TECHNICAL DATASHEET

Amorphous Calcium Aluminate

$C_{12}A_7$ - Cement Accelerator

CALUMEX® XT20

AMORPHOUS CALCIUM ALUMINATE

- **Fast setting times**
- **Increased durability**
- **Amorphous Calcium Aluminate**
- **Alternative to Calumex SC-A**
- **Extended working time**
- **High early and late strength development**
- **Increased density**
- **Shrinkage compensated**
- **Low dosage**

Calumex® XT-20 is an Amorphous Calcium Aluminate ($C_{12}A_7$) additive to Ordinary Portlandcement, used to accelerate setting times, compensate shrinkage and increase both early and late strength development. Calumex® XT-20 provides roughly 4 times the working time of Calumex® SC-A based formulations, without the addition of retarders.

The specialized chemistry of Calumex® XT-20, as well as Calumex® SC-A, allows the formulation of ultra-fast setting times and extremely high early strengths at early stages of hydration. Furthermore, through the high formation of ettringite crystals, drying is accelerated and shrinkage and permeability are reduced.

As is the case with Calumex® SC-A, the basis of Calumex® XT-20 is an amorphous clinker, making it a lot more reactive than crystalline alternatives. This means the required dosage in end formulations can be a lot lower. Between 5-20% of the binder weight should be replaced by Calumex® XT-20, depending on the desired effect.

Additional information

In order to adjust setting times, combine Calumex® XT-20 with Delta-20 set retarder. Delta-20 is specifically formulated for application in ACA based systems. It will provide an extended workability, with minimal sacrifice of strength development. Both Calumex® SC-A and Calumex® XT-20 are white in color and suitable to be mixed with White OPC.

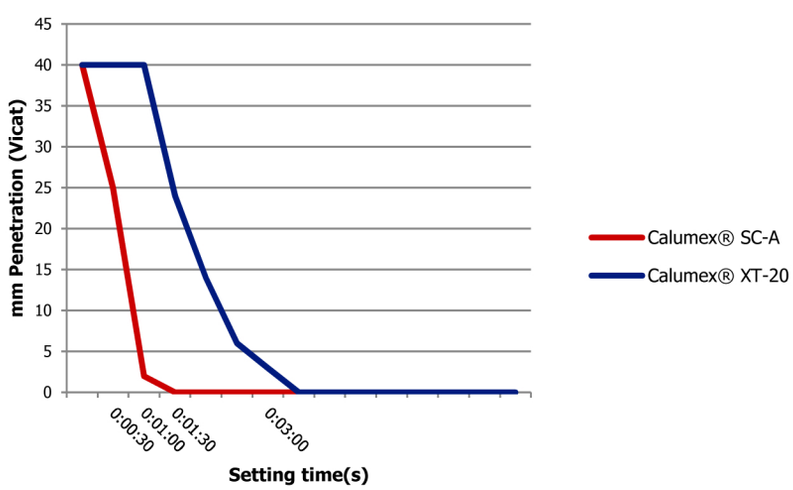
Chemical Analysis

SiO_2	:	≤	6	%
Al_2O_3	:		19 - 23	%
Fe_2O_3	:	≤	0,5	%
CaO	:		40 - 45	%
SO_3	:	≤	30	%
TiO_2	:	≤	1	%
MgO	:	≤	1	%

Physical composition

Appearance	:		White powder	
Blaine	:	~	6000	cm^2/g
Bulk density	:	~	2,9 - 3,1	g/cm^3

Comparing Setting times of Calumex® SC-A and Calumex® XT-20 (when mixed with OPC at a 1:9 ratio)



Compressive strength development (MPa)

	Calumex® SC-A	Calumex® XT-20
6 hours	**10**	**12**
24 hours	**38**	**45**
72 hours	**43**	**60**
7 days	**57**	**82**
28 days	**65**	**85**

The information given above is based on our current experiences and knowledge of the product. It gives no guarantee of the eventual result. The customer remains responsible for testing the product before use. Caltra Nederland B.V. cannot be held responsible for possible damage caused by (incorrect) use of its products. For additional information with regard to safe use, please consult the Material safety datasheet (SDS)

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