
RUSSTECH[®]

SUPERFLO 440R

HIGH-RANGE WATER-REDUCING AND RETARDING ADMIXTURE FOR CONCRETE

DESCRIPTION:

SUPERFLO 440R superplasticizer and retarder is a modification of the original **SUPERFLO 440** superplasticizer. It is a particularly effective patented product which imparts extended workability to superplasticized concrete especially in warm weather, yet still provides excellent water reduction and strength development characteristics. **SUPERFLO 440R** aids in producing concrete with better flowability and workability at reduced water to cement ratios with an increase in strength and durability.

ADVANTAGES:

- Longer period of workability (longer retention of high slump)
- Cohesive and non-segregating
- Consistent and controlled time of set based on dosage rate
- Retardation of set, yet same or better rapid strength development as with conventional super plasticizers
- Reduced contractor placement costs
- Improved durability with lower permeability
- Higher modulus of elasticity
- Increased resistance to freeze thaw cycles; lower water to cement ratio for a given slump
- Reduced shrinkage and creep
- Improved resistance to sulfate attack
- May be used in prestressed and precast applications
- May be added at the ready mix plant or jobsite as needed

USES:

SUPERFLO 440R is recommended for use in concrete where longer periods of workability and flowability are desired with increased early and ultimate strengths.

SUPERFLO 440R allows the contractor to place concrete with improved flowability and increased strength while lowering placement costs.

COMPATIBILITY:

SUPERFLO 440R is compatible with all types of Portland cement, class C and F fly ash, silica fume, calcium chloride, fibers, and approved air entraining, accelerating, retarding, and water-reducing admixtures.

SUPERFLO 440R can be used in white, colored, and architectural concrete. For best results, each admixture must be dispensed separately into the concrete mix.

DOSAGE RATE:

SUPERFLO 440R is recommended for use at a dosage range of 10 to 20 ounces per 100 pounds (650 mL to 1300 mL per 100 kg) of cementitious material.

Because local job conditions vary, contact your local RussTech technical sales representative for further assistance if using outside recommended dosage ranges.

SPECIFICATIONS:

SUPERFLO 440R Conforms to:

ASTM C 494 Types F and G

ASTM C 1017 Type II

AASHTO M 194 Types F and G

CRD C 87 Types F and G

All other Federal and State specifications

STORAGE:

SUPERFLO 440R may freeze at temperatures below 32 F (0 C). If frozen, thaw at 40 F (4 C) or higher and reconstitute with mild mechanical agitation. **Do Not Use Pressurized Air For Agitation.**

TECHNICAL NOTE:

SUPERFLO 440R does not contain calcium chloride or any chloride-based components. **SUPERFLO 440R** will not initiate or promote the corrosion of steel in concrete used with:

- Galvanized steel flooring or roofing systems left for permanent construction
- Rebar, wire mesh or metal fibers
- Pre-cast, site cast, and prestressed steel reinforcement
- Steel cable in both pre-tensioned and post-tensioned applications

PACKAGING:

5 gallon pails, 55-gallon drums, 275-gallon tote tanks, bulk delivery.

MIX PERFORMANCE DATA:

700 lbs.(415 kg) of Type I cement per cubic yard (cubic meter)

Ambient Temperature: 70 F (21 C)

Concrete Temperature: 70 F (21 C)

Slump Plain: 1.5 inches (38 mm)

Slump after **SUPERFLO 440R**

@ 11.5 ounces per 100 pounds

(750 mL per 100 kg): 8.0 inches (200 mm)

Slump after **SUPERFLO 440R**

@ 15.3 ounces per 100 pounds

(1000 mL per 100 kg): 9.5 inches (240 mm)

Compressive Strength:

Mix	7 day		28 Day	
	psi	MPa	psi	MPa
Plain	3060	21.1	4420	30.5

Superflo 440R @ 11.5 oz.	6015	41.5	7680	52.9
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Superflo 440R @ 15.3 oz.	6110	42.1	8015	55.3
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Set Time:

Mix	Initial Set Hours: Minutes
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Plain: 4:15

Superflo 440R
@ 11.5 oz.: 6:15

Superflo 440R
@ 15.3 oz.: 7:40

SHELF LIFE:

18 months

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