



METCO WR

Water Reducing and Retarding Admixture for Concrete and Mortar

1. Product Description

a. **Basic Use:** Metco WR is a liquid admixture for concrete and mortar that allows water reduction without sacrificing slump or workability. Through a chemical process, it internally lubricates the cement matrix to increase the efficiency of any cementitious system. This allows the production of concrete and mortars with higher strengths, better freeze/thaw resistance, and lower permeability. It can also be used to increase the workability of concrete and mortar while maintaining water content.

b. **Features/Benefits:**

- Easy to use by direct addition to concrete or mortar.
- Reduces required water thereby enhancing hardened properties.
- Normal set times virtually unaffected with normal dosage rates.
- Contains no added calcium chloride or other corrosive agents.
- Takes hard to work concrete to easily placed high slumps.
- Can be used with air entrained systems.
- Excellent for use as a pumping aid.

c. **Typical Applications:** Ready-mix concrete, mass concrete, job mixed concrete, footers, grouts, flat-work, heavily reinforced structural concrete, high strength concrete.

d. **Limitations:** Keep Metco WR from freezing in storage.

e. **Composition:** Metco WR is a blend of chemicals in a water-based system that are non-corrosive to concrete and mortar.

f. **Color/Appearance:** Metco WR is a dark brown liquid in the container, but has no effect on the color of concrete or mortar.

2. Packaging

Metco WR is available in 1-gal. (3.8 liter) jugs (4 jugs per case), 5-gal. (18.9 liter) pails, and 55-gal. (208 liter) drums. Metco WR is also available in bulk.

3. Estimating/Coverage

To properly dose with Metco WR, the cement factor or content of the concrete or mortar must be known. Most applications will use 2 oz. (0.06 liter) to 5 oz. (0.15 liter) of Metco WR per 100-lbs. (45 kg) of cement.

4. Technical Data

a. **Applicable Standards:** ASTM C 494, Standard Specification for Chemical Admixtures for Concrete, Types D.

b. **Compressive Strength:** Metco WR vs. control at a 4 in. (102 mm) slump.

Age	Control	Metco WR
1 day	1,300 psi (9.0 MPa)	1,350 psi (9 MPa)
3 days	2,000 psi (14 MPa)	2,170 psi (15 MPa)
7 days	3,000 psi (21 MPa)	3,430 psi (24 MPa)
28 days	4,000 psi (28 MPa)	4,480 psi (31 MPa)

5. Directions for Use

a. **Preparation:** Normally, standard concrete or mortar mixes should be mixed with an approximately 5% water reduction as a starting point. Add Metco WR and mix for 3 minutes and check for desired slump or flow. Add additional water to make final adjustments and mix for 2 additional minutes. Keep track of water and Metco WR dosage for additional batches. On applications where additional slump or flow is needed, add Metco WR to the standard mix and blend for 3 to 5 minutes. Adjust Metco WR to achieve desired workability. Concrete utilizing Metco WR will flow farther and expect greater form pressures than with standard concrete. Forms should be built accordingly.

6. Availability

Metco WR is normally available immediately from your local distributor or it will be shipped within 5 working days upon receipt of order. Please contact your local Metalcrete representative or call Metalcrete directly for more information.

7. Warranty

Metco WR is manufactured in strict accordance with the quality control standards of Metalcrete Industries. It is guaranteed to perform as indicated on this data sheet when used in accordance with printed instructions.

8. Technical Service

Metalcrete technical service representatives are available to provide on-site assistance with a minimum three day notice.



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