

## LC-400P

### ***SET RETARDING WATER-REDUCING ADMIXTURE FOR CONCRETE***

#### **DESCRIPTION:**

**LC-400P** is a normal setting water-reducing admixture for concrete. It is designed to facilitate the placing and finishing of concrete. **LC-400P** also, is a set retarding, water reducing admixture for concrete. It is designed to facilitate the placing and finishing of concrete while providing control over the set time, especially in paving operations. **LC-400P** is especially beneficial during hot weather concreting operations when control of setting time and maintenance of a placeable consistency are essential.

#### **ADVANTAGES:**

- Improves quality of concrete by decreasing water-cement ratio
- Lower inventory costs at batch plant, one product performs dual purpose
- Increases strengths both compressive and flexural
- Increases density and relative durability
- Resists damage caused by freezing and thawing
- Reduces water content needed for a given workability
- Reduces cracking and shrinkage
- Reduces surface bleeding
- Reduces segregation
- Provides superior finishability on all flatwork and pre-cast surfaces
- Improves pumpability of concrete
- Maintains slump life during extended mixing times
- Aids to reduce peak heat of hydration in mass pour concrete- reduces thermal cracking
- Aids in preventing cold joints
- Excellent paving admixture

#### **TECHNICAL NOTE:**

**LC-400P** does not contain calcium chloride or any chloride-based components. It will not promote or contribute to corrosion of reinforcing steel in concrete.

#### **SPECIFICATIONS:**

Conforms to:  
ASTM C 494 Types A, B and D  
AASHTO M 194 Types A, B and D  
CRD C 87 Types A, B and D  
All other Federal and State specifications

#### **DOSAGE RATE:**

**LC-400P** is recommended for use at a dose of 3 to 5 fluid ounces per 100 pounds (196 to 327 mL per 100 kg) of cement to meet the requirements of ASTM C 494 Type A.

**LC-400P** is normally added to the concrete mix at the following dosage rates to meet the requirements of ASTM C 494 Types B and D as a function of temperature:

Below 65 F (18 C) - 5 to 6 fl. oz. per 100 pounds (327 to 392 mL per 100 kg) cement

65 F (18 C) to 85 F (29 C) - 6 to 7 fl. oz. per 100 pounds (392 to 460 mL per 100 kg) cement

Above 85 F (29 C) - 7 to 8 fl. oz. per 100 pounds (460 to 526 mL per 100 kg) cement

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

## COMPATIBILITY:

**LC-400P** is compatible with all types of Portland cement, class C and F fly ash, silica fume, fibers, approved air entraining, water-reducing, and superplasticizing admixtures. **LC-400P** can be used in white, colored, and architectural concrete. For best results, each admixture must be added separately into the concrete mix.

## MIX PERFORMANCE DATA:

517 lbs. (307 kg) of Type I cement per cubic yard (cubic meter)

Slump 3.5 inches (89 mm)

Ambient Temperature 70 F (21 C)

Concrete Temperature 65 F (18 C)

## Compressive Strength:

**LC-400P** at 6 ounces per 100 pounds  
(393 mL per 100 kg) cement

Mix	7 day		28 Day	
	<u>psi</u>	<u>MPa</u>	<u>psi</u>	<u>MPa</u>
Plain	4280	29.5	5620	38.8
<b>LC-400P</b>	4980	34.3	6430	44.3

## Time of Set:

**LC-400P** at 6 ounces per 100 pounds  
(393 mL per 100 kg) cement

	Initial Set		Difference	
	<u>Hours:</u>	<u>Minutes</u>	<u>Hours:</u>	<u>Minutes</u>
Plain	5:04		--	
<b>LC-400P</b>	6:55		+1:51	

## Compressive Strength:

**LC-400P** at 3 ounces per 100 pounds  
(196 mL per 100 kg) cement

Mix	7 day		28 Day	
	<u>psi</u>	<u>MPa</u>	<u>psi</u>	<u>MPa</u>
Plain	4280	29.5	5620	38.8
<b>LC-400P</b>	4610	32.1	6100	42.1

## Time Of Set:

**LC-400P** at 3 ounces per 100 pounds  
(196 mL per 100 kg) cement

	Initial Set		Difference	
	<u>Hours:</u>	<u>Minutes</u>	<u>Hours:</u>	<u>Minutes</u>
Plain	5:31		--	
<b>LC-400P</b>	5:55		+0:24	

\*\*As the dosage rate of **LC-400P** increases, concrete set times are increased at the rate of approximately 30 to 45 minutes per 1 ounce (65 mL) per 100 pounds (100 kg) cement. Ultimate strengths are also increased as the dosage rate of **LC-400P** increases.

## STORAGE:

**LC-400P** may freeze at temperatures below 35 F (2 C). Although freezing does not harm **LC-400P**, precautions should be taken to protect it from freezing. If it should happen to freeze, thaw and reconstitute with mechanical agitation. **Do Not Use Pressurized Air For Agitation.**

## PACKAGING:

55-gallon drums, 275-gallon tote tanks, and bulk tank truck

## SHELF LIFE:

18 months

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