# Reactamine® 760 HB

PRODUCT DATA SHEET

## SELECTION & SPECIFICATION DATA

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| **Generic Type** | Solvent Free High Build Aromatic Polyurethane Hybrid |
| **Description** | Environmentally friendly, advanced hybrid technology, plural-component applied coating used as a lining for water, wastewater, manholes, penstocks, dam gates, pipelines and other aggressive immersion applications. Provides protection against microbiologically induced corrosion (MIC) and hydrogen sulfide corrosion found in wastewater treatment service. Ultra high build product designed to be applied at high thickness in one coat application. |
| **Features** | • High film build (200 mil plus) in one coat<br>• Complies to Greenbook<br>• UL approved for potable water*<br>• Cold temperature cure<br>• Fast cure and walk on time<br>• Excellent barrier properties, low permeability<br>• Can be used to resurface highly deteriorated concrete<br>• Bridges normal shrinkage cracks in concrete<br>• True monolithic film on steel and concrete<br>• Encapsulates rivets, bolts, and edges in one coat<br>• Outstanding abrasion, impact and tear resistance<br>• Combines polyurethane and polyurea technologies to form a hybrid polyurethane<br><br>*Valid if manufactured at a certified location. |
| **Color** | 0200 (Light Tan) |
| **Finish** | Gloss |
| **Primer** | Steel: Self-priming<br>Concrete: Self-priming: Apply a thin coat of 10-20 mils of Reactamine 760 HB to allow for outgassing of the concrete. Once tacky (1-15 minutes), apply the remainder of Reactamine 760 HB to specified thickness. |
| **Dry Film Thickness** | 20 - 200 mils (508 - 5080 microns) Total DFT<br><br>20 to 150 mils (508 to 3810 microns) for most applications on steel<br>60 to 200+ mils (1524 to 5080+ microns) or higher for most applications on concrete. |
| **Solids Content** | By Volume 100% |
| **Theoretical Coverage Rate** | 1604 ft²/gal at 1.0 mils (39.4 m²/l at 25 microns)<br>80 ft²/gal at 20.0 mils (2.0 m²/l at 500 microns)<br>8 ft²/gal at 200.0 mils (0.2 m²/l at 5000 microns)<br>Allow for loss in mixing and application. |
| **VOC Value(s)** | No measurable VOC levels |
| **Limitations** | • Reactamine 760 HB will tend to yellow or darken in exterior UV exposure but will not affect performance<br>• Not recommended for exposure to concentrated acids, aromatic, ketone or chlorinated solvents<br>• Dry temperature resistance ranges -20 to 180°F (-29 to 82°C) |

## SUBSTRATES & SURFACE PREPARATION

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| **General** | Surfaces must be properly cleaned. Employ adequate methods to remove dirt, dust, oil and all other contaminants that could interfere with adhesion of the coating. |
| **Steel** | SSPC-SP10 with a 3.5 mil (89 micron) to 5 mil (127 microns) surface profile. |
| **Concrete** | Concrete must be cured 28 days at 75°F (24°C). Prepare surfaces in accordance with SSPC-SP13/NACE 6 or ICRI 03732 to obtain a CSP 5 to 7 roughness. Attain a surface profile resembling extra coarse sandpaper. Eliminate leaks and infiltrations and remove standing water. Resurface areas with excessive cavities (bugholes) or exposed aggregate using our Carboguard 510 or other approved resurfacers. Before application of Reactamine 760 HB, the surface must be free of condensation and visible moisture. Vacuum to dust-free condition before application. Reactamine 760 HB can go direct to the concrete if the concrete is clean and dry or to primed concrete. |

## PERFORMANCE DATA

**All test data was generated under laboratory conditions. Field testing results may vary.**

| Test Method | System | Results |
|---|---|---|
| ASTM 2794 Indirect Impact Resistance | 1 ct. Reactamine 760 HB | 15 inch-pounds |
| ASTM 2794, Impact Direct | 1 ct. Reactamine 760 HB | 160 inch-pounds |
| ASTM D 624 Tear Strength | 1 ct. Reactamine 760 HB | >350 pli |
| ASTM D2240, Shore D Hardness | 1 ct. Reactamine 760 HB | 60-65 |
| ASTM D4060 (1000 cycles with 1000g), Abrasion Resistance | 1 ct. Reactamine 760 HB | 85 mg loss, |
| ASTM D412 Tensile strength<br>Elongation | 1 ct. Reactamine 760 HB | 2,800 to 3,000 psi<br>35 to 45% |
| ASTM D522, Flexibility Method A, 3/16 inches Conical Mandrel Bend | 1 ct. Reactamine 760 HB | Pass |
| ASTM D570 Water Absorption, Long Term Method | 1 ct. Reactamine 760 HB | Less than 0.87% |
| ASTM E-96, Permeance, B method/BW method | 1 ct. Reactamine 760 HB | 0.088 perms/ 0.081 perms |
| ASTM G95, Cathodic Disbondment, -1.5V for 31 days at 22°C (71.6°F) | 1 ct. Reactamine 760 HB | 0 mm disbondment |
| NACE TM1074, Immersion testing of various | 1 ct. Reactamine 760 HB | Pass, see chemical resistance chart |
| Pickle Jar Test from Greenbook Section 210-2.3 | 1 ct. Reactamine 760 HB | Pass |

## MIXING & THINNING

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| **Mixing** | Power mix Resin (Reactamine 760 HB Part A) with an air-driven agitator for 30 minutes just prior to use. Catalyst (Reactamine 760 Part B) requires no mixing before using unless tinted. |
| **Thinning** | Not recommended |
| **Ratio** | 2:1 Ratio (A to B) by volume |
| **Gel Time** | 3 to 5 minutes @ 77 F |

## APPLICATION EQUIPMENT GUIDELINES

Listed below are general equipment guidelines for the application of this product. Job site conditions may require modifications to these guidelines to achieve the desired results.

