS | 3.0 - 5.0 |
| | | | | | |
| Ferrous Metals | Interior | Hand-Tool and/or Power-Tool Clean | Shop Primer | Bar Rust 235 | 3.0 - 5.0 |
| | | | Spot Primer | Devran 224 HS | 3.0 - 5.0 |
| | | | Finish | Devran 224 HS | 3.0 - 5.0 |
| | | | | | |
| Ferrous Metals | Exterior | Pressure Wash<br>&<br>Hand-Tool and/or Power-Tool Clean | Spot Primer | Bar Rust 235 | 3.0 - 5.0 |
| | | | Intermediate | Devran 224 HS | 3.0 - 5.0 |
| | | | Finish | Devthane 379 | 3.0 - 4.0 |

# Bar-Rust® 235

## Surface Tolerant Epoxy

**PRODUCT DESCRIPTION**

A high performance, multi-purpose, surface tolerant, two-component chemically-cured epoxy semi-gloss coating.

**INTENDED USES**

For use on properly prepared steel or masonry surfaces including immersion (non-potable water) service. Ideal for structural steel, piping, storage tank exteriors, machinery, and equipment in petroleum refineries, pulp and paper mills, chemical and fertilizer plants, and sewage treatment plants.

Performance alternate for Federal Specifications TT-C-550 and TT-C-545. Meets AWWA D102

**PRACTICAL INFORMATION FOR BAR-RUST 235**

| | |
|---|---|
| **Color** | Off White, custom and ready-mix colors |
| **Gloss Level** | Semi-gloss |
| **Volume Solids** | 68% ± 2% |
| **Typical Thickness** | 4-8 mils (100-200 microns) dry equivalent to 5.9-11.8 mils (147-294 microns) wet |
| **Theoretical Coverage** | 182 sq.ft/US gallon at 6 mils d.f.t and stated volume solids<br>4.50 m²/liter at 150 microns d.f.t and stated volume solids |
| **Practical Coverage** | Allow appropriate loss factors |
| **Method of Application** | Airless Spray, Roller, Air Spray, Brush |

**Drying Time**

| | | | Overcoating Interval with recommended topcoats | |
|---|---|---|---|---|
| **Temperature** | **Touch Dry** | **Hard Dry** | *Minimum* | *Maximum* |
| 23°F (-5°C) | *[1] | 46 hours | 28 hours | 7 days[2] |
| 41°F (5°C) | *[1] | 18 hours | 11 hours | 6 days[2] |
| 59°F (15°C) | *[1] | 9 hours | 6 hours | 5 days[2] |
| 77°F (25°C) | *[1] | 5 hours | 3 hours | 5 days[2] |

[1] * not applicable
[2] Where overcoating is with self or other epoxy finishes, the maximum overcoating interval is 30 days.

**REGULATORY DATA**

| | | |
|---|---|---|
| **Flash Point (Typical)** | Part A 100°F (38°C); Part B 100°F (38°C); Mixed 100°F (38°C) | |
| **Product Weight** | 11.0 lb/gal (1.32 kg/l) | |
| **VOC** | 2.43 lb/gal (292 g/lt) | EPA Method 24 |

See Product Characteristics section for further details

# Bar-Rust® 235

## Surface Tolerant Epoxy

### SURFACE PREPARATION

Surfaces must be dry, clean, free of oil, grease, form release agents, curing compounds, laitance, other foreign matter and be structurally sound. Remove all loose paint, mortar spatter, mill scale, and rust. All direct to metal coatings provide maximum performance over blasted surfaces. There are situations and cost limitations which preclude blasting. Bar-Rust 235 was designed to provide excellent protection over less than ideal surface preparation. The minimum standard for non-immersion service is SSPC-SP2 or ISO8501-1:2007 St2; for immersion service the minimum standard is SSPC-SP6 or ISO8501-1:2007 Sa2. These minimum surface preparation standards apply to steel that has been previously abrasive blasted, coated and deteriorated. Where very rusty surfaces still remain after cleaning use Pre-Prime 167 Sealer before application of Bar-Rust 235. All direct to metal coatings provide maximum performance over near-white blasted surfaces.

**New Surfaces:**

**Steel**
New steel surfaces should be initially abrasive blasted to near-white metal surface cleanliness in accordance with SSPC-SP10 or ISO8501-1:2007 Sa2.5. Blast profile on steel should be at least 2.5 mils (63 microns) in depth and be of a sharp, jagged nature as opposed to a “peen” pattern (typically obtained in shot blasting).

**Concrete Block:**
Remove loose aggregate and repair voids. Fill with Bar-Rust 235 or Tru-Glaze-WB 4015 blockfiller.

**Concrete Floors, Poured Concrete:**
Cure at least 30 days. Acid etch or abrasive blast slick, glazed concrete or concrete with laitance. Prime with Pre-Prime 167 or Bar-Rust 235

**Galvanized Steel**
Remove dirt and oils by solvent cleaning or with Devprep 88 Cleaner or other suitable cleaner followed by a thorough water rinsing. Prime with Devran 203 or Devran 205 epoxy primers for non-immersion. For immersion or severe moisture condition, abrasive blasting is recommended before priming with this product or Devran 201H epoxy primer.

**Previously Painted Surfaces**
Old coatings should be tested for lifting. If lifting occurs, remove the coating. Otherwise, scuff sand glossy areas and aged epoxy coatings. Clean aged epoxy or urethane coatings with Devprep 88 Cleaner. Remove cracked and peeling paint. Prime bare areas with appropriate primer. If thinning is required, use T-5 Thinner only when used over aged alkyd coatings.

### APPLICATION

**Mixing**

Material is supplied in two containers as a unit. Always mix a complete unit in the proportions supplied. Once the unit has been mixed it must be used within the working pot life specified.

(1) Agitate Base (Part A) with a power agitator.
(2) Combine entire contents of Curing Agent (Part B) with Base (Part A) and mix thoroughly with power agitator.

**Mix Ratio**

4 part(s) : 1 part(s) by volume

**Working Pot Life**

| 23°F (-5°C) | 41°F (5°C) | 59°F (15°C) | 77°F (25°C) |
|---|---|---|---|
| 6 hours | 5 hours | 5 hours | 4.5 hours |

| | | |
|---|---|---|
| **Airless Spray** | Recommended | Tip Range 19-25 thou (0.48-0.63 mm)<br>Total output fluid pressure at spray tip not less than 3000 psi (211 kg/cm²)<br>See Product Characteristics section for further details |
| **Air Spray (Conventional)** | Suitable | See Product Characteristics section for further details |
| **Brush** | Suitable | |
| **Roller** | Suitable | |
| **Thinner** | T-10 Thinner<br>(T-5 Thinner) | Not normally required See Product Characteristics section for further details |
| **Cleaner** | T-10 Thinner | |

**Work Stoppages**

Do not allow material to remain in hoses, gun or spray equipment. Thoroughly flush all equipment with T-10 Thinner. Once units of paint have been mixed they should not be resealed and it is advised that after prolonged stoppages work recommences with freshly mixed units.

**Clean Up**

Clean all equipment immediately after use with T-10 Thinner. It is good working practice to periodically flush out spray equipment during the course of the working day. Frequency of cleaning will depend upon amount sprayed, temperature and elapsed time, including any delays. All surplus material and empty containers should be disposed of in accordance with appropriate regional regulations/legislation.

# Bar-Rust® 235

## Surface Tolerant Epoxy

**PRODUCT CHARACTERISTICS**

Advantages:

- Exceptional corrosion protection
- Suitable for salt & fresh water immersion
- Low temperature cure to 0°F (-18°C)
- Surface tolerant
- Good adhesion to damp surfaces
- Self-priming for steel & masonry substrates
- Fast Recoat
- High solids – high film build

For airless spray application: Use an airless spray pump capable of 3,000 psi (207 bars) and .019" to .025" tip size will provide a good spray pattern. Ideally, fluid hoses should not be less than 3/8" ID and not longer than 50 feet to obtain optimum results. Longer hose length may require an increase in pump capacity, pressure, and/or thinning.

For air spray application: Use a fluid tip of .070" or larger, a professional grade conventional gun and an air cap with good break-up. The fluid pressure should be kept low with just enough air pressure to get good break-up of the coating. Excessive air pressure can cause over-spray problems.

