TECHNICAL DATA SHEET

NPR-5305 ONE-STEP EPOXY KIT

Structural Epoxy System for Infrastructure Protection

Rev. 20251215

DESCRIPTION

The Neopoxy NPR-5305 One-Step Epoxy Kit is a super high viscosity 100% solids structural epoxy coating with exceptional chemical resistance and adhesion to a variety of surfaces including concrete and steel. While traditional epoxy systems are comprised of a resin and a hardener component that need to be measured and transferred to a mixing container, NPR-5305 One-Step Kits are conveniently pre-packaged in one bucket with the two components separated by a layer of inert fibers. Mixing is simple and requires no weight or volume measurements. High build formulation allows the coating to be hand applied at up to 500 mils in a single pass. Cures rapidly to allow the application area to go back into service within one hour. Third party testing and decades of field experience demonstrate excellent chemical resistance to sulfuric acid, nitric acid, sodium hydroxide, hydrogen sulfide, caustics, gasoline, and other hydrocarbons.

FEATURES

- Single Package –
  No measuring, weighing, or messy cleanup
- 100% solids, solvent free, no VOCs
- Chemical and corrosion resistant
- Very strong surface bond
- Prevents inflow and infiltration
- Protects for decades
- Structural coating
- Verified by independent testing
- On the market since 1999

USES

- Protection of new or corroded concrete and steel infrastructure, including manholes, sumps, wet wells, pipelines, vaults, tanks, concrete surfaces, cracks, WTPs, and more
- End sealing or patching for CIPP liners
- PVC coating and bridging with other materials (requires primer coat with Neopoxy NPR-3200 PVC Adhesive)

PACKAGING OPTIONS

- One-Step Kit Size Options: .5 gal, 1 gal, 1.5 gal, 3 gal
- Optional “One-Step Set” packaging separates pre-measured resin and hardener components into two buckets, extending the shelf life from three months to one year.

23964 Clawiter Road
Hayward, California 94545

Phone: 510-782-1290
www.neopoxy.com

PHYSICAL PROPERTIES

The following are typical values obtained under laboratory conditions. Expect reasonable variation under field conditions.

Description	Standard	Data
Mix Ratio (Resin/Hardener)	-	PREMEASURED
Initial Cure Time, 100 Grams @ 77°F (25°C)	-	30 Minutes
Pot Life, 100 Grams @ 77°F (25°C)	-	20 Minutes
Appearance	-	Resin (Part A): Green Hardener (Part B): White Mixture: Light Green
Weight Per Gallon (Resin)	-	8.9 – 9.1 Lbs
Weight Per Gallon (Hardener)	-	13.9 – 14.3 Lbs
Weight Per Gallon (Mixture)	-	10.9 – 11.2 Lbs
Specific Gravity (Resin)	-	1.06 – 1.09 G/ml
Specific Gravity (Hardener)	-	1.64 – 1.71 G/ml
Maximum Service Temp. (Ambient Cure)	-	150°F (66°C)
Maximum Service Temp. (Postcured)	-	168°F (76°C)
Coefficient of Linear Thermal Expansion	-	37×10^{-6} cm/cm/°C
Shrinkage	-	<0.5%
Flexural Strength	ASTM D-790	11,500 psi
Flexural Modulus	ASTM D-790	550,000 psi
Tensile Strength	ASTM D-638	7,000 psi
Tensile Modulus	ASTM D-638	290,000 psi
Tensile Elongation	ASTM D-638	5%
Compressive Strength	ASTM D-695	18,000 psi
Shore D Hardness	ASTM D-2240	>86
Adhesion to Concrete	ASTM D-4541 ASTM D-7234	Concrete Failure
Adhesion to Steel	ASTM D-4541	>2,500 psi
Abrasion Resistance (Taber Abraser)	ASTM D-4060	50 mg loss (1000 cycles @ 1000 gram load)
Volatile Organic Compounds (VOCs)	ASTM D-3960	0.0 Lbs/Gallon
Chemical Resistance	ASTM F-1216 ASTM D-543 ASTM D-2122	Requirements Met

