



REMR MATERIAL DATA SHEET CM-PC-1.27
 CONCRETE PATCHING MATERIAL: RAPID SET
 GROUT

1. NAME

Rapid Set Grout

2. MANUFACTURER

Rapid Set Products
 Midwestern Regional Office
 1211 South 6th Street
 St. Charles, IL 60174
 Telephone: 312-773-4949

3. DESCRIPTION

Rapid Set Non-shrink Grout is a mixture of Rapid Set Cement and a quality sand. At fluid consistency (1-1/4 gal of water per 50-lb bag), typical field-test strengths are over 6,000 psi at 28 days. At dry pack consistency, typical field-test strengths are over 9,000 psi at 28 days. One hour strengths are 2,000 psi.

4. APPLICABLE SPECIFICATIONS

Rapid Set Non-shrink Grout meets the requirements of ASTM C 1107, specification for nonshrink grout and the Corps of Engineers Specification for Nonshrink Grout--CRD C 621. It has the Los Angeles City Building Department approval #RR 24654 and also that of many state highway departments.

5. USES

Rapid Set Non-shrink Grout can be used for precision grouting under columns,

machine base plates, and precast repair. It is used to grout anchor bolts, reinforcing bars, and railing. It is excellent for floor patching and leveling. Because it provides quick concrete strength, it is ideal for patching highways, runways, sidewalks, and floors.

6. MANUFACTURER'S TECHNICAL DATA

Compressive strength, psi, ASTM C 109

	<u>5-lb bag</u>	<u>1/2-pt water</u>	<u>1 pt water</u>
	<u>50-lb bag</u>	<u>3 qt water</u>	<u>5 qt water</u>
1 hr		4,800	2,700
3 hr		5,000	3,700
1 day		5,200	5,400
7 days		8,200	6,400
28 days		11,200	7,400
Yield, cubic ft/ 5# bag		0.04	0.046
Yield, cubic ft/ 50# bag		0.40	0.46
Time of set, ASTM C 191		25 min	25 min
Slant shear, ASTM C 882		4 qt water, psi	
1 day		1,400	
28 days		2,680	

7. MANUFACTURER'S GUIDANCE FOR APPLICATION

Remove all unsound concrete, keeping edges and corners square. Clean oil, grease, laitance, and debris from adjacent concrete. Mix the grout with 3 to 5 qt of water per 50-lb bag or 1/2 to 1 pt per 5-lb bag to the consistency desired. The stiffer the mixture, the higher the resulting strength. Use an approved air-entraining agent for enhanced protection from freezing and thawing. The

working time for Rapid Set Grout is approximately 20 min at 70°F. Placement procedures should be organized within this time limit. After setting, the grout gains strength quickly, and finishing operations can be difficult.

The working time can be extended through the use of cold materials and/or Rapid Set Control. In cold weather, warm materials and/or Rapid Set Accelerator can be used to hasten the set and strength development.

8. CORPS OF ENGINEERS' EVALUATION

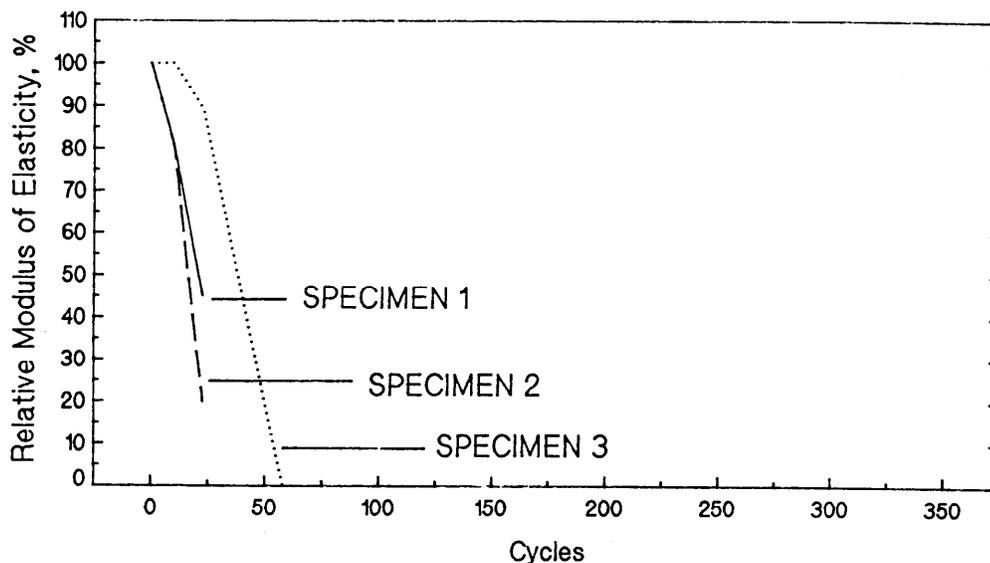
Technical data:

Mixture: 0.9 gal water per 50-lb grout.

<u>Properties</u>	<u>Test Method</u>	<u>Results</u>
Compressive strength, psi	ASTM C 109	
	1 hr	1,910
	2 hr	2,010
	3 hr	2,080
	ASTM C 39	
	24 hr	3,690
	28 days	6,300
Modulus of elasticity, psi	ASTM C 469	
	24 hr	3.45×10^6
	28 days	3.51×10^6
Flexural strength, psi	ASTM C 78	
	24 hr	495
	28 days	320
Bond to concrete, psi	ASTM C 882	
	24 hr	2,110
	28 days	2,550
Shrinkage, percent	GR-83-10*	
	(unconfined condition)	0.18
	(concrete patch)	0.04

* Bureau of Reclamation Technical Report Standard.

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



9. ENVIRONMENTAL CONSIDERATIONS

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

For more information, call Rapid Set Products.