Product Data Sheet

Reference FC-TW-CH-GB-LAF-082006

Valid from 15/09/2006

TERNAL® WHITE

Building Chemistry

1 Description

Ternal® White is a calcium aluminate cement in which the reactivity and very white colour are strictly controlled and guaranteed.

Ternal® White has been developed to meet the highly demanding requirements of Building Construction products. It allows the design of products in which consistency, rapid return to service and / or aesthetic features are key performance criteria.

Ternal® White is often used either alone or in combination with other hydraulic binders, fillers and all current types of polymers and organic additives in products like tile adhesives for natural stones, tile grouts and floor decorative levelling compounds. It is also widely used in renders for wall preparation.

Ternal® White offers all the traditional properties of calcium aluminate cement : rapid set and rapid hardening, setting time acceleration of Portland cement, rapid drying and shrinkage compensation when mixed with calcium sulphates, excellent resistance to corrosion and abrasion.

Thanks to its very white colour which makes it particularly adapted for use with a wide range of pigments, and to non-efflorescence properties due to the absence of alkalis and of lime hydration products, Ternal® White is a product of choice in all applications where aesthetic features are critical.

2 Specifications

The specification limits are determined with an Acceptable Quality Level (AQL) of 2.5% as defined in the sampling standard ISO 3951.

The usual range represents typical values of our production.

Chemical composition

Main constituents	Usual range	Specification limit
Al_2O_3 (%)	68.7 - 70.5	> 68.5
CaO (%)	28.5 - 30.5	< 31
SiO_2 (%)	0.2 - 0.6	< 0.8
Fe_2O_3 (%)	0.1 - 0.2	< 0.4
MgO (%)	< 0.5	-
TiO_2 (%)	< 0.4	-
K_2O+Na_20 (%)	< 0.5	-
SO_3 (%)	< 0.3	-

- Determined according to EN 196-2: Methods of testing cement- Chemical analysis of cement.

Mineralogical composition

X-Ray diffraction analysis

- Principal phase 1) : CA CA_2
- Secondary phases 1) : $C_{12}A_7$ Aα

	Specification limit
C12A7/CA 2)	< 0.03

1) C=CaO, A=Al_2O_3, S=SiO_2, T=TiO_2

2) From quantitative phase analysis

Fineness

	Usual range	Specification limit
Specific surface area Blaine (cm2/g)	3800 - 4400	> 3700
Residue 90 µm (%)	-	< 5

- Determined according to EN 196-6 : Methods of testing cement- Determination of fineness

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Colour

	Usual range	Specification limit
L*	93 - 96	> 92
a*	- 0.5 < a* < 0	- 0.5 < a* < 0
b*	0.8 < b* < 1.5	0 < b* < 1.6

- Colour measured on the powder. CIE Lab system, light D65.Standard observation angle: 10°.

3 Additional data

This information is given for guidance only

Other physical characteristics

- Bulk density : 0.9 g/cm^3
- Density : 2.90 - 3.05 g/cm^3

4 Storage and shelf life

In common with all hydraulic binders, Ternal® White must be stored in dry conditions, off the ground. In this case, it will retain its properties for at least 6 months. In many instances, experience has demonstrated that properties are retained for more that one year.

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