



Provisional Product Data

CA-SYNC

Calcium Aluminate Cement

with controlled hydration and lower shrinkage rates



Think alumina, think Almatris.



CA-SYNC

Calcium Aluminate Cement

Almatís CA-SYNC is a white high 76 % 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		Typical
Al ₂ O ₃	[%]	76
CaO	[%]	23
Na ₂ O	[%]	0.3
SiO ₂	[%]	0.1
Fe ₂ O ₃	[%]	0.1
MgO	[%]	0.2
Fineness (Cilas)		
-45 µm	[%]	100
d50	µm	4

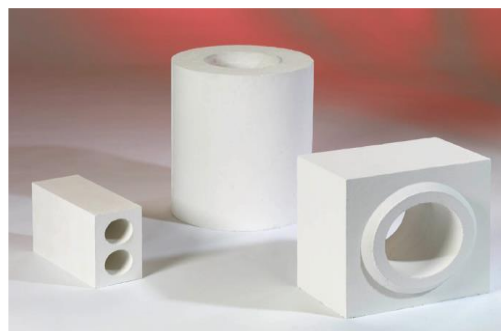


APPLICATION: EAF-roof

Cement Properties in NORTAB Mortar

Water addition: 10%		
Vicat Setting Time		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

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



APPLICATION: Steel-Well-Blocks



Plastic Packaging



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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.

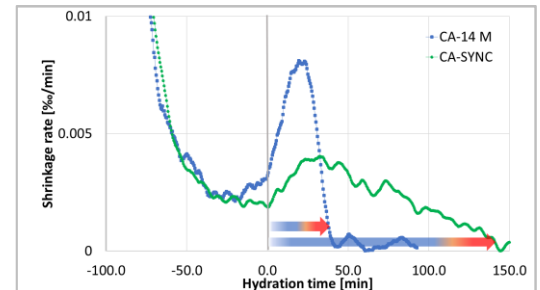
Setting and Rheology

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

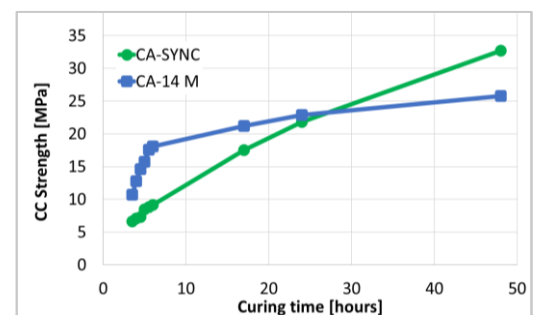
Shelf life

Stored under adequate dry conditions and in the original packaging, the properties of all Almatris Calcium Aluminate Cements remain stable for a period of 24 months.

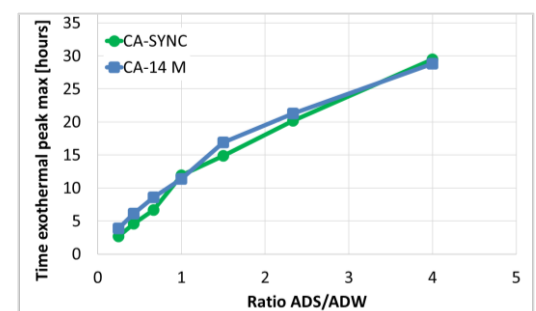
Experience has shown that even after longer storage time the properties are not impaired. Exposure to ultraviolet radiation from direct sunlight can alter the plastic packaging and ultimately reduce the shelf life. An additional protection from direct sunlight is required in such cases. The shrink wrap should remain until the material is being used.



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 curves vibration castable with CA-14 M and CA-SYNC with different ratios ADS 3/ADW 1



CA-SYNC

Calcium Aluminate Cement

Standard Packaging

- 25 kg paper bags
- 1000 kg big bags



Contacts for sales, technical information and application assistance

Almatís GmbH

Giulinistrasse 2
67065 Ludwigshafen
Germany

Phone 49 621 5707 0
Fax 49 621 5707 130

Almatís B.V.

Theemsweg 30
3197KM Botlek RT
The Netherlands

Phone 31 181 2701 00
Fax 31 181 2178 53

**Almatís Alumina
Private Limited**

Kankaria Estate, 2nd Floor 6,
Little Russell Street
Calcutta 700-001, India

Phone 91 33 2242 7961
Fax 91 33 2242 1557

Qingdao Almatís Co. Ltd.

No.1 Song Hua Jiang Road
Qingdao Economic &
Technology Development Zone
Qingdao, 266510
P.R. China

Phone 86 532 8572 8035
Fax 86 532 8572 8551

Almatís Limited

Morimura Bldg.
Toranomon Tower Office 13 F
1-28, Toranomon 4-chrome
Minato-ku, Tokyo 105-8451
Japan

Phone 81 3 5510 66 88
Fax 81 3 5510 66 80

Almatís, Inc.

501 West Park Road
Leetsdale, PA 15056,
USA

Phone 1 412 630 2800
Fax 1 412 630 2900

Almatís do Brasil Ltda.

Avenida Jose de Souza
Campos, 243
2° Andar – Cambuí
13025-320 – Campinas,
SP – Brasil

Phone 55 19 3515-1400
Fax 55 19 3515-1410

**Almatís GmbH**

Lyoner Straße 9
60528 Frankfurt/Germany
info@almatis.com
www.almatis.com

**SDS 993**