**Plural Component Airless Spray**

Heated plural airless will be a fixed-volume ratio at 2A:1B at a 3 gallon/min delivery rate. Standard equipment typically includes heated hoses, drum heaters, pressure feed from 50 gallon steel drums or heated hoppers, recirculation system, automatic high-pressure shut-off system. Carboline recommends the WIWA® Duomix 230 or equivalent plural component airless pump. Consult the Carboline Application Guide for Reactamine 760 for complete pump, static mixer, whip hose and airless gun with tip set up recommendations.

Note: Part A optimum material temperature should be 80° to 90°F (27° to 32°C) and Part B should be 75° to 85°F (24° to 29°C).

**Touch Up**

Brush apply material from Reactamine 760 Repair Kit. For use on small areas only. Available in dual cartridge system for spray application. Requires HSS(hand spray system) gun to apply. Contact Technical Service for details.

## APPLICATION CONDITIONS

| Condition | Material | Surface | Ambient | Humidity |
|---|---|---|---|---|
| Minimum | 75°F (24°C) | 35°F (2°C) | 25°F (-4°C) | 0% |
| Maximum | 110°F (43°C) | 140°F (60°C) | 120°F (49°C) | 95% |
| Optimum | 90°F (32°C) | 70°F (21°C) | 70°F (21°C) | 30% |

Industry standards are for substrate temperatures to be 5°F (3°C) above the dew point. Caution: This product has some moisture tolerance, but it can be moisture sensitive depending on conditions. Excessive material temperatures can reduce film build. See detail material temperature range for part A and B in plural component airless spray section.

## CURING SCHEDULE

| Surface Temp. | Cure for Most Immersion Services | Dry Time (Light Foot Traffic) | Dry to Touch | Maximum Recoat Time |
|---|---|---|---|---|
| 38°F (3°C) | 16 Hours | 6 Hours | 4 Hours | 36 Hours |
| 73°F (23°C) | 2 Hours | 2 Hours | 1 Hour | 12 Hours |

2 hour cure to immersion refers to water and wastewater sevice only. Inquire for other services, consult with Carboline's Technical Service Department. These times are based on recommended dry film thickness. If maximum recoat is exceeded, the surface must be abraded to roughen surface and cleaned of dust and debris and then solvent wiped with MEK or acetone prior to the application of additional coats. Maximum recoat time with itself: 4 hours in direct sunlight, 8 hours not in sunlight and 12 hours inside closed tank at 73°F (23°C).

## TESTING / CERTIFICATION / LISTING

**Potable Water Certifications**

**Potable Water Use Limitations @ 75°F (24°C):**
*Meets drinking water criteria of NSF/ANSI/CAN 600*
Max DFT: 300 mils (7620 microns)
# Coats: 1 to 2
Tank Rating: >50 gal (189.271 Liters)
Pipe Rating: 14" or larger (35.56 cm)
Valve Rating: Not Rated
Thinning: N/A
4 Hour Cure Required before service
Approved Colors: 0200 (Brown)

## TESTING / CERTIFICATION / LISTING

## CLEANUP & SAFETY

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| **Cleanup** | Use Thinner #2, Thinner #225E, or Thinner #76. In case of spillage, absorb and dispose of in accordance with local applicable regulations. |
| **Safety** | Read and follow all caution statements on this product data sheet and on the SDS for this product. Employ normal workmanlike safety precautions. |
| **Caution** | This product does not contain flammable solvents; however, clean-up solvents that may be used do contain flammable solvents. Keep away from sparks and open flames. All electrical equipment and installations should be made and grounded in accordance with the National Electric Code. In areas where explosion hazards exist, workmen should be required to use non-ferrous tools and wear conductive and non-sparking shoes. |

## PACKAGING, HANDLING & STORAGE

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| **Shelf Life** | Part A: Min. 24 months at 75°F (24°C)<br>Part B: Min. 12 months at 75°F (24°C)<br><br>When kept at recommended storage conditions and in original unopened containers |
| **Storage Temperature & Humidity** | 40 to 110°F (4 to 43°C)<br>0 to 95% Humidity<br>Store indoors and keep Dry. Do not place drums directly on concrete or earth. Store on top of wood slats or pallets. Blanket all partial drums with nitrogen gas to prevent moisture contamination. Avoid freezing. Do not open until ready to use. Rotate Resin (Part A) drums regularly if stored for the long term. |
| **Shipping Weight (Approximate)** | 150 Gallon kit weighs 1400 lbs. (635 kg)<br>75 Gallon kit weighs 700 lbs. (318 kg)<br>15 Gallon kit weighs 140 lbs. (63.5 kg) |
| **Flash Point (Setaflash)** | Part A: >300°F (148°C)<br>Part B: 390°F (199°C) |

## WARRANTY

To the best of our knowledge the technical data contained herein is true and accurate on the date of publication and is subject to change without prior notice. User must contact Carboline Company to verify correctness before specifying or ordering. No guarantee of accuracy is given or implied. We guarantee our products to conform to Carboline quality control. We assume no responsibility for coverage, performance, injuries or damages resulting from use. Carbolines sole obligation, if any, is to replace or refund the purchase price of the Carboline product(s) proven to be defective, at Carbolines option. Carboline shall not be liable for any loss or damage. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY CARBOLINE, EXPRESS OR IMPLIED, STATUTORY, BY OPERATION OF LAW, OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. 