STANDARDS FOR CEMENT, AGGREGATE, Gypsum.
DEFINITIONS, REQUIREMENTS AND TEST METHODS

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Regulation No 305/2011

When a construction product is covered by a harmonised standard, the manufacturer shall draw up a declaration of performance when such a product is placed on the market. Thus the manufacturer shall assume responsibility for conformity of the construction product with declared performance. He can affix CE marking.
STANDARDS FOR CEMENT, AGGREGATE, GIPSUM.
DEFINITIONS, REQUIREMENTS AND
TEST METHODS

Cement
EN 197-1:2011

Aggregates

Gypsum
EN 13279-1:2008

Official Journal
Harmonized European Standards
Declaration of performance
CE marking
EN 197-1:2011 Cement - Part 1: Composition, specifications and conformity criteria for common cements

EN 14216:2004 - very low heat special cement
EN 15743:2010 - supersulfated cement
EN 14647:2005 - calcium aluminate cement
EN 413-:2011 - masonry cement
European Standard **EN 197-1** defines:

- the specifications of 27 distinct common cements, 7 sulfate resisting common cements, as well as 3 distinct low early strength blast furnace cements and 2 sulfate resisting low early strength blast furnace cements
- the proportions in which the constituents are to be combined to produce these distinct products in a range of nine strength classes
- the requirements which the constituents have to meet
- the mechanical, physical, and chemical requirements of the cements
- the conformity criteria and the related rules and their constituents.
The products in the family of common cements, covered by EN 197-1 are given in Table 1. They are grouped into five main cement types as follows:

- CEM I  Portland cement,
- CEM II  Portland-composite cement,
- CEM III Blast furnace cement,
- CEM IV  Pozzolanic cement,
- CEM V  Composite cement.
<table>
<thead>
<tr>
<th>Main types</th>
<th>Notation of the 27 products (types of common cement)</th>
<th>Clinker</th>
<th>Blast-furnace slag</th>
<th>Silica fume</th>
<th>Pozzolana</th>
<th>Fly ash</th>
<th>Burnt shale</th>
<th>Limestone</th>
<th>Minor additional constituents</th>
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<tbody>
<tr>
<td>CEM I</td>
<td>Portland cement</td>
<td>CEM I</td>
<td>95-100</td>
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<td>Portland-slag cement</td>
<td>CEM II/A-S</td>
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<tr>
<td></td>
<td>Portland-silica fume cement</td>
<td>CEM II/B-S</td>
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<td>21-35</td>
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<td>Portland-pozzolana cement</td>
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<td>6-20</td>
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<td>Portland-pozzolana cement</td>
<td>CEM II/B-P</td>
<td>65-79</td>
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<td>21-35</td>
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<td>Portland-fly ash cement</td>
<td>CEM II/A-Q</td>
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<td>Portland-fly ash cement</td>
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<tr>
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<td>Portland-burnt shale cement</td>
<td>CEM II/A-W</td>
<td>80-94</td>
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<td>Portland-burnt shale cement</td>
<td>CEM II/B-W</td>
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<tr>
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<td>Portland-limestone cement</td>
<td>CEM II/A-L</td>
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<td>Portland-limestone cement</td>
<td>CEM II/B-L</td>
<td>65-79</td>
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<td>21-35</td>
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<tr>
<td></td>
<td>Portland-composite cement</td>
<td>CEM II/A-M</td>
<td>80-88</td>
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<td>--</td>
<td>12-20</td>
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<td>Portland-composite cement</td>
<td>CEM II/B-M</td>
<td>65-79</td>
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<td>21-35</td>
<td>--</td>
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<tr>
<td>CEM III</td>
<td>Blast furnace cement</td>
<td>CEM III/A</td>
<td>35-64</td>
<td>35-65</td>
<td>--</td>
<td>--</td>
<td>--</td>
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<td>--</td>
</tr>
<tr>
<td></td>
<td>Blast furnace cement</td>
<td>CEM III/B</td>
<td>20-34</td>
<td>65-80</td>
<td>--</td>
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<td></td>
<td>Blast furnace cement</td>
<td>CEM III/C</td>
<td>5-19</td>
<td>81-95</td>
<td>--</td>
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<tr>
<td>CEM IV</td>
<td>Pozzolanic cement</td>
<td>CEM IV/A</td>
<td>65-89</td>
<td>--</td>
<td>11-35</td>
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<tr>
<td></td>
<td>Pozzolanic cement</td>
<td>CEM IV/B</td>
<td>45-64</td>
<td>--</td>
<td>36-65</td>
<td>--</td>
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<tr>
<td>CEM V</td>
<td>Composite cement</td>
<td>CEM V/A</td>
<td>40-64</td>
<td>18-30</td>
<td>18-30</td>
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</tr>
<tr>
<td></td>
<td>Composite cement</td>
<td>CEM V/B</td>
<td>20-38</td>
<td>31-49</td>
<td>31-49</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

*a The values in the table refer to the sum of the main and minor additional constituents.