Bar-Rust 235 may yellow during application and cure if exposed to the combustion by-products of improperly vented fossil fuel burning heaters.

Tinting: Tint the appropriate base (Part A) with industrial colorants. Mix thoroughly before curing agent (Part B) is added.

Where a durable cosmetic finish with good gloss and color retention is required, overcoat with recommended topcoats.

Thinning is not normally required or desired; however, at extreme environmental conditions, small amounts (15% or less by volume) of T-10 thinner can be added depending on local VOC and air quality regulations. When using Bar-Rust 235 over aged alkyds, use T-5 thinner. Any solvent addition should be made after the two components are thoroughly mixed.

Note: VOC values are typical and are provided for guidance purpose only. These may be subject to variation depending on factors such as differences in color and normal manufacturing tolerances.

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**SYSTEMS COMPATIBILITY**

The following primers are recommended for Bar-Rust 235:

| | |
|---|---|
| Bar-Rust 235 | Cathacoat 302H |
| Cathacoat 302HB | Cathacoat 303H |
| Cathacoat 304L | Cathacoat 304V |
| Cathacoat 313 | Cathacoat 315 |
| Cathacoat 316 | Devran 201H |
| Devran 203 | Pre-Prime 167 |
| Tru-Glaze-WB 4015 | |

The following topcoats are recommended for Bar-Rust 235:

| | |
|---|---|
| Devthane 349QC | Devthane 359 |
| Devthane 359H | Devthane 378 |
| Devthane 378H | Devthane 379 |
| Devthane 379H | Devthane 389 |
| Devthane 389H | |

# Bar-Rust® 235

## Surface Tolerant Epoxy

**ADDITIONAL INFORMATION**

Further information regarding industry standards, terms and abbreviations used in this data sheet can be found in the following documents available at www.international-pc.com:

- Definitions & Abbreviations
- Surface Preparation
- Paint Application
- Theoretical & Practical Coverage

Individual copies of these information sections are available upon request.

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**SAFETY PRECAUTIONS**

This product is intended for use only by professional applicators in industrial situations in accordance with the advice given on this sheet, the Material Safety Data Sheet and the container(s), and should not be used without reference to the Material Safety Data Sheet (MSDS) which International Protective Coatings has provided to its customers.

All work involving the application and use of this product should be performed in compliance with all relevant national, Health, Safety & Environmental standards and regulations.

In the event welding or flame cutting is performed on metal coated with this product, dust and fumes will be emitted which will require the use of appropriate personal protective equipment and adequate local exhaust ventilation.

If in doubt regarding the suitability of use of this product, consult International Protective Coatings for further advice.

**PACK SIZE**

| Unit Size | Part A | | Part B | |
|---|---|---|---|---|
| | Vol | Pack | Vol | Pack |
| 1 US gal | 0.8 US gal | 1 US gal | 0.2 US gal | 1 US quart |
| 5 US gal | 4 US gal | 6 US gal | 1 US gal | 1 US gal |

For availability of other pack sizes contact International Protective Coatings

**SHIPPING WEIGHT (TYPICAL)**

| Unit Size | Part A | Part B |
|---|---|---|
| 1 US gal | 9 lb | 2.2 lb |
| 5 US gal | 44.7 lb | 11.2 lb |

**STORAGE**

| | |
|---|---|
| Shelf Life | 24 months minimum at 77ºF (25°C). Subject to re-inspection thereafter. Store in dry, shaded conditions away from sources of heat and ignition. |

### Disclaimer



**www.international-pc.com**

# Ceilcote® 680M

## Epoxy

**PRODUCT DESCRIPTION**

Ceilcote 680M Primer/Saturant is a low viscosity, 85% volume solids epoxy compound based on a unique adduct curing technology. This provides tolerance of surface moisture at temperatures down to 32ºF (2ºC) and the ability to cure in the presence of moisture. The addition of Ceilcote C#1 Powder provides conductivity where required.

**INTENDED USES**

Ceilcote 680M is recommended for application as a primer for steel and as a concrete sealer where non-dusting and/or mild chemical resistance is required. Applied in one or two coats over correctly prepared surfaces, it provides a moisture resistant barrier and improves the surface strength of concrete. It may also be used as a blast holding primer.

**PRACTICAL INFORMATION FOR CEILCOTE 680M**

| | |
|---|---|
| **Color** | Clear |
| **Gloss Level** | Not applicable |
| **Volume Solids** | 85% |
| **Typical Thickness** | 1.6-4 mils (40-100 microns) dry equivalent to 1.9-4.7 mils (47-118 microns) wet |
| **Theoretical Coverage** | 454 sq.ft/US gallon at 3 mils d.f.t and stated volume solids<br>11.30 m²/liter at 75 microns d.f.t and stated volume solids |
| **Practical Coverage** | Allow appropriate loss factors. Coverage will vary depending on the density of the concrete. |
| **Method of Application** | Airless spray, Brush, Roller |

**Drying Time**

| | | | Overcoating Interval with recommended topcoats | |
|---|---|---|---|---|
| **Temperature** | **Touch Dry** | **Hard Dry** | *Minimum* | *Maximum* |
| 50°F (10°C) | 16 hours | 30 hours | 9 hours | 4 weeks |
| 68°F (20°C) | 8 hours | 24 hours | 5 hours | 4 weeks |
| 95°F (35°C) | 3 hours | 8 hours | 3 hours | 2 weeks |

* Consult the relevant Ceilcote system Application Guideline for further information on cure and re-coat times.

**REGULATORY DATA**

| | | |
|---|---|---|
| **Flash Point (Typical)** | Part A 108°F (42°C); Part B 228°F (109°C) | |
| **Product Weight** | 9.0 lb/gal (1.08 kg/l) | |
| **VOC** | 1.50 lb/gal (180 g/lt)<br>112 g/kg | EPA Method 24<br>EU Solvent Emissions Directive (Council Directive 1999/13/EC) |

See Product Characteristics section for further details

# Ceilcote® 680M

## Epoxy

### SURFACE PREPARATION

All surfaces to be coated should be clean, dry and free from contamination. Prior to paint application, all steel surfaces should be assessed and treated in accordance with ISO 8504:2000.

Oil or grease should be removed in accordance with SSPC-SP1 Solvent Cleaning.

**Steel Substrates**

For immersion service or service in humid conditions or elevated temperatures, this product should be applied to surfaces which have been prepared by abrasive blast cleaning to Sa3 (ISO 8501-1:2007), SSPC SP5 or NACE #1. For dry environments, abrasive blast cleaning to Sa2½ (ISO 8501-1:2007), SSPC SP10 or NACE #2 will be suitable. A minimum surface profile of 3 mils (75 microns) is required.

Ceilcote 680M must be applied before oxidation of the steel occurs. If oxidation does occur the entire oxidized area should be reblasted to the standard specified above. Surface defects revealed by the blast cleaning process should be ground, filled or treated in the appropriate manner.

**Concrete Substrates**

Concrete should be well cured prior to priming with Ceilcote 680M. The concrete surface should be dry and pass the plastic sheet test (ASTM D4263). All surfaces should be clean, dry and free from curing compounds, release agents, trowelling compounds, surface hardeners, efflorescence, grease, oil, dirt, old coatings and loose or disintegrating concrete. All concrete surfaces must also be abrasive blast cleaned to provide a roughened surface and remove laitance. The surface tensile strength (ASTM 4541) as prepared should be at least 300 psi (2MPa). Refer to the Concrete Surface Preparation Guidelines for more information.

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### APPLICATION

**Mixing**

Material is supplied in two containers as a unit. Always mix a complete unit in the proportions supplied. Once the unit has been mixed it must be used within the working pot life specified.

(1) Agitate Base (Part A) with a power agitator.
(2) Agitate Curing Agent (Part B) with a power agitator.
(3) Combine entire contents of Curing Agent (Part B) with Base (Part A) and mix thoroughly with power agitator.

**Mix Ratio**

3 part(s) : 1 part(s) by volume

**Working Pot Life**

| 50°F (10°C) | 68°F (20°C) | 95°F (35°C) |
|---|---|---|
| 2 hours | 45 minutes | 25 minutes |

**Airless Spray**

Recommended

**Air Spray (Conventional)**

Not recommended

**Brush**

Recommended

**Roller**

Recommended — Use a short nap roller.

