



ResoBond 805 Tie-Coat Technical Bulletin (Revision B)

PHYSICAL PROPERTIES

Application time	
Working time at 70°F	20 minutes
Initial set at 70°F	6 hours
Bond strength of ResoBond 805 Tie-Coat on ResoSeal 800 Sealer on concrete (ASTM D-4541)	Concrete failure
Components	2 part
Percent solids	100%
Thickness	5-10 mils

Physical properties were determined on specimens prepared under laboratory conditions using applicable ASTM procedures. Actual field conditions may vary and yield different results; therefore, data are subject to reasonable deviation.

ResoBond 805 Tie-Coat is a bonding agent used in combination with the Resodyn line of ResoCoat 301 Polymer Thermal Spray coatings, and ResoSeal 800 sealer materials. ResoBond 805 is applied by brush or roller over ResoSeal 800 Concrete Sealer.

This tie-layer coating is an integral part of the Resodyn concrete coating system in that it promotes adhesion of the specified protective top coat material.

CHARACTERISTICS

- Ensures adhesion of PTS topcoats to sealer coats
- Easy to apply – brush or roll
- No noxious or toxic odors during application

AREA PREPARATION

Temperature of Working Area

Maintain a temperature of 60⁰-85°F on air, substrate, Liquid, and Hardener components during mixing, application, and cure. The two material components should be maintained at 65°F to 85°F for 48 hours prior to beginning work. At temperatures below 65°F, the application becomes more difficult and curing is retarded. Above 80°F, the material working time decreases. Immediately transferring the material

after mixing into several shallow roller trays will ensure full working time. Allowing large volumes of the mixture to remain in the original container will drastically reduce the working time due to a build-up of extreme heat (up to 400° F) generated by the curing process. For hot working environments, bulk material and roller trays may be placed on ice baths to cool the material and further extend working times. Pre-cooling of the two components is also recommended for ambient temperatures greater than 85°F.

Surface Preparation

All substrate structures must have the necessary strength to withstand imposed loads during normal use and operation. Surface should be floated free of ridges or depressions and all voids and surface imperfections are to be filled with appropriate fast-curing materials recommended by Resodyn Corporation, such as FlexKrete 102, Bondo etc, and machined to create a completely smooth surface.

Prior to the application of any coating or over-coating, surfaces must be free of dirt, dust, oil, grease, water, and other contaminants that may inhibit bonding. New concrete must be dry, firm and have achieved full 28 day cure prior to coating. When preparing old concrete, mechanical

methods should be utilized to remove laitance, old paints, protective coatings, and attacked or deteriorated concrete. All structural cracks, bug holes, and major imperfections should be repaired prior to application of sealer products.

Cleaning

ResoBond 805 Tie-Coat should be applied over the previously applied ResoSeal 800 sealer surface within the time specified in the ResoSeal 800 Technical Data Sheet. The sealer surface must be clean and dry prior to application of the Tie-Coat material. Cleaning prior to application of Tie-Coating will only be required if the surface was contaminated with dirt, rain water, and other debris during the ResoSeal 800 cure cycle.

Use only low pressure water rinse to clean the ResoSeal 800 sealed surface. Do not scrub surface with mechanical abrasive cleaning methods. A soft cloth or sponge may be used to loosen any adhered contamination. Immediately remove any standing water and allow the surface to completely dry before applying ResoBond 805 Tie-Coat.

APPLICATION

Mixing

ResoBond 805 Tie-Coat is packaged in pre-measured containers consisting of

Hardener Part A and Resin Part B which must be mixed together before use. Remix the Part A and Part B contents separately before combining.

Completely empty the contents of Resin Part B container into the Hardener Part A container to ensure proper mixing ratio. Always pouring the Resin into the hardener will ensure the empty containers can safely be disposed of after use. Using a slow speed 1/2 inch drill motor with a "Jiffy" type blade mix thoroughly until blended for 3 minutes. Primer is ready for use immediately after mixing.

