



REMR MATERIAL DATA SHEET CM-PC-1.9

CONCRETE PATCHING MATERIAL: DECO-REZ TPM 721

1. NAME

Deco-Rez Thin Overlay and Patching
Mortar 721

2. MANUFACTURER

General Polymers Corp.
9461 Le Saint Drive
Fairfield, OH 45014

3. DESCRIPTION

Deco-Rez TPM 721 is a specially formulated co-polymer mortar designed for repair and filling of surface irregularities in applications of 1/16 to 1/4 in. in depth.

4. USES & LIMITATIONS

Uses: This versatile mortar can also be applied overhead in thin multiple-coat applications. Once in place, the material will develop extremely high early strengths, suitable for foot traffic in 3 to 4 hr with final compressive strengths beyond 6,000 psi. Because of its exceptional wear resistance and excellent bonding, it will outperform conventional cement mortars even when featheredged. This fast-setting material is excellent for horizontal surfaces to fill small pores and voids or for use as a thin overlay on these surfaces. Vertical or overhead repairs are achieved in thin coat applications.

Limitations: Deco-Rez TPM 721 is not recommended for applications greater than 1/4 in. thick or less than

1/16 in. and should not be applied at a temperature below 45° F or when the temperature is expected to fall below 40° F within 48 hr. TPM 721 can and should be applied over damp surfaces, and the substrate must be clean and sound. For repairs greater than 1/4 in. deep, TPM 711, 722, or 723 should be used. For skim coat applications or textured coatings, AT2500 is recommended. Solvent-based curing compounds should not be used.

5. MANUFACTURER'S TECHNICAL DATA

Packaging: TPM 721 is packaged in convenient, premeasured quantities for ease of mixing and handling. The kit contains 1 gal of polymer and 46 lb of selected powders, wetting agents, and aggregates. The packaging eliminates the need for onsite batching, which will alleviate blending errors and ensures constant composition. The total package will yield approximately 0.4 cu ft.

Weight per gallon, co-polymer: 8.4 lb

Cured color: Cement gray

Shelf life: Polymer:	1 year in original container
Dry blend:	6 months in original package

Conditions for storage: The polymer should be stored at temperatures between 65° and 80° F and should be kept from freezing.

The dry blend should be stored between 65° and 80° F and should be kept dry.

<u>Performance Properties</u>	<u>Results</u>
Compressive strength, psi	
7 days air cured	5,300
28 days air cured	6,200
Bond strength, to wet cement after aging	
28 days, min, psi	300
Flexural strength, 28 days, psi	1,700
Wear resistance	5 to 6 times better than concrete

6. MANUFACTURER'S GUIDANCE FOR APPLICATION

Preparation: TPM 721 can be applied to clean concrete and cementitious masonry surfaces. All oil, dirt, paint, adhesives, loose material, and waxes must be removed. Areas to be repaired should be no less than 1/4 in. in depth. Surface should be prepared by mechanical means (sand-blasting) to remove all foreign matter. Surface should be damp, but not wet with standing water, during application of the TPM 721.

Mixing and application: TPM 721 may be mixed manually or mechanically. For manual mixing the material may be mixed in mortar box or wheelbarrow. Mechanical mixing should be done in conventional mortar mixer or with drill and paddle in suitable vessel.

To begin mixing, pour approximately four-fifths of the liquid component into the mixing vessel. While mixer is rotating, add the entire package of dry blend and continue mixing until uniform. Remaining liquid may be added to provide a more fluid consistency. Mix no more than 3 min. Priming is generally not required, but if the surface is porous or if the material is to be applied to vertical

or overhead surfaces, the remaining one-fifth of the liquid component should be used as a prime coat. The prime coat should be brush applied to the repair area immediately before placing mixed mortar. Do not allow prime coat to dry before placing the mortar.

If manual mixing requires more than 3 min, mix smaller quantities. Dry blend should be premixed before adding when preparing less than a full unit. For repairs greater than 1/4 in. in depth, TPM 711, 722, or 723 should be used. The surface to be repaired should be damp, but free of standing water. Place material onto surface with trowel or float, making sure to force material into pores and voids. Once material has set to desired stiffness, finish with trowel or float. Sprinkle water on the surface and steel trowel for an extremely smooth finish. Curing is generally not required, but under conditions of high heat, low humidity, or strong winds, special curing procedures may be necessary to prevent the surface from drying too rapidly. If any of these conditions exists, keep surface damp by misting with water, covering with wet burlap, or using a solvent-free curing compound. If rain is imminent, cover newly repaired area. If freezing may occur, protect patch with insulating material. Clean tools and equipment immediately after use with water. Hardened material must be mechanically removed.

