



Reference Material Cement

METHODE DE CONTROLE ET CALIBRATION

Measure of Fineness

USAGE

This reference cement allows the control and calibration of laboratory cement Blaine Apparatus according to the test standard CEN EN 196-6. For the other standards, these reference cements are very useful for regular checks to identify a drift.

For the calibration of Blaine's device, follow the requirements of standard NF EN 196-6, specially for any temperature corrections. To determine the volume of the compacted layer, it is not essential to use the reference cement, but it must be used systematically:

- ✓ After 1000 measures.
- ✓ In case of using another type of pressure fluid, another type of filter paper, a new pressure gauge tube or a new perforated disc.
- ✓ In case of systematic deviations of the secondary reference cement.

REFERENCE CEMENT CHARACTERISTICS

European reference materials were created under the technical coordination of France-Ciments (formerly ATILH).

All cements used as references comply with the standard CEN EN 197-1 and can be used in accordance with the test standard CEN EN 196-6.

The analyses and statistical consultations that led to the certification of these reference materials for cements were carried out by Alain Bonnet, Head of the Statistical Engineering Division of France-Ciments, on the basis of inter-laboratory tests involving 170 laboratories, including certified European laboratories whose participation in this inter-laboratory is an integral part of their COFRAC certification.

An Inter laboratory testing campaign is organized each year by France-Ciments formerly ATILH. Participate in particular: the laboratories of the Cement Industry in France, in Europe and more widely in the world, the laboratories of cement users and research and control centres in the field of construction materials.

Should you want to participate to this yearly interlaboratory round robin test organized by France-Ciments, please contact a.bonnet@france-ciments.fr

This participation is mandatory for laboratories accredited by COFRAC for tests on cement. The tests are carried out according to standard methods where they exist and according to current and traditional methods where they do not.

Statistical analysis

Outlier removal is performed at the 98% level by the Student test. Reiteration is set at this threshold, to keep only the values related to the "Normal or Gaussian" distribution and fully defined by the two parameters: mean and standard deviation. The coefficient of variation symbolized by 'V' is the ratio between standard deviation 'and average 'X'

The certificate of analysis was carried out and checked by the offices of France-Ciments in Clichy.

PACKAGING

The reference cement is proposed in two versions:

- ✓ Series C: box of 20 sealed vials of approximately 5g
- ✓ Series T : 100g aluminium bag for Blaine meter equipped with 90g cell

Each reference cement is delivered with its analysis certificate

Product Portfolio for reference Cement

- 1) box of 20 sealed vials of approximately 5g

Reference	Packaging	Cement	Blaine
SN4C	box of 20 sealed vials of approximately 5g	Portland Cement Cem I 52,5	3488 cm ² /g
SN5C	box of 20 sealed vials of approximately 5g	Portland Cement Cem I 52,5	3918 cm ² /g
SN6C	box of 20 sealed vials of approximately 5g	Portland Cement Cem I 52,5	4500 cm ² /g
SN205C	box of 20 sealed vials of approximately 5g	Composite Cement Cem II 52,5 (limestone)	5362 cm ² /g

- 2) 100g aluminium bag for Blaine meter equipped with 90g cell

Reference	Packaging	Cement	Blaine
SN4T	100g aluminium bag	Portland Cement Cem I 52,5	3488 cm ² /g
SN5T	100g aluminium bag	Portland Cement Cem I 52,5	3918 cm ² /g
SN6T	100g aluminium bag	Portland Cement Cem I 52,5	4500 cm ² /g
SN205T	100g aluminium bag	Composite Cement Cem II 52,5 (limestone)	5362 cm ² /g

SNL proposes other options for fineness measurement

KIT Blaine :

The SNL offers a Blaine KIT in a case composed of 8 reference cements in 15 ml bottles to calibrate on a wide band of Blaine.

These cements are from the inter-laboratory testing campaigns of France-Ciments and Quantum-Engineering to offer an expanded range of Blaine

Cement included in the KIT BLAINE SNL		
N°	Type de Ciment	Blaine
K1SSB	Portland	3090 cm ² /g
K2SSB	Portland	3488 cm ² /g
K3SSB	Portland	3640 cm ² /g
K4SSB	Portland	3918 cm ² /g
K5SSB	Portland	4125 cm ² /g
K6SSB	Portland Limestone II/A	4383 cm ² /g
K7SSB	Portland	4576 cm ² /g
K8SSB	Portland Limestone II/A	5362 cm ² /g

Other Materials for fineness measurement

SNL proposes other materials to support you in your fineness measurement

Please note that Alumine powder is also recognized as an option for Blaine measurement in the cement test standard CEN EN 196-6

Refence	Packaging	Fineness
Alumina A	Glass bottle 50g	2300 cm ² /g
Alumina B	Glass bottle 50g	10300 cm ² /g
Silica Fines D50=61μ	On Request	1840 cm ² /g
Silica Fines D50=36μ	On Request	2700cm ² /g
Silica Fines D50=18μ	On Request	4060 cm ² /g
Silica Fines D50=13μ	On Request	5120 cm ² /g
Silica Fines D50=3μ	On Request	16200 cm ² /g