REMR Material Data Sheet CM-CR-1.2

Epoxy Resin System for Dormant Crack Repair: Deco-Rez 3517

1. NAME

Deco-Rez 3517
Injection Resin

2. MANUFACTURER

General Polymers Corp.
PO Box 12168
Cincinnati, OH 45212
Telephone: 513-631-0649

3. DESCRIPTION

Deco-Rez 3517 is a two-component, low-viscosity epoxy resin designed specifically for pressure injection. This low-viscosity resin is also excellent for repair of cracks by gravity feeding. This 100-percent solids resin is completely moisture insensitive and thus can be applied on a damp concrete surface. When applied with standard injection equipment, it will effectively grout and seal cracks in horizontal, vertical, or overhead surfaces.

4. APPLICABLE SPECIFICATIONS

ASTM C 881, "Standard Specification for Epoxy-Resin-Base Bonding Systems for Concrete," is a guide in specifying the material.

5. USES & LIMITATIONS

Uses: Deco-Rez 3517 is used for crack repair by injection or gravity feeding.

Limitations: Only the amount of material that can be used in 30 to 35 min should be mixed at a time. Deco-Rez 3517 should not be applied when ambient or surface temperatures are below 50° F.

6. MANUFACTURER'S GUIDANCE FOR APPLICATION

Surface preparation: Surfaces to be repaired or sealed must be clean and sound. Concrete must be free of dust, laitance, grease, sealers, curing compounds, and other bond-inhibiting contaminants. Cracks or areas to be repaired may be damp or dry.

Mixing: Deco-Rez 3517 Injection Resin must be mixed 2 parts of resin (A) to 1 part hardener (B) by volume. The material should be mixed with a low-speed drill and paddle for approximately 3 min to ensure a thorough mix.

Application: For grouting cracks, usual injection techniques should be employed. Prior to pressure injection, the crack surface must be sealed.

7. MANUFACTURER'S TECHNICAL DATA

Physical properties:*

Mixing ratio (Part A to Part B) by volume	2 to 1
Viscosity, centipoises	250
Pot life, min	30 to 35
Tack free (thin film), hr	5 to 6

Performance Properties at 75° F*	Test Method	Results
Tensile strength, psi	ASTM D 638	3,500
Tensile elongation, percent	ASTM D 638	12 to 15
Compressive strength, psi	ASTM D 695	8,500
Compressive modulus, psi	ASTM D 695	200,000-300,000

* Values will vary with temperature and humidity changes.

8. CORPS OF ENGINEERS' EVALUATION

Technical data:

Performance Properties at 73° F, 50% Relative Humidity	Test Method	Results
Viscosity, centipoises	ASTM D 2393	252
Gel time, min	ASTM C 881 ASTM D 1259	24
Bond to concrete, psi	ASTM C 882	560
Effect of moisture on bond strength, psi	ASTM C 882	---
Compressive strength, psi	ASTM D 695	7,750
Young's modulus of elasticity, psi	ASTM D 695	2.45×10^5
Tensile strength, psi	ASTM D 638	2,800
Tensile elongation, percent	ASTM D 638	4.1
Flexural strength, psi	ASTM D 790	5,530
Shrinkage volumetric, percent		3.51
Hardness	ASTM D 2240	67
Water absorption, percent	ASTM D 570	0.39

9. ENVIRONMENTAL CONSIDERATIONS

Reasonable caution should guide the preparation, repair, and cleanup phases of crack repair 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.

10. AVAILABILITY & COST

Availability: Deco-Rez 3517 is normally marketed throughout the United States.

Cost: Cost information is available upon request.

11. TECHNICAL SERVICES

Skilled representatives of General Polymers Corp. are available throughout the United States. Write or telephone direct to General Polymers corporation for assistance.