

SELECTION & SPECIFICATION DATA

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 • Complies to Greenbook • UL approved for potable water* • Cold temperature cure • Fast cure and walk on time • Excellent barrier properties, low permeability • Can be used to resurface highly deteriorated concrete • Bridges normal shrinkage cracks in concrete • True monolithic film on steel and concrete • Encapsulates rivets, bolts, and edges in one coat • Outstanding abrasion, impact and tear resistance • Combines polyurethane and polyurea technologies to form a hybrid polyurethane *Valid if manufactured at a certified location.
Color	Light Tan (0200) is the only standard color that is potable water approved. Other color available is Gray(0700). All colors are unmatched colors.
Finish	Gloss
Primer	Steel: Self-priming Concrete: Self-priming when concrete is dry. If a primer is desired use Phenoline 311, Phenoline 311 Primer, or Carboguard 1340 WB, to dry prepared concrete.
Dry Film Thickness	635 - 5080 microns (25 - 200 mils) Total DFT 25 to 150 mils (635 to 3810 microns) for most applications on steel 60 to 200+ mils (1524 to 5080+ microns) or higher for most applications on concrete.
Solids Content	By Volume 100%
Theoretical Coverage Rate	39.4 m ² /l at 25 microns (1604 ft ² /gal at 1.0 mils) 1.6 m ² /l at 625 microns (64 ft ² /gal at 25.0 mils) 0.2 m ² /l at 5000 microns (8 ft ² /gal at 200.0 mils) Allow for loss in mixing and application.
VOC Values	As Supplied : 0
Limitations	• Reactamine 760 HB will tend to yellow or darken in exterior UV exposure but will not affect performance • Not recommended for exposure to concentrated acids, aromatic, ketone or chlorinated solvents • Dry temperature resistance ranges -20 to 180°F (-29 to 82°C)

Reactamine 760 HB

PRODUCT DATA SHEET



SUBSTRATES & SURFACE PREPARATION

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 Elongation	1 ct. Reactamine 760 HB	2,800 to 3,000 psi 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

Gel Time | 3 to 4 minutes @ 77 F

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

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. Please call Carboline Technical Service (1-800-848-4645) for complete pump, static mixer, whip hose and airless gun with tip set up recommendations. Applicator training is required and spray equipment must be approved by Carboline's Field Technical Service. 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).

*WIWA is a registered trademark of the Wilhelm Wagner GmbH & Co. KG

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	24°C (75°F)	2°C (35°F)	-4°C (25°F)	0%
Maximum	43°C (110°F)	60°C (140°F)	49°C (120°F)	95%
Optimum	32°C (90°F)	21°C (70°F)	21°C (70°F)	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
3°C (38°F)	16 Hours	6 Hours	4 Hours	36 Hours
23°C (73°F)	2 Hours	2 Hours	1 Hour	12 Hours

2 hour cure to immersion refers to water and wastewater service 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).

CLEANUP & SAFETY

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 MSDS for this product. Employ normal workmanlike safety precautions.

Reactamine 760 HB

PRODUCT DATA SHEET



CLEANUP & SAFETY

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.
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TESTING / CERTIFICATION / LISTING

Underwriters Laboratories, Inc.	Reactamine 760 HB (color 0200) was tested by UL and is approved for ANSI/NSF Standard 61 (potable water lining). It is approved for water tanks greater than or equal to 50 gallons and pipes greater than or equal to 14" inches in diameter. Maximum film thickness is 300 mils (8750 microns) DFT. Minimum cure time for potable water service is 4 hours at 59°F (15°C). Material must be manufactured at a UL certified manufacturing location for use in potable water service.
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PACKAGING, HANDLING & STORAGE

Shelf Life	Part A: Min. 24 months at 75°F (24°C) Part B: Min. 12 months at 75°F (24°C) When kept at recommended storage conditions and in original unopened containers
Storage Temperature & Humidity	40 to 110°F (4 to 43°C) 0 to 95% Humidity 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) 75 Gallon kit weighs 700 lbs. (318 kg) 15 Gallon kit weighs 140 lbs. (63.5 kg)
Flash Point (Setaflash)	Part A: >300°F (148°C) 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 to verify correctness before specifying or ordering. No guarantee of accuracy is given or implied. Carboline warrants our products to be free of manufacturing defects in accord with applicable Carboline quality control procedures. THIS WARRANTY IS NOT VALID WHEN THE PRODUCT IS NOT: (1) APPLIED IN ACCORDANCE WITH CARBOLINE'S SPECIFICATIONS, AND/OR (2) PROPERLY STORED, CURED, AND USED UNDER NORMAL OPERATING CONDITIONS. Carboline assumes no responsibility for coverage, performance, injuries, or damages resulting from use of the product. If this product is found not to perform as specified upon inspection by a Carboline representative during the warranty period, Carboline's sole obligation, if any, is to replace the Carboline product(s) proven to be defective or refund the purchase price thereof, at Carboline's sole option. Carboline shall not be liable for any other losses or damages. This warranty excludes (1) labor and costs of labor for the application or removal of any product, and (2) any incidental or consequential damages, whether based on breach of express or implied warranty, negligence, strict liability or any other legal theory. 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. All of the trademarks referenced above are the property of Carboline International Corporation unless otherwise indicated. The whole text of this Product Data Sheet, as well as the documents derived from it, have been written in English, and for legal purposes the English version shall prevail.