**Thinner**

- **DO NOT THIN**

**Cleaner**

Ceilcote T-410 Solvent — N.B. Clean all equipment immediately after use.

**Work Stoppages**

Do not allow material to remain in hoses, gun or spray equipment. Thoroughly flush all equipment with T-410 Solvent. Once units of paint have been mixed they should not be resealed and it is advised that after prolonged stoppages work recommences with freshly mixed units.

**Clean Up**

Clean all equipment immediately after use with T-410 Solvent. It is good working practice to periodically flush out spray equipment during the course of the working day. Frequency of cleaning will depend upon amount sprayed, temperature and elapsed time, including any delays.

All surplus materials and empty containers should be disposed of in accordance with appropriate regional regualtions/legislation.

# Ceilcote® 680M

## Epoxy

### PRODUCT CHARACTERISTICS

The detailed Application Guidelines for the relevant Ceilcote system should always be consulted prior to use.

The Ceilcote 680M application shall be conducted by the Applicator Company using employees trained in the appropriate application procedures. It is strongly advised that both application and application supervision is only carried out by professional personnel who have been trained in the correct use of the products.

The exact specification with regards to dry film thickness and number of coats will be provided by International Protective Coatings prior to application start up.

For concrete substrates where film integrity spark testing of lining and coating systems applied over Ceilcote 680M is required, a conductive powder should be added. The type and quantity of powder per litre (and gallon) of mixed resin is as follows:

**C-1 Powder** 1.3lb/gal (0.16kg/l).
The powder must first be added and mixed into Part A resin prior to adding Part B.

Surface temperature must always be a minimum of 5°F (3°C) above dew point.

For all application steps, the surface temperature, air temperature and material temperature should be between 50ºF (10ºC) and 110ºF (43ºC)

Do not apply when relative humidity exceeds 80% or when condensation is likely to occur.

Dehumidification (DH) air conditioning and/or heating equipment may be necessary to control environmental conditions.

Consult International Protective Coatings for temperature limits for specific environments.

Note: VOC values are typical and are provided for guidance purpose only. These may be subject to variation depending on factors such as differences in color and normal manufacturing tolerances.

Low molecular weight reactive additives, which will form part of the film during normal ambient cure conditions, will also affect VOC values determined using EPA Method 24.

### SYSTEMS COMPATIBILITY

Ceilcote 680M is designed for application to correctly prepared substrates.

It is compatible with various coatings and linings; consult International Protective Coatings or further advice.

# Ceilcote® 680M

## Epoxy

**ADDITIONAL INFORMATION**

Further information regarding industry standards, terms and abbreviations used in this data sheet can be found in the following documents available at www.international-pc.com:

- Definitions & Abbreviations
- Surface Preparation
- Paint Application
- Theoretical & Practical Coverage

Individual copies of these information sections are available upon request.

**SAFETY PRECAUTIONS**

This product is intended for use only by professional applicators in industrial situations.
All work involving the application and use of this product should be performed in compliance with all relevant national Health, Safety and Environmental standards, regulations and legislation.

Proper ventilation must be provided during application and afterwards during drying (Refer to product datasheets for typical drying times) to keep solvent concentrations within safe limits and prevent fires and explosions. Forced extraction will be required in confined spaces. Ventilation and/or respiratory personal protective equipment (airfed hoods or appropriate cartridge masks) must be provided during application and drying. Take precautions to avoid skin and eye contact (overalls, gloves, goggles, masks, barrier cream, etc).

Before use, obtain, read and then follow the advice given on the Material Safety Data Sheets (Base and Curing Agent if two-pack) and the Health and Safety section of the Coatings Applications Procedures for this product.

In the event that welding or flame cutting is performed on metal coated with this product, dust and fumes will be emitted which will require the use of appropriate personal protective equipment and adequate local exhaust ventilation.

The detailed safety measures are dependent on application methods and the work environment. If you do not fully understand these warnings and instructions or if you cannot strictly comply with them, do not use the product and consult International Protective Coatings.

**PACK SIZE**

| Unit Size | Part A | | Part B | |
|---|---|---|---|---|
| | Vol | Pack | Vol | Pack |
| 20 liter | 15 liter | 20 liter | 5 liter | 5 liter |
| 4 US gal | 3 US gal | 5 US gal | 1 US gal | 1 US gal |

For availability of other pack sizes contact International Protective Coatings

**SHIPPING WEIGHT (TYPICAL)**

| Unit Size | Part A | Part B |
|---|---|---|
| 4 US gal | 32 lb | 8.8 lb |

*Please consult International Paint for further information

**STORAGE**

Shelf Life: 18 months minimum at 77°F (25°C).Subject to re-inspection thereafter. Store in dry, shaded conditions away from sources of heat and ignition.

### Disclaimer



*Issue date: 12/7/2017*



**www.international-pc.com**

# TRU-GLAZE-WB™ 4015

## High Performance Waterborne Epoxy Block Filler

**Cat. # 4015-1000/4015-9999**

## PRODUCT DESCRIPTION

**Generic:** Advanced Technology Waterborne Epoxy

**General Description:** A high performance, two-package, chemically cured waterborne epoxy block filler for interior or exterior porous concrete and CMU wall surfaces. TRU-GLAZE-WB 4015 High Performance Waterborne Epoxy Block Filler is ideal for filling walls in high humidity areas such as shower rooms, locker rooms, boiler rooms, processing rooms, car washes, water and wastewater treatment facilities, food processing and pharmaceutical plants. TRU-GLAZE-WB 4015 block filler will resist penetration of water through walls of basements, recreation rooms and interior or exterior walls of garages, warehouses, etc.

## FEATURES

**Advantages:**

- Excellent filling
- Excellent foundation over masonry substrates for finish coats
- May be topcoated with solvent based and waterborne finish coats
- Low odor
- Low VOC
- Highly resistant to structural moisture and hydrostatic pressures
- Fast dry, early recoat
- Excellent aged recoatability

**Limitations of Use:** Not for use on floors or previously painted surfaces. DO NOT EXCEED POT LIFE.

## SPECIFICATION DATA

**Color:** Off white, tintable (limit 1 oz./gal.)
**Finish:** Flat
**Reduction Solvent:** Water
**Clean-up Solvent:** Soap and Water
**Weight/Gallon (mixed):** 13.7 lbs./gal. (1.63 kg/L)
**VOC (mixed):** <100 g/L (0.83 lbs./gal.)
**Solids By Volume:** 53% ± 2%
**Theoretical Coverage at 1.0 Mil (25 microns) Dry:** 850 sq. ft./gal. (20.9 $m^2$/L)
**Practical Coverage:** Apply at 75-100 sq. ft./gal. (1.8-2.5 $m^2$/L)
**Recommended Film Thickness:** 9-11 mils (225-275 microns) dry - 17-21 mils (425-525 microns) wet
**Systems:** Please consult the appropriate system guide, the particular job specification or your ICI Paints Representative for proper systems using this product. Systems must be selected considering the particular environment involved.
**Flash Point:** Over 100°F (38°C)
**Dry Time** (ASTM D 1640)**:** At 10 mils (250 microns) DFT

| Substrate Temperature | 77°F (25°C) |
|---|---|
| Minimum Recoat | 4 Hours |
| Dry Hard | 8 Hours |
| Maximum Recoat | 45 Days |

Ventilation, film thickness, humidity, thinning and other factors can influence the rate of dry.
**Warning:** The above table provides general guidelines only. Always consult your ICI Paints Representative for appropriate recoat windows since the maximum aged recoat time of this product may be significantly shortened or lengthened by a variety of conditions, including, but not limited to humidity, surface temperature, and the use of additives or thinners. The use of accelerators or force curing may shorten the aged recoat of individual coatings. The above recoat windows may not apply if recoating with a product other than those listed above. If the maximum aged recoat window is exceeded, please consult your ICI Paints Representative for appropriate recommendations to enhance adhesion. Failure to observe these precautions may result in intercoat delamination.
**Shelf Life:** Over 12 months at 77°F (25°C) - unopened
**Mix Ratio By Volume:** 4 (base)**:** 1 (converter) – see mixing instructions.
**Induction:** No induction required
**Pot Life:** 4 hours at 77°F (25°C) & 50% R.H.