*b The proportion of silica fume is limited to 10%.

*c In Portland-composite cements CEM II/A-M and CEM II/B-M, in pozzolanic cements CEM IV/A and CEM IV/B and in composite cements CEM V/A and CEM V/B the main constituents other than clinker shall be declared by designation of the cement (for examples, see Clause 8).
Cement – definitions, requirements, test methods

The seven products in the family of the sulfate resisting common cements are given in Table 2 of EN 197-1. They are grouped into three main cement types as follows:

**Sulfate resisting Portland cement:**
- CEM I-SR 0  Sulfate resisting Portland cement (C₃A content of the clinker = 0 %)
- CEM I-SR 3  Sulfate resisting Portland cement (C₃A content of the clinker ≤ 3 %)
- CEM I-SR 5  Sulfate resisting Portland cement (C₃A content of the clinker ≤ 5 %)

**Sulfate resisting blast furnace cement:**
- CEM III/B-SR  Sulfate resisting blast furnace cement (no requirement on C₃A content of the clinker)
- CEM III/C-SR  Sulfate resisting blast furnace cement (no requirement on C₃A content of the clinker)

**Sulfate resisting pozzolanic cement:**
- CEM IV/A-SR  Sulfate resisting pozzolanic cement (C₃A content of the clinker ≤ 9 %)
- CEM IV/B-SR  Sulfate resisting pozzolanic cement (C₃A content of the clinker ≤ 9 %)
# Cement definitions, requirements, test methods

## Mechanical and physical requirements

<table>
<thead>
<tr>
<th>Strength class</th>
<th>Compressive strength MPa</th>
<th>Initial setting time</th>
<th>Soundness (expansion)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Early strength</td>
<td>Standard strength</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 days</td>
<td>7 days</td>
<td>28 days</td>
</tr>
<tr>
<td>32.5 L&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-</td>
<td>≥ 12,0</td>
<td></td>
</tr>
<tr>
<td>32.5 N</td>
<td>-</td>
<td>≥ 16,0</td>
<td>≥ 32,5</td>
</tr>
<tr>
<td>32.5 R</td>
<td>≥ 10,0</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>42.5 L&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-</td>
<td>≥ 16,0</td>
<td></td>
</tr>
<tr>
<td>42.5 N</td>
<td>≥ 10,0</td>
<td>-</td>
<td>≥ 42,5</td>
</tr>
<tr>
<td>42.5 R</td>
<td>≥ 20,0</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>52.5 L&lt;sup&gt;a&lt;/sup&gt;</td>
<td>≥ 10,0</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>52.5 N</td>
<td>≥ 20,0</td>
<td>-</td>
<td>≥ 52,5</td>
</tr>
<tr>
<td>52.5 R</td>
<td>≥ 30,0</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup> Strength class only defined for CEM III cements.

L – low early strength  
N – ordinary early strength  
R – high early strength
Chemical requirements

<table>
<thead>
<tr>
<th>Property</th>
<th>Test reference</th>
<th>Cement type</th>
<th>Strength class</th>
<th>Requirements&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loss on ignition</td>
<td>EN 196-2</td>
<td>CEM I, CEM III</td>
<td>All</td>
<td>≤ 5,0 %</td>
</tr>
<tr>
<td>Insoluble residue</td>
<td>EN 196-2&lt;sup&gt;b&lt;/sup&gt;</td>
<td>CEM I, CEM III</td>
<td>All</td>
<td>≤ 5,0 %</td>
</tr>
<tr>
<td>Sulfate content (as SO&lt;sub&gt;3&lt;/sub&gt;)</td>
<td>EN 196-2</td>
<td>CEM I, CEM II&lt;sup&gt;c&lt;/sup&gt;, CEM IV, CEM V</td>
<td>32,5 N, 32,5 R, 42,5 N</td>
<td>≤ 3,5 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>42,5 R, 52,5 N, 52,5 R</td>
<td>≤ 4,0 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CEM III&lt;sup&gt;d&lt;/sup&gt;</td>
<td>All</td>
<td></td>
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<tr>
<td>Chloride content</td>
<td>EN 196-2</td>
<td>all&lt;sup&gt;e&lt;/sup&gt;</td>
<td>All</td>
<td>≤ 0,10 %&lt;sup&gt;f&lt;/sup&gt;</td>
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<tr>
<td>Pozzolanicity</td>
<td>EN 196-5</td>
<td>CEM IV</td>
<td>All</td>
<td>Satisfies the test</td>
</tr>
</tbody>
</table>
## Cement – definitions, requirements, test methods