7. CORPS OF ENGINEERS' EVALUATION

Technical data:

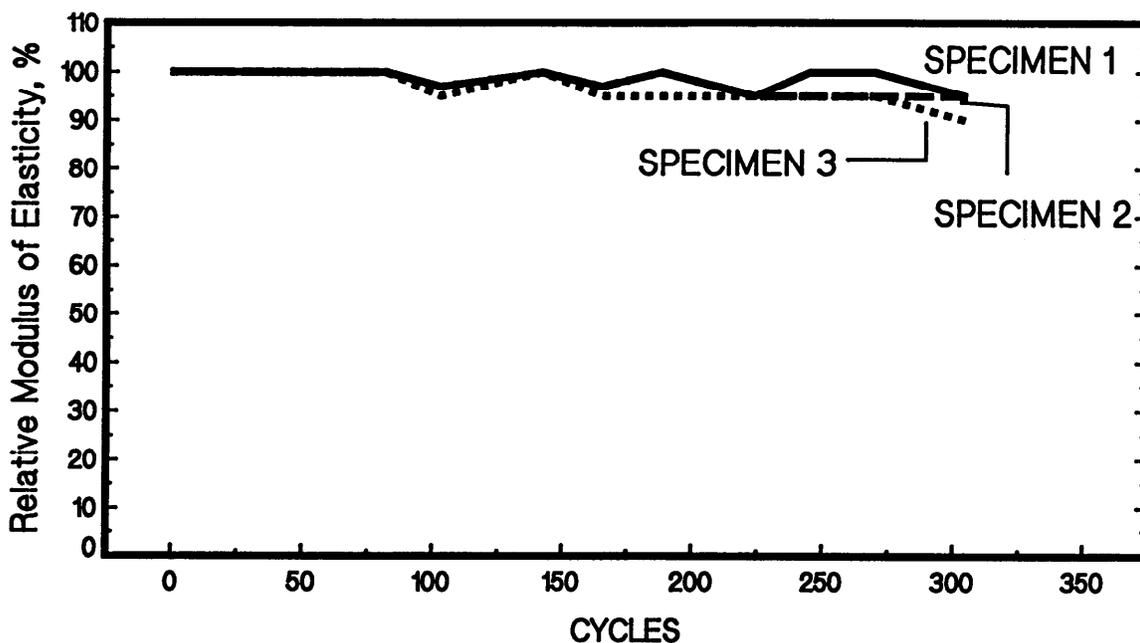
<u>Performance Properties</u>	<u>Test Method</u>	<u>Result</u>
Compressive strength, psi	ASTM C 39	
	24 hr	2,920
	3 days	5,840
	7 days	7,040
	28 days	8,600

<u>Performance Properties</u>	<u>Test Method</u>	<u>Result</u>
Modulus of elasticity, psi	ASTM C 469	
	24 hr	1.56×10^6
	7 days	2.43×10^6
	28 days	2.80×10^6
Flexural strength, psi	ASTM C 78	
	24 hr	610
	3 days	960
	7 days	1,000
	28 days	1,460
Bond to concrete, psi	ASTM C 882	
	24 hr	1,100
	3 days	2,040
	7 days	3,020
	28 days	3,300

8. ENVIRONMENTAL CONSIDERATIONS

Reasonable caution should guide the preparation, repair, and cleanup phases of concrete patching activities involving potentially hazardous and toxic chemical substances. Manufacturer's recommendations to protect occupational health and environmental quality should be carefully followed. Material safety data sheets should be obtained from the manufacturers of such materials. In cases where the effects of a chemical substance on occupational health or environmental quality are unknown, chemical substances should be treated as potentially hazardous toxic materials.

Rapid Freezing and Thawing, ASTM C 666, Relative Dynamic Modulus of Elasticity, %



9. AVAILABILITY & COST

Availability: Normally marketed throughout the United States.

Cost: Depends on job conditions and geographic areas. Cost available on request.

10. TECHNICAL SERVICE

Write to manufacturer at address given under item 2 or call 513-874-5980 for complete problem-solution or custom-system information for project requirements.