## PERFORMANCE DATA

| PROPERTY | TEST METHOD | RESULTS |
|---|---|---|
| Adhesion | ASTM D 4541 | 500 psi, block failure |
| Humidity Resistance | ASTM D 4585, 3000 hours | No blistering or delamination |
| Resistance to Hydrostatic Pressure | Fed. Spec. TT-P-1411A, Para. 4.3.8 | Pass, no moisture leakage |
| Service Temperature Limit: | | 250°F (121°C) dry |

Read Label and Material Safety Data Sheet Prior to Use. See other cautions on last page. DSF1-0690




DEVOE COATINGS
9 FINISHES SPECIAL COATINGS (9800)

## GENERAL SURFACE PREPARATION

Surfaces must be dry, clean, free of oil, grease, dirt, mildew, form release agents, curing compounds, laitance, efflorescence, other foreign matter and be structurally sound.

**New Surfaces: Concrete and Masonry** - Cure at least 30 days before painting. pH must be 10.0 or lower. Roughen slick poured or pre-cast concrete and remove sealers by chemical cleaning or abrasive method such as sand sweeping. Rinse thoroughly with water and allow to dry. Remove loose aggregate. **Aged Unpainted and Weathered Concrete -** Thoroughly wire brush to remove all loose powdery and unsound material. Repair all structural cracks and other surface defects. Structural failure after application of this coating may result in leakage and localized efflorescence.

**Previously Painted Surfaces:** Not recommended over old paints.

**WARNING! If you scrape, sand, or remove old paint, you may release lead dust. LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear a NIOSH-approved respirator to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself and your family by contacting the National Lead Information Hotline at 1-800-424-LEAD or log on to www.epa.gov/lead.**

## DIRECTIONS FOR USE

**Tinting:** May be tinted with up to 1 oz./gal. of ICI Paints Colorants. **Only add colorants to the B component (converter portion)**. Mix thoroughly before adding to the base portion.

**Thinning:** Thinning is not normally required or desired. However, if needed, small amounts (10% or less by volume) of water may be added. Any water addition should be made after the two components are thoroughly mixed.

**Mixing:** TRU-GLAZE-WB™ 4015 filler is a two component product supplied in 5 gallon kits that contain the proper ratio of ingredients. The entire contents of each container must be mixed together. Power mix the base portion first to obtain a smooth, homogeneous condition. After mixing the base portion, add the converter slowly with continued agitation. After the converter add is complete, continue to mix slowly. Mixed material is usable for 4 hours; if it thickens, do not thin, but discard and mix fresh material. Higher temperatures will reduce working life of the coating. Avoid storing or placing containers in direct sunlight.

**Application:** Mix thoroughly before use. May be applied by brush, roll or spray. No thinning required. A slight dampness in the surface is not objectionable as long as there is no actual wetness. In hot weather or under dry conditions, pre-wetting the surface may ease application. Apply with a scrubbing-in motion using a fiber masonry brush, concrete coater or a roller. When rolled, use a long nap roller for smoother surfaces. Work well into the surface for best results. Spray application can be used to "lay" the materials on the walls, but an immediate follow-up with brush or roller will be necessary to work it into the pores. Do not apply when the surface or air temperature is below or expected to be below 40°F (4°C).

**Spreading Rate:** Apply at 75-100 sq.ft. per gallon (1.8-2.5 $m^2$/L) depending on surface texture and porosity. Make allowance for any losses due to overspray or surface irregularities.

**Topcoats:** May be used under a variety of conventional and high performance topcoats including DEVFLEX™ acrylics, DEVGUARD™ alkyds, DEVRAN®, TRU-GLAZE®, TRU-GLAZE-WB epoxies, and DEVTHANE® urethane coatings.

**Dry Time** (ASTM D 1640)**:** At 77°F (25°C) & 50% R.H., dries to recoat 4 hours and hard in 8 hours.

**Clean-up:** Clean immediately with warm soapy water.

## PRECAUTIONS

**WARNING! CAUSES EYE AND SKIN BURNS. HARMFUL IF INHALED. MAY CAUSE CENTRAL NERVOUS SYSTEM EFFECTS, INCLUDING DIZZINESS, HEADACHE OR NAUSEA. CAUSES RESPIRATORY TRACT IRRITATION. HARMFUL IF SWALLOWED. MAY CAUSE ALLERGIC SKIN REACTION. MAY BE HARMFUL IF ABSORBED THROUGH SKIN. OVEREXPOSURE MAY CAUSE BLOOD, LIVER, KIDNEY DAMAGE. CONTAINS CRYSTALLINE SILICA WHICH CAN CAUSE LUNG CANCER AND OTHER LUNG DAMAGE IF INHALED. CONTAINS MICA WHICH MAY CAUSE PNEUMOCONIOSIS. WHEN TINTED, CONTAINS ETHYLENE GLYCOL WHICH CAN CAUSE SEVERE KIDNEY DAMAGE WHEN INGESTED AND HAS BEEN SHOWN TO CAUSE BIRTH DEFECTS IN LABORATORY ANIMALS. USE ONLY WITH ADEQUATE VENTILATION. KEEP OUT OF THE REACH OF CHILDREN. NOTICE: This product contains solvents.** Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. For emergency information call (800) 545-2643. **Note: These warnings encompass the product series. Prior to use, read and follow product-specific MSDS and label information.** If sanding, wear a dust mask to avoid breathing of sanding dust. Do not breathe vapors or spray mist. Ensure fresh air entry during application and drying. Avoid contact with eyes and skin. If you experience eye watering, headaches, or dizziness, leave the area. If properly used, a respirator may offer additional protection. Obtain professional advice before using. Close container after each use. **FIRST AID**: For skin contact, wash thoroughly with soap and water. If any product remains, gently rub with petroleum jelly, vegetable or mineral/baby oil then wash again with soap and water. Repeat as needed. Remove contaminated clothing. For eye contact, flush immediately with plenty of water for at least 15 minutes. **Get medical attention**. If swallowed, **get medical attention immediately**. If inhalation causes discomfort, remove to fresh air. If discomfort persists or breathing difficulty occurs, get medical attention. **KEEP FROM FREEZING.**

DS372-0606

## SHIPPING

**Flash Point:** None
**Packaging:** 5 gallon kit (18.925L)
4.00 gallon base
1.00 gallon converter

**Shipping Weight:** 5 gallon kit - 74 lbs. (33.6 kg)

4015 (05/07)
Ad Stock #68533A

DEVOE HIGH PERFORMANCE COATINGS
Strongsville, Ohio U.S.A.
800-654-2616
www.devoecoatings.com

# Devran® 124

## Epoxy Novolac

**PRODUCT DESCRIPTION**

100% solids novolac epoxy coating with excellent chemical resistance properties which may be applied on both vertical and horizontal surfaces.

**INTENDED USES**

For use as an excellent secondary containment coating with good chemical resistance. Also recommended for use on concrete floors in a wide range of facilities where abrasion resistance is required. May be applied to vertical surfaces up to 12.0 mils dft in one application.

**PRACTICAL INFORMATION FOR DEVRAN 124**

| | |
|---|---|
| **Colour** | Grey |
| **Gloss Level** | Gloss |
| **Volume Solids** | 100% |
| **Typical Thickness** | 500-625 microns (20-25 mils) dry equivalent to<br>500-625 microns (20-25 mils) wet |
| **Theoretical Coverage** | 2.20 m²/litre at 463 microns d.f.t and stated volume solids<br>87 sq.ft/US gallon at 18.5 mils d.f.t and stated volume solids |
| **Practical Coverage** | Allow appropriate loss factors |
| **Method of Application** | Roller, Trowel, Squeegee |

**Drying Time**

| | | | Overcoating Interval with recommended topcoats | |
|---|---|---|---|---|
| **Temperature** | **Touch Dry** | **Hard Dry** | *Minimum* | *Maximum* |
| 15°C (59°F) | * | * | 25 hours | 48 hours |
| 20°C (68°F) | * | * | 7 hours | 24 hours |
| 30°C (86°F) | * | * | 5 hours | 8 hours |

* not applicable

**REGULATORY DATA**

| | | |
|---|---|---|
| **Flash Point (Typical)** | Part A 93°C (199°F); Part B 92°C (198°F); Mixed 93°C (199°F) | |
| **Product Weight** | 1.38 kg/l (11.5 lb/gal) | |
| **VOC** | 0.29 lb/gal (35 g/lt) | EPA Method 24 |

See Product Characteristics section for further details

# Devran® 124

## Epoxy Novolac

**SURFACE PREPARATION**

All surfaces must be sound, dry, clean, free of oil, grease, dirt, mildew, curing compounds, loose and flaking paint and other foreign substances.