DO NOT ADJUST HARDNER MIXING RATIO IN AN ATTEMPT TO CHANGE THE WORKING TIME OR INITIAL SET TIME! Deviations from the pre-measured component ratio will cause detrimental effects to the coating, including soft/tacky uncured coating, cracking, and/or complete coating failure with poor adhesion of top coat to sealer coating.

Installation

Do not apply ResoBond 805 Tie-Coat until the previous layers of ResoSeal 800 Sealer are completely dry and have achieved full cure. Consult the ResoSeal 800 Technical Data Sheet for required drying time and maximum residual moisture content.

Apply using either a short nap adhesive roller with a non-degradable core, or a nylon bristle brush. Apply material in a thin rolled layer evenly over entire surface. Special attention must be taken to ensure complete application of material at surface edges and masking coating margins to ensure full contact adhesion of top coat material to the base coat sealer for maximum adhesion at the coating edge.

COVERAGE

1 gallon unit ≈ 350 ft² at 5 mils thick.
*Coverage is theoretical and will vary depending upon surface conditions, porosity, application techniques, and project specifics.

SETTING/CURING

At 70°F air temperature, ResoBond 805 Tie-Coat should be allowed to cure for eight hours, but no longer than 72 hours, prior to application of ResoCoat PTS top coat materials. In very hot and dry weather (e.g. Temperature >100°F and RH < 30%) ResoBond 805 Tie-Coat should be allowed to cure for six to eight hours, but no longer than 48 hours, prior to application of ResoCoat PTS top coat materials. All epoxies are sensitive to ultra violet (UV) radiation, where the loss of mechanical properties is proportional to the time of UV exposure. Do everything possible to minimize exposure of the ResoBond 805 layer to direct sunlight prior to the application of ResoCoat 301 top-coat! If topcoat time exceeds the time-frames discussed above, consult Resodyn to discuss the specifics of the situation and establish next steps.

Weather affects to ResoBond 805

Rain following application of ResoBond 805 layer

Laboratory tests have indicated that rain water is miscible neither with the ResoBond 805 resin, nor with its hardener. However, rain water may induce a slight change in color of the cured resin and may extend the curing time. Experimental testing conducted at 77° F (25° C) and simulating **rain in a time frame from 5 minutes to 3 hours after application of the ResoBond 805 layer** indicated that water does not affect the integrity of the layer. When ResoCoat 301 is thermally sprayed over a ResoBond 805 layer that experienced a rain event more than 5 minutes from application, and was then allowed 24 hours to cure, excellent mechanical bonding is still detected.

IMPORTANT: Remove all standing water as soon as possible. Ensure the ResoBond 805 layer is dry to the touch (moisture/water) prior to the thermal application of the ResoCoat 301 layer.

PACKAGING

1 gallon unit

Part A Hardener	1 gallon can
Part B Liquid	1 gallon can

Containers are filled by weight, not volume. Container size does not indicate volume of contents.

CLEAN-UP

All equipment should be cleaned with MEK before material cures. If removal is required after cure, consult Resodyn for recommendations.

SHELF LIFE

ResoBond 805 Liquid and Hardener components have a shelf life of one (1) year when stored in unopened, tightly sealed containers in a dry location at 70°F. If there is a doubt as to the quality of the materials, consult a Resodyn representative.

CAUTION and SAFETY

Consult Material Safety Data Sheets and container label Caution Statements for detailed explanations of the hazards and personal protection required in handling these materials.

WARNING! Can cause severe eye, skin and respiratory tract burns and may cause central nervous system effects.

INHALATION: Can cause severe eye, skin and respiratory tract burns. May cause central nervous system effects such as headache, nausea, dizziness, confusion, and breathing difficulties. Severe cases of overexposure can result in respiratory failure.

