Provisional Product Data

CA-SYNC Calcium Aluminate Cement

Controlled hydration and lower shrinkage rates

CA-SYNC

Calcium Aluminate Cement

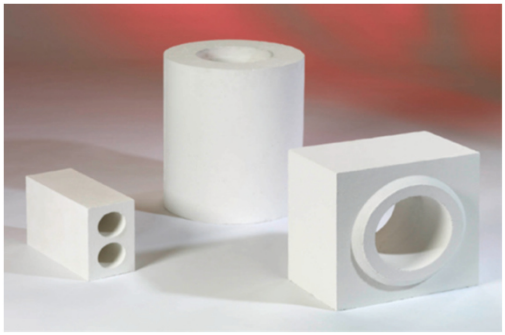
Almatis CA-SYNC is a white high alumina cement with controlled hydration and lower shrinkage rates. It enables more predictable and flexible production for time-sensitive processes, such as the removal of inner cores in pre-cast shape production.

Chemical Composition	Unit	Typical
Al_2O_3	[%]	76
CaO	[%]	23
Na_2O	[%]	0.3
SiO_2	[%]	0.1
Fe_2O_3	[%]	0.1
MgO	[%]	0.2
Fineness (Cilas)		
-45 µm	[%]	100
d50	µm	4

APPLICATION: EAF-roof

Cement Properties in NORTAB Mortar

Water addition: 10%		
Vicat Setting Time	**Unit**	**Typical**
Initial Set	[min]	380
Final Set	[min]	420
Exothermic Reaction Time		
EXO Max	[min]	520
Vibration Flow		
F10	[cm]	18
F30	[cm]	18
F60	[cm]	18
Cold Modulus of Rupture (CMoR)		
24 h Cured 20°C	[MPa]	6
24 h Dried 105°C	[MPa]	12
5 h Fired 1000°C	[MPa]	6
Cold Crushing Strength (CCS)		
24 h Cured 20°C	[MPa]	31
24 h Dried 105°C	[MPa]	86
5 h Fired 1000°C	[MPa]	46



APPLICATION: Steel-Well-Blocks

Plastic Packaging

The typical properties are based upon the current averages from production data. All data are based upon Almatis standard test methods. For more Information on Cement Testing please refer to the brochure “Cement Test Methods”.

CA-SYNC

Calcium Aluminate Cement

CA-SYNC is a new, innovative high alumina cement. This cement has a controlled hydration behavior and reduced shrinkage rate which provides advantages in cases where a more gradual hydration is needed. This is especially beneficial for the synchronization of pre-cast shape production process steps such as the removal of inner cores of nozzles, well blocks or EAF delta sections.

Shrinkage Rate

CA-SYNC yields slower shrinkage rates during hydration which is beneficial to avoid seizure of inner-molds and build-up of internal stresses. This enables more flexibility in pre-cast shape production scheduling.

Strength Development

CA-SYNC offers:

- Good initial strength
- Continuous strength development
- High dried strength

The relatively high initial strength of CA-SYNC, right after the start of hydration, allows handling of pre-cast shape pieces for further processes at an earlier stage. The strength continues to develop during curing as well as drying.

Setting and Rheology

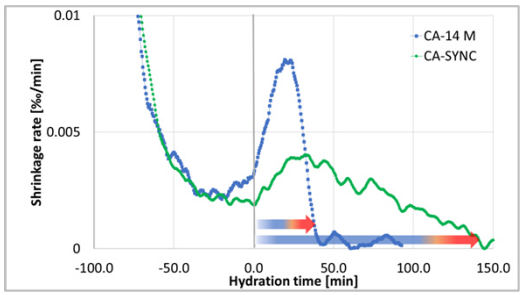
The final setting behavior and rheology of CA-SYNC castables can be controlled similarly to other high alumina cements by Almatis Dispersing Aluminas ADS/ADW. No recipe adjustment is required to use CA-SYNC in place of other cements.

Shelf life

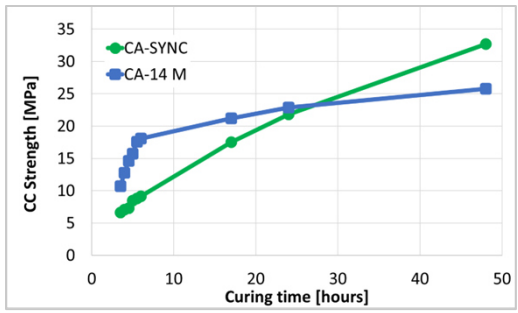
Stored under adequate dry conditions and in the original packaging, the properties of all Almatis Calcium Aluminate Cements remain stable for a period of 24 months.
Experience has shown that even after longer storage time the properties are not impaired. Exposure to ultraviolet radiation from direct sunlight can alter the plastic packaging and ultimately reduce the shelf life. An additional protection from direct sunlight is required in such cases. The shrink wrap should remain until the material is being used.

Standard Packaging

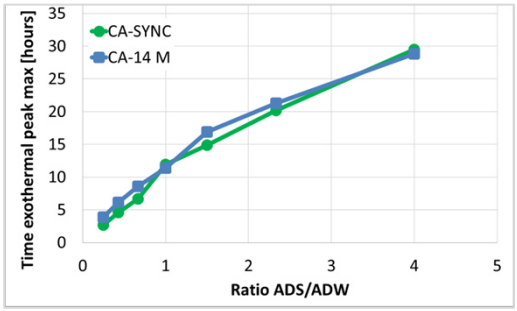
- 25 kg paper bags
- 1000 kg big bags



Shrinkage rate self-flow castable with CA-14 M and CA-SYNC



Cold Crushing Strength development self-flow castable with CA-14 M and CA-SYNC



Exothermal peak max of vibration castable with CA-14 M and CA-SYNC with different ratios ADS3/ADW1

Contact for sales, technical information and application assistance

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