**New Surfaces:**

**Concrete:**
All surfaces must be brush blasted or power scarified. Care must be taken to ensure that the substrate to be covered is sound, clean and free of all laitance or other contaminants. Allow new concrete to cure for 30 days minimum. Seal the properly prepared surface with Pre-Prime 167 sealer.

**Steel**
Abrasive blast to minimum SSPC-SP10 or ISO8501-1:2007 Sa2½. The blast profile should be jagged rather than “peened” and between 1.5 to 2.5 mils (38-62 microns). After blasting, vacuum or blow off all abrasive dust and ensure surface remains clean before painting.

**Previously Painted Surfaces**
Devran 124 may not be applied to existing coatings. All coatings must be removed and substrates treated as for New Surfaces.

---

**APPLICATION**

**Mixing**

Material is supplied in two containers as a unit. Always mix a complete unit in the proportions supplied. Once the unit has been mixed it must be used within the working pot life specified.

(1) Agitate Base (Part A) with a power agitator.
(2) Combine entire contents of Initiator (Part B) with Base (Part A) and mix thoroughly with power agitator.

**Mix Ratio**

1 part(s) : 1 part(s) by volume

**Working Pot Life**

25°C (77°F)
30 minutes

**Roller**

Recommended

**Trowel**

Recommended

**Thinner**

Do not thin

**Cleaner**

T-10 Thinner

In the SCAQMD region, use T-0 Thinner or other solvent in compliance with local VOC and air quality regulations.

**Work Stoppages**

Do not allow material to remain in hoses, gun or spray equipment. Thoroughly flush all equipment with T-10 Thinner. Once units of paint have been mixed they should not be resealed and it is advised that after prolonged stoppages work recommences with freshly mixed units.

**Clean Up**

Clean all equipment immediately after use with T-10 Thinner. It is good working practice to periodically flush out spray equipment during the course of the working day. Frequency of cleaning will depend upon amount sprayed, temperature and elapsed time, including any delays. All surplus material and empty containers should be disposed of in accordance with appropriate regional regulations/legislation.

# Devran® 124

## Epoxy Novolac

**PRODUCT CHARACTERISTICS**

Advantages:

- High chemical resistance
- High impact and abrasion resistance
- Low odour application
- Resistant to 98% sulfuric acid and 37% hydrochloric acid for splash, spills and secondary containment
- Resistant to dilute organic acids, alkalies and organic solvents in splash spillage conditions
- Excellent secondary containment lining
- Can be applied up to 1/2" thick on horizontal surfaces
- May be applied up to 12 mils on vertical surfaces
- Can be used as a broadcast, slurry or troweled system

Devran 124 is not intended to be used as a cosmetic finish and colour stability will not be achievable.

Apply in good weather, when air and surface temperatures are above 10°C (50°F). Application below this temperature may compromise chemical resistance.

Optimum application properties and working life of the coating are obtained when the mixed components are at 77°F (25°C) and every effort should be made to keep material to this temperature.

Devran 124 can be applied to floors and decks with a spreader, squeegee or roller. If air entrapment is encountered, use a “porcupine” or another type of air release roller tool.

Where plural component airless spray equipment is used, a 45 to 1 pump equipped with a 1:1 cylinder pump should be used. All plural component applications require a volumetric check of the mix ratio.

A minimum of 24 hours cure at temperatures above 25ºC (77°F) is required before the Devran 124 can withstand light traffic. Full chemical resistance is achieved only after 7 days cure at 25ºC (77ºF).

Although Devran 124 is solventless, good ventilation with dry air is required for the protection of the applicator, to prevent condensation and to obtain proper coating performance. Ventilation should be maintained throughout the cure period. Be sure the air in the lowest areas is constantly replaced with fresh, dry air. Longer curing times with ventilation are required if temperatures are lower than 25ºC (77°F).

When applying specialized sealer coats for anti-slips and chemical resistant properties, be sure to follow recommended recoat intervals.

Note: VOC values are typical and are provided for guidance purpose only. These may be subject to variation depending on factors such as differences in colour and normal manufacturing tolerances.

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**SYSTEMS COMPATIBILITY**

Devran 124 is intended for use as a single product system and as such, should not be overcoated with any other product.

# Devran® 124

## Epoxy Novolac

**ADDITIONAL INFORMATION**

Further information regarding industry standards, terms and abbreviations used in this data sheet can be found in the following documents available at www.international-pc.com:

- Definitions & Abbreviations
- Surface Preparation
- Paint Application
- Theoretical & Practical Coverage

Individual copies of these information sections are available upon request.

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**SAFETY PRECAUTIONS**

This product is intended for use only by professional applicators in industrial situations in accordance with the advice given on this sheet, the Material Safety Data Sheet and the container(s), and should not be used without reference to the Material Safety Data Sheet (MSDS) which International Protective Coatings has provided to its customers.

All work involving the application and use of this product should be performed in compliance with all relevant national, Health, Safety & Environmental standards and regulations.

In the event welding or flame cutting is performed on metal coated with this product, dust and fumes will be emitted which will require the use of appropriate personal protective equipment and adequate local exhaust ventilation.

If in doubt regarding the suitability of use of this product, consult International Protective Coatings for further advice.

| | | | | | |
|---|---|---|---|---|---|
| **PACK SIZE** | Unit Size | Part A | | Part B | |
| | | Vol | Pack | Vol | Pack |
| | 1 US gal | 1 US gal | 1 US gal | 1 US gal | 1 US gal |
| | 5 US gal | 5 US gal | 5 US gal | 5 US gal | 5 US gal |
| | For availability of other pack sizes, contact International Protective Coatings. | | | | |
| **SHIPPING WEIGHT (TYPICAL)** | Unit Size | Part A | | Part B | |
| | 1 US gal | 13.9 lb | | 10.8 lb | |
| | 5 US gal | 69.9 lb | | 54.4 lb | |
| **STORAGE** | Shelf Life | 24 months minimum at 25°C (77°F). Subject to re-inspection thereafter. Store in dry, shaded conditions away from sources of heat and ignition. | | | |

**Important Note**



**www.international-pc.com**

# DEVRAN® 224HS

## High Solids Epoxy Coating

## Cat. # 224FNXXXX/224GN0908

## PRODUCT DESCRIPTION

**Generic:** Catalyzed Polyamide Epoxy

**General Description:** A high performance, multi- purpose, surface tolerant, two-component chemically-cured epoxy semi-gloss coating for industrial or high performance architectural coating (HIPAC) applications. For use on properly prepared steel or masonry surfaces.

**Typical Uses:** Ideal for structural steel, piping, tanks, and equipment in chemical, fertilizer, power plants, petroleum refineries, pulp and paper mills, water and sewage treatment plants and mining operations.

Can also be used in the hard service areas of correctional facilities, schools, commercial and restaurant kitchens were a high performance architectural coating (HIPAC) is required.

**Special Qualifications:** Performance alternate for Federal Specifications TT-C-550, TT-C-535B, MIL-C-22750F, and MIL-P-23377F Type I.

## FEATURES

**Advantages:**

- Excellent corrosion protection
- Resists splash and spillage of solvents, alkalis, salts, moisture, oils, greases, foodstuffs and detergents
- Cold weather cure – Use cold weather additive for application down to 25°F (-4°C)
- Surface tolerant
- Low VOC
- Self-priming on steel or masonry
- Abrasion resistant
- High build/high solids coating

**Limitations of Use:** Exterior exposure will cause a color change, early dulling, and loss of gloss, but this does not affect protective properties. Epoxy coatings may yellow during application and cure if exposed to the combustion by-products of improperly vented fossil fuel burning heaters. Commonly finished with DEVTHANE® Urethane Enamel for maximum exterior color & gloss retention. Use only products that are in compliance with local VOC regulations.

