



REMR MATERIAL DATA SHEET CM-WA-1.2

WATER-REDUCING, CEMENT-DISPERSING, SET-CONTROL
ADMIXTURE FOR CONCRETE: HPS-R

1. NAME

HPS-R
Water-Reducing
Cement-Dispensing
Set-Control Admixture

2. MANUFACTURER

Hunt Process Corporation - Southern
PO Box 688
Ridgeland, MS 39157

3. DESCRIPTION

HPS-R is a sodium ligno-sulfonate admixture furnished in a 40 percent solids solution.

4. APPLICABLE SPECIFICATIONS

Civil Works Guide Specification for Concrete, CW-03305.

ASTM C 494-82, "Standard Specification for Chemical Admixtures for Concrete."

5. USES & LIMITATIONS

Uses: The manufacturer states that HPS-R can be used in concrete mixtures to increase workability or to reduce mixing water required. It can also be used to reduce bleeding and segregation and to control or retard the time of set.

Limitations: HPS-R should not be used in excess of the manufacturer's recommendations. The results may be excessive retardation or segregation of the mixture.

6. MANUFACTURER'S TECHNICAL DATA

Packaging: 1- to 55-gal containers

Mechanical & Physical Properties: The manufacturer states that this product meets ASTM C 494-82 which is as follows:

Compressive str, min, % of control

3-day	100
7-day	100
28-day	100
6-month	100
1-year	100

Flexural str, min, % control

3-day	100
7-day	100
28-day	100

Length change, max shrinkage

% of control	135
Increase over control	0.010

Relative durability factor, min

80

Color dark brown

7. MANUFACTURER'S GUIDANCE FOR APPLICATION

The recommended dosage for normal concreting operation is 5 to 8 fl oz of the solution per 100 lb cement. The material should be dispensed into the mixing water. HPS-R is compatible with sulfonate or vinsol type air-entraining agents and calcium chloride but should be added separately to the mixing water.

8. CORPS OF ENGINEERS' EVALUATION

HPS-R was used in a study by the Waterways Experiment Station to retard the set of concrete placed underwater to allow for extended movement and better bonding. The results are published in Technical Report C-76-3, "Evaluation of Admixtures for Use in Concrete to be Placed Underwater." Based on the results of that investigation the following conclusions appear warranted:

a. Use of HPS-R did not increase the flowability of equal-slump concrete, regardless of the point of tremie discharge.

b. When HPS-R was added to a concrete mixture without any adjustment of the components of the mixture, the flowability of the concrete was increased.

c. Use of HPS-R did not affect the slope significantly, regardless of the point of tremie discharge.

d. The concrete containing HPS-R appeared to be more cohesive and developed less laitance than equal-slump concrete without this admixture.

e. The higher slump concrete mixture containing HPS-R appeared to be less cohesive than all mixtures with a lower slump.

9. ENVIRONMENTAL CONSIDERATIONS

Reasonable caution should guide the preparation, repair, and cleanup phases of concrete or mortar 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

This material is available throughout the US through a network of local distributors.

Cost: Approximately \$1.50 per gal.

11. TECHNICAL SERVICES

A national network of applicators approved by the manufacturer offers field services, assistance, and related information.