RIG OIL sales & services

INFORMATION

CA-TX5

THIXOTROPIC AGENT

DESCRIPTION

CA-TX5 is a liquid additive that imparts thixotropic properties to any Portland cement to prepare regulated fill-up cement slurries. Its properties are:

Form	Liquid
Specific Gravity	1.26
Pour Point	-25°F/-31°C
pH	1

APPLICATION

Regulated fill-up slurries must have the ability to become fluid in motion but to rapidly develop gel structure after pumping has stopped. This gel strength must keep the slurry column from falling back. CA-TX5 gives these properties to Portland cement.

When pump pressure is high enough, the slurry returns to a fluid state. Some of the advantages of CA-TX5 are:

- It can be used with any Portland cement; the C3A content is not a limitation.
- It causes higher early and ultimate compressive strength development than solid thixotropic agents.
- Slurries prepared with CA-TX5 do not expand upon setting.

One disadvantage of the product is that it is compatible with only a relatively few other additives. We recommend the following products:

- CA-LC5 and CA-LC10 as lost circulation materials.
- CA-A2 as an accelerator.
- CA-EX4 as an extender.
- CA-AFL as an antifoam agent.

- CA-R13 as a retarder.

RECOMMENDED TREATMENT

Tables 1 and 2 give typical formulations for regulated fill-up cement slurries using CA-TX5. Table 1 shows the slurry properties for these systems while Table 2 deals with thickening times and compressive strengths. Mix CA-TX5 thoroughly in the mix water. Next add CA-R13 and CA-AFL if required. Then add cement and mix.

HANDLING

Chemical goggles and rubber gloves must be worn while handling CA-TX5. Contact with eyes could cause permanent damage. In case of eye contact, flush with water for at least 15 minutes and seek prompt medical attention. Exposure to skin will be irritating and can cause a chemical burn. Wash affected area with soap and water. Inhalation should not be a problem.

PACKAGING

CA-TX5 is available in 55-gallon net poly-lined drums. Alternative packaging is available on request.

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ESSINA CHEMICALS

TABLE 1
SLURRY PROPERTIES

System[1]	Gal/Sk CA-TX5	Gal/Sk CA-CR13	Gal/Sk CA-A2	% Liquid	Wt. ppg	Yield ft^3/sk	H_2O gal/sk	Total Fluids gal/sk
1	0.80	0.00	0.57	602	14.8	1.38	5.40	6.77
2	0.80	0.04	0.00	702	14.1	1.88	7.08	7.90
3	0.68	0.08	0.00	702	14.1	1.88	7.06	7.78
4	0.80	0.00	0.57	643	14.8	1.45	5.85	7.22
5	0.80	0.04	0.00	703	14.3	1.54	7.08	7.90

TABLE 2
PERFORMANCE

	Well Conditions °F			Compressive Strength (psi)@BHST (hrs)			
System[1]	BHCT[4]	BHST[5]	(Hrs:Min)@BHCT	8	24	72	168
1	80	80	4:15	490	1000	1900	2400
2	100	140	4:10	470	1300	2000	2400
3	165	210	3:10	700	1400	1800	2000
4	80	80	3:20	590	840	1700	2800
5	100	140	3:10	550	1600	1900	2500

NOTES:
1. These systems are made with Class G cement.
2. Fresh Water
3. Sea Water
4. Bottom Hole Circulating Temperature
5. Bottom Hole Static Temperature