## SPECIFICATION DATA

**Color:** Off White, ready-mixed & custom colors
**Finish:** Semi-Gloss
**Weight/Gallon:** 12.5 lbs./gal. (1.5 kg/L) – varies with color.
**VOC** (EPA24)**:** 1.8 lbs./gal. (212 g/L) – varies with color.
When thinned 5% with T-10 thinner, VOC < 250 g/L(2.08 lbs./gal)
When thinned 10% with T-10 thinner, VOC < 275 g/L (2.29 lbs./gal)
224FN3501 VOC (EPA 24) (TBAC Exempt): < 100 g/L (0.83 lbs./gal.)
224FN3501 VOC (TBAC Non-Exempt): <250 g/L (2.08 lbs./gal.)
**Solids By Volume** (ASTM D 2697-7days)**:** 75%±2% – varies with color.
**Theoretical Coverage at 1.0 Mil** (25 microns) **Dry:** 1203 sq. ft./gal. (29.5 $m^2$/L).
**Recommended Film Thickness:** 4.0-8.0 mils (100-200 microns) dry – 5.3-10.7 mils (155-267 microns) wet.
**Systems:** Please consult the appropriate system guide, the particular job specification or your ICI Paints Representative for proper systems using this product. Systems must be selected considering the particular environment involved.
**Minimum Dry Time** (ASTM D 1640)**:** At 6 mils (150 microns) DFT (Use of cold weather additive will decrease times noted. See cold weather applications on back page.)

| Substrate Temperature | 40°F (4°C) | 60°F (16°C) | 70°F (21°C) | 80°F (27°C) |
|---|---|---|---|---|
| Minimum Recoat | 20 Hours | 8 Hours | 6 Hours | 3 Hours |
| Dry Hard | 42 Hours | 16 Hours | 9 Hours | 5 Hours |
| Maximum Recoat | | | | |
| Self | 30 Days | 30 Days | 30 Days | 30 Days |
| 359, 389 | 15 Days | 10 Days | 7 Days | 7 Days |
| 378, 379 | 10 Days | 7 Days | 5 Days | 3 Days |

Ventilation, film thickness, humidity, thinning and other factors can influence the rate of dry.
**Warning:** The above table provides general guidelines only. Always consult your ICI Paints Representative for appropriate recoat windows since the maximum aged recoat time of this product may be significantly shortened or lengthened by a variety of conditions, including, but not limited to humidity, surface temperature, and the use of additives or thinners. The use of accelerators or force curing may shorten the aged recoat of individual coatings. The above recoat windows may not apply if recoating with a product other than those listed above. If the maximum aged recoat window is exceeded, please consult your ICI Paints Representative for appropriate recommendations to enhance adhesion. Failure to observe these precautions may result in intercoat delamination.
**Shelf Life:** Over 24 months at 77°F (25°C) – unopened
**Mix Ratio By Volume:** 1 (base): 1 (converter)–see mixing instructions.
**Induction:** 15 minutes at 60-80°F (16-27°C) – see mixing instructions.
**Pot Life:** 6 hours @ 77°F (25°C) & 50% R.H

## PERFORMANCE DATA

**Adhesion:** (ASTM D 4541) – Excellent
**Salt Spray Resistance:** (ASTM B 117) – Excellent
**Direct Impact Resistance:** (ASTM D 2794) – Very Good
**Abrasion Resistance:** (ASTM D 4060) – Excellent
**Humidity Resistance:** (ASTM D 4585) – Excellent
**Exterior Exposure:** (45°South – Lt. Industrial) – Very Good (Normal, expected loss of gloss for epoxy coatings)
**Service Temperature Limits:** 250°F (121°C) dry
**Hardness:** (ASTM D 3363), 7 day cure @ 77°F (25°C) – 3H

**Chemical Resistance:** (ASTM D 1308 – 24 hr. contact) – Excellent. Resists splash and spillage of alkalis, salts, moisture, oils, greases, food stuffs, and detergents, 50% 3, 25% citric acid, 25% lactic acid, 10% sulfuric acid, crude oil, 10% hydrochloric acid, 20% tannic acid, 5% sodium chloride, 10% ammonium hydroxide, sewage, 50% ethanol, gasoline, methanol, kerosene, naphtha, xylol. All results based on testing of system comprised of two coats of DEVRAN 224HS coating at 4 mils (100 microns) DFT per coat.

**DANGER! COMBUSTIBLE. HARMFUL OR FATAL IF SWALLOWED.** Read label and Material Safety Data Sheet Prior to Use. See other cautions on last page. DSF2-0790

## GENERAL SURFACE PREPARATION

Surfaces must be dry, clean, free of oil, grease, form release agents, curing compounds, laitance, other foreign matter and be structurally sound. Remove all loose paint, mortar spatter, mill scale, and rust. All direct to metal coatings provide maximum performance over blasted surfaces. There are situations and cost limitations which preclude blasting. DEVRAN® 224HSwas designed to provide excellent protection over less than ideal surface preparation. The minimum standard for non-immersion service is SSPC-SP2 (ISO-St2); for immersion service the minimum standard is SSPC-SP10 (ISO-Sa2 1/2). **These minimum surface preparation standards apply to steel that has been previously abrasive blasted, coated and deteriorated.** Where very rusty surfaces still remain after cleaning use PRE- PRIME™ 167 Sealer before application of DEVRAN 224HS coating. **All direct to metal coatings provide maximum performance over near-white blasted surfaces.**

**New Surfaces: Steel –**New steel surfaces should be initially blasted to near-white metal surface cleanliness in accordance with SSPC-SP10 or ISO-Sa2 1/2 for immersion service or commercial blast cleanliness in accordance with SSPC-SP6 or ISO-Sa2 for non-immersion service. Blast profile on steel should be 1.2 to 2.5 mils (38-63 microns) in depth and be of a sharp, jagged nature as opposed to a "peen" pattern (from shot blasting). Surfaces must be free of grit dust. **Concrete Block –**Remove loose aggregate and repair voids. Fill with this product or TRU-GLAZE-WB™ 4015 filler. **Concrete Floors, Poured Concrete –** Cure at least 30 days. Acid etch or abrasive blast slick, glazed concrete or concrete with laitance. Prime with PRE-PRIME 167 sealer or this coating. **Galvanized Steel –**Remove dirt and oils by solvent cleaning or with DEVPREP® 88 cleaner or other suitable cleaner followed by a thorough water rinsing. For non-immersion service, prime with DEVRAN 205 or DEVRAN 203 epoxy primers. For immersion or severe moisture condition, abrasive blasting is recommended before priming with this product or DEVRAN 201. Choice of primer depends on local VOC and air quality regulations.

**Previously Painted Surfaces:** Old coatings should be tested for lifting. If lifting occurs, remove the lifted coating. Otherwise scuff sand glossy areas and aged epoxy coatings. Clean aged epoxy or urethane coatings with DEVPREP 88 cleaner. Remove cracked and peeling paint. Prime bare areas with primer specified under **New Surfaces**.

**WARNING! If you scrape, sand, or remove old paint, you may release lead dust. LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear a NIOSH-approved respirator to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself and your family by contacting the National Lead Information Hotline at 1-800-424-LEAD or log on to www.epa.gov/lead.**

## DIRECTIONS FOR USE

**Tinting:** Tint the appropriate base with CHROMA-CHEM* 844 colorants. (Do not use water based colorants). Add colorants to only the base portion. Mix thoroughly before adding the Converter portion.

**Thinning:** For compliance to VOC regulations, thin as follows: South Coast Air Quality Management District (SCAQMD) available in DC224FN3501 only: Thinning is not required, however, if thinning is desired, add acetone or T-0 thinner at no more than 5% by volume. Read and follow all hazard and precautionary information found on labels, data sheets and MSDS's. California outside of SCAQMD: Thinning is not required, however, if thinning is desired, add T10 Thinner at no more than 5% by volume. All other areas: Thinning is not required, however, if thinning is desired, 10% or less by volume of T-10 Thinner can be added depending on local VOC and air quality regulations. Any solvent addition should be made after the two components are thoroughly mixed.

**Mixing:** DEVRAN 224HS Coating is a two component product supplied in 10 gallon and 2 gallon kits which contain the proper ratio of ingredients. The entire contents of each container must be mixed together. Power mix both portions first to obtain a smooth, homogeneous condition. Then add the converter slowly with continued agitation. After the converter add is complete, continue to mix slowly. Allow the mixed material to stand 15 minutes at 60-80°F (16-27°C) before use. Always restir before use. Avoid storing or placing containers in direct sunlight.

