



TECHNICAL DATA- Rio-Coat ESB HIGH PERFORMANCE EPOXY COATING

PRODUCT DESCRIPTION:

RIO-COAT ESB is a two-component solvent based epoxy coating that exhibits excellent characteristics for abrasion resistance, chemical resistance, and substrate penetration. This product is suitable as a primer for high build coatings and urethane or as a stand-alone coating.

RECOMMENDED FOR:

Recommended priming or coating concrete, wood or steel. This product can withstand exposure to many common solvents and chemicals.

SOLIDS BY WEIGHT:

Mixed= 65% (+, - 2%)

SOLIDS BY VOLUME:

Mixed= 52% (+, - 2%)

VOLATILE ORGANIC CONTENT:

Part A= 3.43 pounds per gallon/Part B= 3.75 pounds per gallon VOC mixed < 427 g/l

STANDARD COLORS:

White, off white, light gray, medium gray, tile red, and beige

RECOMMENDED FILM THICKNESS:

5-6 mils per coat wet thickness (yields 3 mils dry)

COVERAGE PER GALLON:

267 to 320 square feet @ 5-6 mils wet thickness

PACKAGING INFORMATION

2 gallon and 10 gallon kits (volume approx.), 2 gal kit= 1 gallon part A (8.5#/gal) (weights approximate) and 1 gal. part B (11.0#/gal) (weights approximate)

MIX RATIO:

1 part A to 1 part B by volume

SHELF LIFE:

1 year

FINISH CHARACTERISTICS:

Satin gloss (30-60 at 60 degrees @ glossmeter)

ABRASION RESISTANCE:

Taber abrasor CS-17 calibrase wheel with 1000 gram total load and 500 cycles = 30.2 mg loss

IMPACT RESISTANCE:

Gardner Impact, direct= 50 in. lb. (passed)

FLEXIBILITY:

No cracks on a 1/8" mandrel

ADHESION:

375 psi @ elcometer (concrete failure, no delamination)

VISCOSITY:

Mixed = 300-500 cps (typical)

DOT CLASSIFICATIONS:

Part A "FLAMMABLE LIQUID N.O.S., 3, UN1993, PGIII"
Part B "FLAMMABLE LIQUID N.O.S., 3, UN1993, PGIII"

CURE SCHEDULE: (70°F)

pot life – 2 gallons volume..... 3-5 hours
tack free (dry to touch) 2-4 hours
recoat or topcoat..... 4-6 hours
light foot traffic 16-24 hours
full cure (heavy traffic)..... 2-7 days

APPLICATION TEMPERATURE:

40-90 degrees F

CHEMICAL RESISTANCE:

REAGENT	RATING
acetic acid 5%	A
xylene	B
mek	A
gasoline	B
10% sodium hydroxide	E
50% sodium hydroxide	D
10% sulfuric	C
10% hydrochloric acid	C
20% nitric acid	A
ethylene glycol	C

Rating key: A - not recommended, B - 2 hour term splash spill, C - 8 hour term splash spill, D - 72 hour immersion, E - long term immersion.
NOTE: extensive chemical resistance information is available through your sales representative.

PRIMER:

None required

TOPCOAT:

Optional- Many products are suitable as topcoats including multiple coats of this product. For added chemical resistance, color stability or UV stability, topcoat with a suitable aliphatic urethane.

LIMITATIONS:

- *Colors or gloss may be affected by high humidity, low temperatures, chemical exposure, UV exposure or lighting such as sodium vapor lights.
- *Product is not UV color stable
- *For best results use a 3/8" nap roller
- *Slab on grade requires moisture barrier
- *Substrate temperature must be 5°F above dew point
- *All new concrete must be cured for at least 30 days
- *Product color will vary from batch to batch
- *Physical properties are typical and not specifications
- *Light or bright colors (white, safety yellow, etc.) may require multiple coats or a topcoat to achieve a satisfactory hide, depending on the substrate
- *See reverse side for application instructions.
- *See reverse side for limitations of our liability and warranty.

MIXING AND APPLICATION INSTRUCTIONS

- 1) **PRODUCT STORAGE:** Store product in an area so as to bring the material to normal room temperature before using. Continuous storage should be between 60 and 90 degree F.
- 2) **SURFACE PREPARATION:** Surface preparation will vary according to the type of complete system to be applied. For a one or two coat thin build system (3-10 mils dry) we recommend either mechanical scarification or acid etching until a suitable profile is achieved. For a complete system build higher than 10 mils dry, we recommend a fine brush blast (shot blast). All dirt, oil, dust, foreign contaminants and laitance must be removed to assure a trouble free bond to the substrate. A test should be made to determine that the concrete is dry; this can be done by placing a 4' X 4' plastic sheet on the substrate and taping down the edges. If after 24 hours, the substrate is still dry below the plastic sheet, then the substrate is dry enough to start coating. The plastic sheet testing is also a good method to determine if any hydrostatic pressure problems exist that may later cause disbonding.
- 3) **PRODUCT MIXING:** This product has a one to one mix ratio by volume- merely mix equal volumes such as 1 gallon of part A to 1 gallon of part B. After the two parts are combined, mix well with slow speed mixing equipment such as a jiffy mixer until the material is thoroughly mixed and streak free. If temperatures are below 55°F, let the material induct for ten minutes to help reduce the possibility of developing an epoxy blush.
- 4) **PRODUCT APPLICATION:** The mixed material can be applied by brush or roller. Maintain temperatures within the recommended ranges during the application and curing process. When using product without a topcoat, it is best to use the same batch of material for an entire job to prevent color or gloss differences.
- 5) **RECOAT OR TOPCOATING:** If you opt to recoat or topcoat this product, you must first be sure that all of the solvents have evaporated from the coating during the curing process. The information on the front side are reliable guidelines to follow. However, it is best to test the coating before recoating or topcoating. This can be done by pressing on the coating with your thumb to verify that no fingerprint impression is left. If no impression is created, then the recoat or topcoat can be started. Always remember that colder temperatures will require more cure time for the product before recoating or topcoating can commence. Before recoating or topcoating, check the coating to insure no epoxy blushes were developed (a whitish, greasy film or deglossing). If a blush is present, it must be removed prior to topcoating or recoating. A standard type detergent cleaner can be used to remove any blush. Many epoxy overlays and coatings as well as urethanes are compatible for use as a topcoat for this product as well as multiple coats of this product.
- 6) **CLEANUP:** Use xylol
- 7) **FLOOR CLEANING:** Caution! Some cleaners may affect the color of the floor installed. Test each cleaner in a small area, utilizing your cleaning technique. If no ill effects are noted, you can continue to clean with the product and process tested.
- 8) **RESTRICTIONS:** Restrict the use of the floor to light traffic and non-harsh chemicals until the coating is fully cured (see technical data under full cure). It is best to let the floor remain dry for the full cure cycle. Dependent on actual complete system application, surface may be slippery, especially when wet or contaminated; keep surface clean and dry.

