



## CA-A1L

### LIQUID CALCIUM CHLORIDE ACCELERATOR

#### DESCRIPTION

CA-A1L is an effective and economical accelerator for slurries made from Portland cement. Its properties are:

Form	Colorless Liquid
Specific Gravity	1.34
Freezing Point	44° F

#### APPLICATION

CA-A1L reduces the thickening time of cement slurries and also increases early compressive strength development. It can be used in both fresh water and sea water, wherever a liquid product is advantageous. It is an accelerator at all concentrations; therefore care must be taken in mixing as over treatment can cause the slurry to set too rapidly.

#### RECOMMENDED TREATMENT

Normal treatment of CA-A1L in fresh water runs 0.4 to 0.6 gal per sack (gal/sk) of cement. Thickening time will be cut about in half by the addition of 0.4 gal/sk and early strength will be increased by 50 to 75%.

In sea water, the CA-A1L concentrations should be limited to 0.2 gal/sk. When thickening time is critical, laboratory tests should be run using actual volumes and actual mix water if possible.

CA-A1L is added to the mix water prior to the cement and agitated thoroughly. The volume of CA-A1L must be included as part of the mix water volume. Some typical data for thickening time and compressive strength are shown in Tables I and II for Class G cement and Class H cement, respectively.

#### HANDLING

Chemical goggles should be worn when handling CA-A1L. Contact with the eyes will cause irritation and could be damaging. While short skin contact should not be irritating, prolonged exposure could cause irritation and even a mild burn. Flush contacted eyes or skin with water. If irritation persists, seek medical attention.



**PACKAGING**

CA-A1L is available in 5-gal pails or 55-gal drums.

**DATA**

TABLE I  
TYPICAL DATA WITH API CLASS G CEMENT  
MIXED AT 15.8 PPG (44% WATER)

CA-A1L gal/st	Thickening Time, Hours:Min		
	2,000 ft 91° F BHCT	4,000 ft 103° F BHCT	6,000 ft 113° F BHCT
0	3:41	3:41	2:26
0.2	2:22	2:03	1:37
0.4	1:36	1:41	1:18

Compressive Strength, psi at Temperature and Time Shown

CA-A1L gal/sk	60° F		80° F		100° F	
	8 hrs	24 hrs	8 hrs	24 hrs	8 hrs	24 hrs
0	* N.S.	380	210	1090	655	2085
0.2	185	860	675	1720	990	2100
0.4	345	1120	815	2120	1310	2260

\* Not Set