**Application:** Spray is preferred for appearance and film build control. For air spray application, use a fluid tip of .070" or larger, a professional grade conventional gun and an air cap with good break-up. The fluid pressure should be kept low, with just enough air pressure to get good break-up of the coating. Excessive air pressure can cause over-spray problems. Where airless equipment is used, an airless spray pump capable of 3,000 psi (207 bars) and .019" to .025" tip size will provide a good spray pattern. Ideally, fluid hoses should not be less than 3/8" ID and not longer than 50 feet to obtain optimum results. Longer hose length may require an increase in pump capacity, pressure, and/or thinning. DEVRAN 224HS epoxy may also be applied by brush or roller. Care should be taken that proper and uniform thicknesses are obtained. For roller work use a clean synthetic roller with 1/4"-1/2" nap. New rollers should be thoroughly wet with the specified thinner and spun vigorously to remove loose fibers. Brushing and rolling may require multiple coats to achieve correct film thickness and/or hiding.

**Cold Weather Applications:** For substrate temperatures between 25°F (-4°C) and 40°F (5°C) cold weather additive 060A000 may be added. Two pint containers of 060A0000 may be added to the converter portion of a 10 gallon kit of DEVRAN 224HS coating. Thoroughly mix the 060A0000 additive in the converter with a power mixer prior to adding the converter to the base portion

**Dry Time** (ASTM D 1640)**:** At 6 Mils (150 microns) DFT with Cold Weather Additive (060A0000)

| Substrate Temperature | 25°F(-4°C) | 30°F(-1°C) | 40°F(4°C) |
|---|---|---|---|
| To Recoat | 25 hours | 16 hours | 11 hours2 |
| Dry Hard | >32 hours | 24 hours | 16 hours |

**Spreading Rate:** Apply at 150-300 sq. ft. per gallon (4-7$m^2$/L) depending on surface texture and porosity. Make allowance for any losses due to overspray or surface irregularities.

**Dry Time** (ASTM D 1640)**:** At 77°F (25°C) & 50% R.H., dries to recoat with epoxy or urethane in 6 hours and dry hard in 9 hours.

**Clean-up:** Use T-10 Thinner, except in the South Coast Air Quality Management District use acetone, T-0 thinner or other solvent in compliance with local VOC and air quality regulations.

## PRECAUTIONS

**DANGER! COMBUSTIBLE LIQUID AND VAPOR. CORROSIVE. CAUSES EYE AND SKIN BURNS. HARMFUL OR FATAL IF SWALLOWED. ASPIRATION HAZARD - CAN ENTER LUNGS AND CAUSE DAMAGE. HARMFUL IF INHALED. MAY CAUSE CENTRAL NERVOUS SYSTEM EFFECTS, INCLUDING DIZZINESS, HEADACHE OR NAUSEA. CAUSES RESPIRATORY TRACT IRRITATION. MAY CAUSE ALLERGIC SKIN AND RESPIRATORY REACTION. OVEREXPOSURE MAY CAUSE BLOOD, LIVER, KIDNEY DAMAGE. CONTAINS CRYSTALLINE SILICA WHICH CAN CAUSE LUNG CANCER AND OTHER LUNG DAMAGE IF INHALED. USE ONLY WITH ADEQUATE VENTILATION. KEEP OUT OF THE REACH OF CHILDREN. NOTICE: Products in this series contain solvents.** Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. For emergency information call (800) 545-2643. **Note: These warnings encompass the product series. Prior to use, read and follow product-specific MSDS and label information.** For emergency information call (800) 545-2643. For additional safety information, refer to the Material Safety Data Sheet for this product. Keep away from heat, sparks and flame. **Do not** smoke. Vapors may ignite. Extinguish all flames, burners, stoves, heaters and pilot lights and disconnect all electrical motors and appliances before use and until all vapors are gone. Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation. If sanding, wear a dust mask to avoid breathing of sanding dust. Do not breathe vapors or spray mist. Ensure fresh air entry during application and drying. Avoid contact with eyes and skin. If you experience eye watering, headaches, or dizziness, leave the area. If properly used, a respirator may offer additional protection. Obtain professional advice before using. Close container after each use. **FIRST AID**: For skin contact, wash thoroughly with soap and water. If any product remains, gently rub with petroleum jelly, vegetable or mineral/baby oil then wash again with soap and water. Repeat as needed. Remove contaminated clothing. For eye contact, flush immediately with plenty of water for at least 15 minutes. **Get medical attention**. If swallowed, **get medical attention immediately**. If inhalation causes discomfort, remove to fresh air. If discomfort persists or breathing difficulty occurs, get medical attention. **KEEP FROM FREEZING.**

DS177-0306

## SHIPPING

**Flash Point:** 100°F (38°C)

**Packaging:**
2 gallon kit (7.570L)
1.00 gallon base
1.00 gallon converter
10 gallon kit (37.850L)
5.00 gallon base
5.00 gallon converter

**Shipping Weight::** 4 gallon case (base or converter) - 53 lbs. (24.0 kg
10 gallon kit - 133 lbs. (60.3 kg)

224HS (05/07)
Ad Stock #68634E

*CHROMA-CHEM is a Registered Trademark of Degussa GmbH.

DEVOE HIGH PERFORMANCE COATINGS
Strongsville, Ohio U.S.A.
800-654-2616
www.devoecoatings.com

# Devthane® 379

**Polyurethane**

**PRODUCT DESCRIPTION**

A high performance, two-component chemically-cured aliphatic urethane gloss finish.

**INTENDED USES**

For use on properly prepared and primed steel, concrete or steel floors, masonry, drywall, plaster, metal, concrete block, galvanized, aluminium, poured concrete and glazed brick. Ideal for use on exterior or interior structural steel, piping, metal buildings, control cabinetry, conveyors, pumps, storage tank exteriors, motors, machinery, and transportation vehicles.

Can also be used in the hard service areas of food processing plants, dairies, schools, restaurants, hospitals, correctional facilities, factories, stadiums, arenas, and amusement parks.

**PRACTICAL INFORMATION FOR DEVTHANE 379**

| | |
|---|---|
| **Colour** | White, custom and ready-mix colours |
| **Gloss Level** | Gloss |
| **Volume Solids** | 63%± 2% |
| **Typical Thickness** | 50-75 microns (2-3 mils) dry equivalent to<br>79-119 microns (3.2-4.8 mils) wet |
| **Theoretical Coverage** | 10 m²/litre at 63 microns d.f.t and stated volume solids<br>401 sq.ft/US gallon at 2.5 mils d.f.t and stated volume solids |
| **Practical Coverage** | Allow appropriate loss factors |
| **Method of Application** | Airless Spray, Roller, Air Spray, Brush |

**Drying Time**

| | | | Overcoating interval with self | |
|---|---|---|---|---|
| **Temperature** | **Touch Dry** | **Hard Dry** | *Minimum* | *Maximum* |
| 5°C (41°F) | * | 32 hours | 10 hours | 2 weeks |
| 15°C (59°F) | * | 24 hours | 6 hours | 2 weeks |
| 25°C (77°F) | * | 16 hours | 3 hours | 2 weeks |

**REGULATORY DATA**

| | |
|---|---|
| **Flash Point (Typical)** | Part A 27°C (81°F); Part B 51°C (124°F); Mixed 27°C (81°F) |
| **Product Weight** | 1.32 kg/l (11.0 lb/gal) |
| **VOC** | 2.59 lb/gal (311 g/lt) EPA Method 24 |

See Product Characteristics section for further details

## SURFACE PREPARATION

Surfaces must be dry, clean, free of oil, grease, form release agents, curing compounds, laitance, other foreign matter and be structurally sound. Remove all loose paint, mortar spatter, mill scale, and rust. To ensure optimum appearance, any primer or undercoat should be smooth and free of any surface defects such as runs, dry spray or heavy orange peel.

**New Surfaces:**

**Steel**
Apply over surfaces which have been suitably prepared and primed. Consult the relevant primer datasheet for advice on surface preparation requirements. Prime using: Bar-Rust 231, Bar-Rust 233H or Bar-Rust 235.