DIRECTIONS FOR USE

SURFACE PREPARATION: Any concrete surface must be fully cured prior to coating (typically 28 days for Portland cement). All inflow and infiltration must be stopped prior to application. High pressure wash all surfaces to be coated at minimum 4000 PSI in order to remove contaminants, paint, laitance, etc. After power washing, remove standing water and blow warm air on surface until visibly dry. There should be no darkened areas, as this may indicate surface moisture. For confirmation of surface dryness, applicant may choose to do the "Plastic Sheet Method" test detailed in ASTM D4263. Surface pH should be between 6-10. The product can be applied to any concrete surface profile, CSP 1 to CSP 10 (the rougher the surface the stronger the adhesion). Steel surfaces to be coated should be prepared according to SSPC-SP 10/NACE No. 2 "Near White Blast Cleaning". Steel surfaces may also require following SSPC-SP-1 (Solvent Cleaning) to remove any soluble contaminants.

APPLICATION CONDITIONS: The temperature of the air and surface to be coated should be between 40-80°F during application. It is important to apply the product while the temperature is either stable or falling. Relative humidity must be below 80%.

MIXING & HAND APPLICATION: Open the NPR-5305 One-Step Kit on a flat stable surface. Using a right angle ½" drill (such as Milwaukee Super Hawg) with paint mixing paddle, mix the kit contents at low speed until the epoxy is sufficiently fluid to mix at high speed. Make sure the mixing paddle scrapes the sides and reaches all the way to the bottom of the bucket. Mix thoroughly until a smooth color is evident. Using a paint trowel or putty knife, remove mixed epoxy from the bucket as rapidly as practical and safe. Spread the epoxy directly onto the surface to be protected.

*For One-Step Set packaging, combine contents of both buckets, then follow directions above.

CLEAN UP: Clean any surface spills or overspray as quickly as possible with isopropyl alcohol or acetone. For cleaning skin, first wipe off epoxy with soft rag and then wash area with soap and warm water.

SHELF LIFE & STORAGE: Store product in closed container at 40°-80°F. Shelf life is three months from the manufacture date indicated on label. Shelf life for optional "One-Step Set" packaging is one year from the manufacture date indicated on label.

SAFETY: Use of safety goggles, particle masks, coveralls, and chemical resistant gloves is recommended. Work in a clean, well-organized area with adequate ventilation. Keep uncured product containers tightly closed and away from children at all times. Please read and understand the full safety recommendations as set forth in the Safety Data Sheets (SDS) available on our website.

ADDITIONAL PRODUCT INFORMATION

COATING THICKNESS: Product may be applied at up at 500 mils (1/2") in one single pass. Exceeding this maximum application thickness may result in sagging. While every project and surface is different, it is considered "standard" to apply 125 mils to new concrete infrastructure and 250 mils to corroded concrete infrastructure. Please consult with Neopoxy representative to determine the best thickness for your project. Since this is a 100% solids solvent-free product, there is minimal shrinkage. Wet and dry-film thicknesses are equal.

COVERAGE: One gallon covers 12 square feet at 1/8" thickness (125 mils).

CURE TIME: Epoxy is "temperature sensitive," meaning that it will cure faster at higher temperatures. Epoxy is also "mass sensitive," meaning that the larger the volume, the shorter the working time. For example, when applied onto a surface at ¼" thickness, the product will harden in approximately one hour. However, when applied at thickness of ½", the time to harden may be as little as 30 minutes. It is important to limit the mass of mixed epoxy by continuing to mix it or by spreading it to extend the working time.

ENVIRONMENTAL: Neopoxy epoxies are comprised entirely of reactive solids (resin & hardener), which means that there are no solvents or thinners that evaporate during the curing process. Since the curing process binds all reactive components, the cured epoxies are inert, non-leeching, and safe for use on stormwater infrastructure, wastewater infrastructure, or for discharge into a wastewater treatment facility or natural body of water. Prior to mixing the epoxy, the applicant must handle the uncured resin and hardener with care and clean up any spills in accordance with local environmental regulations. For additional information please reference Safety Data Sheets (SDS) available on our website.

RECOAT WINDOW: Multiple layers may be applied to build thickness, but the materials must be allowed to cure and become cool to the touch before applying the next layer. Recoat window may be extended up to several months as long as the surface is clean and free of contaminants and amine blush.

THINNING: To lower viscosity, place containers in heated room or submerge bottom of container in hot tap water. **Do not thin with solvents.**