EDITION: 020824

Technical Data Sheet

QuakeBond™ 220-TC

HYCHEM
Infrastructure

Product Description

QuakeBond™ 220-TC (Tack coat) is a two-component high-strength structural epoxy-resin designed for structural adhesion. This adhesive system trowels easily and has high-tackiness. QuakeBond™ 220-TC is a 100% solids formulation with low toxicity, low odor during cure, and features a unique pot life of 130-minutes for longer workability.

Uses

- Adhesive for bonding external reinforcement to concrete, masonry, wood, stone, steel, etc.
- Structural bonding of carbon or glass laminates, PipeMedic®, and PileMedic® products
- Structural bonding of on vertical and overhead surfaces

Advantages

- High strength, structural paste adhesive
- High tackiness for overhead applications.
- Fully compatible with QuakeWrap® laminates and saturated fabric systems
- 100% solvent free
- Moisture tolerant
- 24-hour cure time
- Tile-like high gloss finish provides easy-to-clean and surface
- Non-toxic when fully cured
- Product DOT non-corrosive for shipping

Coverage

Surface Application: Applied at a thickness of 40 mil results in 40 square feet per gallon (1 liter per square meter). Rough and uneven surfaces result in lower yields. Contact a QuakeWrap® specialist for more information.

Laminate Application: Applied at a thickness of 20 mil results in 80 square feet per gallon (0.5 liter per square meter).

Application Equipment

Use a putty knife or trowel for smoothing of resin.

Epoxy Properties

Color – Mixed	Grey
Viscosity – Mixed	Non-Sag Paste
Mix Ratio – Weight (A:B)	100:42.5
Pot life at 77°F (25°C)	137 minutes
Full cure time	24 hours
Tensile Strength (ASTM D-638)	4,360 psi (38.6 MPa)
Shear Strength (ASTM D-1002)	2,300 psi (15.9 MPa)
Flexural Strength (ASTM D-790)	1,400 psi (9.6 MPa)
Adhesion to Concrete	Substrate Failure
Adhesion to Steel SSPC-SP10	>1,200 psi (8.3 MPa)
Adhesion to Damp Concrete	>350 psi (2.4 MPa) Substrate Failure
Tensile Elongation	3%
Hardness, Shore D	85-90

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Surface Preparation

For Bond-Critical Applications: Surfaces must be entirely free of oil, grease, dirt, detergent, laitance, curing compounds, coatings, or other contaminants that may interfere with adhesion.

Steel: *Immersion Service*: SSPC-SP10 Near White Blast Cleaning with 3.0 mil profile
Non-Immersion Service: SSPC-SP6 - Commercial Blast Cleaning with 2.0 mil profile.

Concrete: Concrete shall be properly cured for a minimum of 28 days before application of coating. The concrete must be prepared to provide anchor pattern for adhesion. Final prepared surface should be clean and rough. Consult SSPC-SP13 - Surface Preparation of Concrete.

For Contact-Critical Applications: Surfaces must be entirely free of oil, grease, dirt, detergent, laitance, curing compounds, coatings, or other contaminants that may interfere with adhesion. Surface voids should be patched, and materials and coatings with low compression strengths and elastic moduli should be removed.

For Applications of Additional Layers: In multiple-ply applications where previous layers are cured, interlayer surface preparation, such as light sanding and void filling is required.

Mixing

Prior to mixing, all products should be preconditioned to room temperature (60-75° F / 16-24° C). Do not mix more material than can be applied within the 130-minute pot life. Begin application immediately – no induction time. Mix 2 parts component “A” with 1-part component “B”, by volume or weight.

3-gallon kit: Pour Part B Hardener in Part A Resin. Hand mix for 3 minutes, scraping sides and bottom of container to ensure complete mixing.

15-gallon kit: Pre portion with scale. Mix for 3 minutes using a Jiffy mixer head and a mechanical drill. To ensure complete mixing, scrape sides and bottom of container and continue mixing for an additional 1 to 2 minutes. DO NOT HAND MIX.

Application

Air and surface temperature should be between 50-90° F (10-32° C). Do not begin application if air, substrate, or material temperatures is below 50° F (10° C) or expected to fall below 50° F (10° C) within 24 hours of application. Do not begin application if dew point is within 5° F (3° C) of the temperature. Variations in temperature can affect pot life and sag properties of this material.

Apply product to substrate with a putty knife or trowel and smooth to appropriate thickness.

Cleanup

Collect with absorbent material, flush with water. Clean up using Acetone or other Ketone solvent. For concrete surfaces, a primer coat of either NSP 100, 101, or 110 is strongly recommended. Dispose waste in accordance with local disposal regulation. Cured materials can only be removed mechanically.

Packaging

- 3-gallon (11.4 L) kits
- 15-gallon (56.8 L) kits

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Shelf life and Storage

Shelf life is 18 months from the marked date of manufacture when unopened and stored in a dry, covered area at temperatures between 45-95° F (7-35° C). Keep away from heat, flame, and ignition sources.

Limitations

QuakeBond™ 220TC will not cure in temperatures below 40°F. Seek approval from a QuakeWrap representative for applications of product below 50°F. All epoxies will show chalking/yellowing on exterior exposures. Application of epoxy coatings in cool temperatures and high humidity can result in the formation of amine blush. Blush may appear as a milky, white, tacky residue on the surface of the cured coating and must be removed before the application of another coat. Intercoat adhesion problems may occur if blush is not removed.

First Aid

Appropriate Personal Protective Equipment (PPE) should be worn at all times when handling product.
Consult SDS for more information.

Certificate of Analysis

Certificate of Analysis (C of A) will be provided upon request.

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