INGESTION: Harmful if swallowed. If ingested, severe burns of the mouth and throat, as well as a danger or perforation of the esophagus and the stomach. May cause central nervous system effects, such as headache, nausea, vomiting, abdominal pain, dizziness, confusion, breathing difficulties. Severe cases of overexposure can result in respiratory failure.

SKIN CONTACT: Causes skin burns. If absorbed through the skin, may cause central nervous system effects, such as headache, nausea, dizziness, confusion, breathing difficulties. Harmful in contact with skin. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

EYE CONTACT: Causes eye burns. May cause blindness. Severe eye irritation.

CHRONIC EXPOSURE: Severe cases of overexposure can result in respiratory failure.

AGGRAVATION OF PRE-EXISTING CONDITIONS: Individuals with pre existing skin, eye or respiratory conditions may be more susceptible to over-exposure to this material.

PERSONAL PROTECTION

VENTILATION SYSTEM: A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details.

PERSONAL RESPIRATORS (NIOSH APPROVED): If the exposure limit is exceeded a respirator may be required. Where respirators are required, you must have a written program covering the basic requirements in the OSHA respirator standard. These include training, fit testing, medical approval, cleaning, maintenance, cartridge change schedules, etc. See 29CFR1910.134 for details.

An example of an OSHA approved air purifying cartridge respirator is pictured for reference below. Use of a similar respirator approved for this material is recommended when working with or around this product until it is fully cured.



SKIN PROTECTION: Use impervious gloves, and neoprene or other suitable long-sleeved and legged clothing. Launder clothing before reuse.

An example of appropriate long-sleeved full-body protection and gloves is shown

below. Use of similar protective apparel approved for this material is recommended when working with or around this product until it is fully cured.



EYE PROTECTION: Use full coverage safety glasses and/or goggles (see example below), when working with or around this product where splashing or contact is possible.



GOOD HYGIENE CONDITIONS: Wash thoroughly after handling. Safety shower and eyewash station should be within direct access. Keep containers closed when not in use.

FIRST AID MEASURES

INHALATION FIRST AID: If difficulty breathing, move to fresh air at once. Apply artificial respiration if breathing has stopped. Seek medical attention.

SKIN CONTACT FIRST AID: Immediately remove contaminated clothing, and any extraneous chemical, if possible to do so without delay. Initiate and maintain gentle and continuous irrigation until the patient receives medical care. If medical care is not promptly available, continue to irrigate for one hour. Cover wound with sterile dressing. Take off contaminated clothing and shoes immediately.

EYE CONTACT FIRST AID: Remove contact lens if present. Hold eyelids apart, initiate and maintain gentle and continuous irrigation until the patient receives medical care. If medical care is not promptly available, continue to irrigate for one hour. Rinse immediately with plenty of water also under the eyelids for at least 20 minutes.

INGESTION FIRST AID: Induce vomiting ONLY as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice immediately.

NOTE TO PHYSICIANS: Application of corticosteroid cream has been effective in treating skin irritation.

WARRANTY

We warrant that our goods will conform to the description contained in the order, and that we have good title to all goods sold. WE GIVE NO WARRANTY, WHETHER OF MERCHANTABILITY, FITNESS FOR PURPOSE OR OTHERWISE, EXPRESS OR IMPLIED, OTHER THAN AS EXPRESSLY SET FORTH HEREIN. We are glad to offer suggestions or to refer you to customers using Resodyn materials for a similar application. Users shall determine the suitability of the product for intended application before using, and users assume all risk and liability whatsoever in connection therewith regardless of any suggestions as to application or construction. In no event shall we be liable hereunder or otherwise for incidental or consequential damages. Our liability and your exclusive remedy hereunder or otherwise, in law or in equity, shall be expressly limited to our replacement of nonconforming goods at our factory or, at our sole option, to repayment of the purchase price of nonconforming goods.

Information concerning government safety regulations available upon request. Visit our Website at www.resodyn.com for downloadable versions of MSDS and Technical Data Sheet.