**Galvanised Steel and Aluminium**
Remove dirt, grease, oil or other surface contamination by solvent cleaning or with Devprep 88 cleaner or other suitable cleaner, followed by a thorough water rinsing. Prime using: Devran 201H or Devran 203

**Concrete Block**
Remove loose aggregate and repair major voids. Fill with: Devran 220, Bar-Rust 231, Bar-Rust 235, Bar-Rust 233H thinned 25% with recommended thinner, or Tru-Glaze-WB 4015

**Concrete Floors, Poured Concrete**
Cure at least 30 days. pH must be 10.0 or lower before painting. Acid etch or abrasive blast slick, glazed concrete or concrete with laitance. Prime using: Devran 220, Bar-Rust 231, Bar-Rust 233H, Bar-Rust 235, Tru-Glaze-WB 4030 or Pre-Prime 167

**Drywall:**
Prime with a premium acrylic latex vapor barrier primer sealer.

**Previously Painted Surfaces:**
Poorly adhering old coatings should be removed. Wash to remove contaminants. Rinse thoroughly with water and allow to dry. Dull glossy areas by light sanding. Remove all debris. Prime bare areas with primer specified under New Surfaces.

**Fiberglass**
Solvent wipe, scuff sand and solvent wipe again. Prime with Devran 201H epoxy.

## APPLICATION

**Mixing**
Material is supplied in two containers as a unit. Always mix a complete unit in the proportions supplied. Once the unit has been mixed it must be used within the working pot life specified.
(1) Agitate Base (Part A) with a power agitator.
(2) Combine entire contents of Curing Agent (Part B) with Base (Part A) and mix thoroughly with power agitator.

**Mix Ratio**
4 part(s) : 1 part(s) by volume

**Working Pot Life**

| 5°C (41°F) | 15°C (59°F) | 25°C (77°F) |
|---|---|---|
| 6 hours | 5 hours | 4 hours |

| | | |
|---|---|---|
| **Airless Spray** | Recommended | Tip Range 0.27-0.43 mm (11-17 thou)<br>Total output fluid pressure at spray tip not less than 211 kg/cm² (3000 p.s.i.) See Product Characteristics section for further details |
| **Air Spray (Conventional)** | Recommended | See Product Characteristics section for further details |
| **Brush** | Suitable | |
| **Roller** | Suitable | |
| **Thinner** | T-9 Thinner<br>or T-17 Thinner | See Product Characteristics section for further details |
| **Cleaner** | T-9 Thinner | |

**Work Stoppages**
Do not allow material to remain in hoses, gun or spray equipment. Thoroughly flush all equipment with T-9 Thinner. Once units of paint have been mixed they should not be resealed and it is advised that after prolonged stoppages work recommences with freshly mixed units.

**Clean Up**
Clean all equipment immediately after use with T-9 Thinner. It is good working practice to periodically flush out spray equipment during the course of the working day. Frequency of cleaning will depend upon amount sprayed, temperature and elapsed time, including any delays. All surplus material and empty containers should be disposed of in accordance with appropriate regional regulations/legislation.

**PRODUCT CHARACTERISTICS**

Advantages:

- Excellent gloss and colour retention
- Excellent abrasion and chemical resistance
- Easily applied by brush, roller or spray
- Wide colour selection
- Excellent resistance to marring, chipping, and scratching
- Contains ultraviolet light absorber

Cure Acceleration: Urethane catalyst 070A0000 may be used to accelerate cure at or below 5ºC (40°F). The addition of one or two ounces per gallon will decrease the dry hard time approximately one-third to one-half respectively at 40°F (5°C). The pot life will be reduced one-half to three-fourths.

Thinning is not normally required. However, depending on local VOC and air quality regulations, small amounts (5% or less) of T-9 Thinner may be added. Small amounts (5% or less) of T-17 Thinner may improve roller, brush or spray application. If local VOC and/or air quality regulations are not an issue, and depending on the individual set-up of the spray equipment, additional thinning may be allowed to obtain the desired individual finish.

Maximum continuous dry temperature resistance for Devthane 379 is 121ºC (250°F). Exposure to continuous operating temperatures towards the maximum dry temperature resistance of this product may induce some discolouration, though the film will remain intact.

Devthane 379 reacts with atmospheric moisture, and as such when in the can should remain covered at all times. Failure to keep the tin covered will result in skinning of unused material and loss of pot life.

Devthane 379 may be tinted with industrial colourants; contact International Paint for further information. Add colourants only to the base portion and mix thoroughly before adding the converter portion.

For airless spray application: Ideally, fluid hoses should not be less than 3/8" ID and not longer than 50 feet to obtain optimum results. Longer hose length may require an increase in pump capacity, pressure, and/or thinning.

For air spray application: Use a professional grade conventional gun with a 1.78mm (0.07") fluid tip or larger. Adjust fluid and air pressure to achieve a good spray pattern.

Care should be taken that proper and uniform film thicknesses are obtained. Brushing and rolling may require multiple coats to achieve correct film thickness and/or hiding.

Note: VOC values are typical and are provided for guidance purpose only. These may be subject to variation depending on factors such as differences in colour and normal manufacturing tolerances.

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**SYSTEMS COMPATIBILITY**

The following primers are recommended for Devthane 379:

| | |
|---|---|
| Bar-Rust 231 | Bar-Rust 233H |
| Bar-Rust 235 | Cathacoat 302H |
| Cathacoat 302HB | Cathacoat 303H |
| Cathacoat 313 | Devran 201H |
| Devran 203 | Devran 261QC |
| Tru-Glaze-WB 4015 | Tru-Glaze-WB 4030 |

**ADDITIONAL INFORMATION**

Further information regarding industry standards, terms and abbreviations used in this data sheet can be found in the following documents available at www.international-pc.com:

- Definitions & Abbreviations
- Surface Preparation
- Paint Application
- Theoretical & Practical Coverage

Individual copies of these information sections are available upon request.

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**SAFETY PRECAUTIONS**

This product is intended for use only by professional applicators in industrial situations in accordance with the advice given on this sheet, the Material Safety Data Sheet and the container(s), and should not be used without reference to the Material Safety Data Sheet (MSDS) which International Protective Coatings has provided to its customers.

All work involving the application and use of this product should be performed in compliance with all relevant national, Health, Safety & Environmental standards and regulations.

In the event welding or flame cutting is performed on metal coated with this product, dust and fumes will be emitted which will require the use of appropriate personal protective equipment and adequate local exhaust ventilation.

If in doubt regarding the suitability of use of this product, consult International Protective Coatings for further advice.

**PACK SIZE**

| Unit Size | Part A | | Part B | |
|---|---|---|---|---|
| | Vol | Pack | Vol | Pack |
| 1 US gal | 0.8 US gal | 1 US gal | 0.2 US gal | 1 US quart |
| 5 US gal | 4 US gal | 5 US gal | 1 US gal | 1 US gal |

For availability of other pack sizes, contact International Protective Coatings.

**SHIPPING WEIGHT (TYPICAL)**

| Unit Size | Part A | Part B |
|---|---|---|
| 1 US gal | 10.8 lb | 2.7 lb |
| 5 US gal | 47.2 lb | 11.9 lb |

**STORAGE**

Shelf Life: 24 months minimum at 25°C (77°F). Subject to re-inspection thereafter. Store in dry, shaded conditions away from sources of heat and ignition.

**Important Note**



**www.international-pc.com**

ST. TAMMANY PARISH

PATRICIA P. BRISTER
PARISH PRESIDENT

**November 28, 2018**

Please find the following addendum to the below mentioned BID.

**Addendum No.:** 1

**Bid#**: 323-00-18-54-2

**Project Name**: Safe Haven Facility Maintenance and Improvements – Boiler House HVAC Chiller System

**Bid Due Date**: Tuesday, December 11, 2018

## GENERAL INFORMATION:

1. The Boiler House will be open for site visitation as follows:
    a. Thursday, November 29, 2018, from 8:00 am – 3:30 pm; and
    b. Friday, November 30, 2018, from 8:00 am – 12:00 pm.

2. Inquiries and requests for approved equals must be submitted in writing to the Procurement Department, purchasing@stpgov.org, no later than 2:00 pm CST, Friday, November 30, 2018.

3. All requests for approved equals must be submitted prior to the inquiry deadline. Requests for an approved equal must clearly identify the bid item for which the approve equal is requested and provide sufficient information (products cut sheets, technical data) for a determination to be made. Please refer to Section 8, General Conditions for St. Tammany Parish Government, Paragraph 13.04.

**<< End of Addendum #1 >>**