### Additional requirements for sulfate resisting common cements

<table>
<thead>
<tr>
<th>Property</th>
<th>Test reference</th>
<th>Cement type</th>
<th>Strength class</th>
<th>Requirements&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfate content (as $\text{SO}_3$)</td>
<td>EN 196-2</td>
<td>CEM I-SR 0</td>
<td>32,5 N</td>
<td>≤ 3,0 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CEM I-SR 3</td>
<td>32,5 R</td>
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<tr>
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<td></td>
<td>CEM I-SR 5&lt;sup&gt;b&lt;/sup&gt;</td>
<td>42,5 N</td>
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<td>CEM IV/A-SR</td>
<td>42,5 R</td>
<td>≤ 3,5 %</td>
</tr>
<tr>
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<td>CEM IV/B-SR</td>
<td>52,5 N</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>52,5 R</td>
<td></td>
</tr>
<tr>
<td>$C_3A$ in clinker&lt;sup&gt;c&lt;/sup&gt;</td>
<td>EN 196-2&lt;sup&gt;d&lt;/sup&gt;</td>
<td>CEM I-SR 0</td>
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<td>0%</td>
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<td></td>
<td></td>
<td>CEM I-SR 3</td>
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<td>≤ 3 %</td>
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<td>CEM I-SR 5</td>
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<td>-&lt;sup&gt;e&lt;/sup&gt;</td>
<td>CEM IV/A-SR</td>
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<td>≤ 9 %</td>
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<td>CEM IV/A-SR</td>
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<td>Satisfies the test at 8 days</td>
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<td>Compressive strength</td>
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<td>Loss on ignition</td>
<td>EN 196-2:2013</td>
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<td>Insoluble residue</td>
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<td>Sulfate content</td>
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<td>$C_3A$ in clinker</td>
<td>EN 196-2:2013 (for CEM I)</td>
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<td>as FPC on the clinker (for CEM IV)</td>
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<td>Pozzolanicity</td>
<td>EN 196-5:2011</td>
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<tr>
<td>Heat of hydration</td>
<td>EN 196-8:2010 or EN 196-9:2010</td>
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<tr>
<td>Composition</td>
<td>Appropriate test method chosen by the manufacturer</td>
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<tr>
<td>Release of dangerous substances</td>
<td>EN 196-10:2010 (water-soluble chromium VI content)</td>
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</tbody>
</table>
Cement – definitions, requirements, test methods

**Standard designation of common cements**

CEM cements shall be designated by at least the notation of the cement type as specified in Table 1 and the figures 32,5, 42,5 or 52,5 indicating the strength class as well as the letter N, R or L indicating the early strength class.

Sulfate resisting cement shall be designated additionally by the notation SR. Cements not covered by this European Standard for their sulfate resisting property but considered sulfate resisting according to National Standards listed in Annex A shall not be identified by the notation SR.

Low heat common cement shall be additionally designated by the notation LH.

**EXAMPLE 1** - **Portland cement EN 197-1 – CEM I 42,5 R**
Portland cement, conforming to EN 197-1, of strength class 42,5 with high early strength

**EXAMPLE 2** - **Portland-limestone cement EN 197-1 – CEM II/A-L 32,5 N**
Portland-limestone cement, conforming to EN 197-1, containing between 6 % and 20 % by mass of limestone (L) of strength class 32,5 with an ordinary early strength

**EXAMPLE 3** - **Blast furnace cement EN 197-1 – CEM III/B 32,5 N – LH/SR**
Blast furnace cement, conforming to EN 197-1, containing between 66 % and 80 % by mass of granulated blast furnace slag (S), of strength class 32,5 with an ordinary early strength and a low heat of hydration and sulfate resisting
Cement – definitions, requirements, test methods

Conformity criteria

The compliance of the common cements with the requirements of EN 197-1 and with the stated values (including classes) shall be demonstrated by:

- initial type testing
- factory production control by the manufacturer, including product assessment.

Conformity of the products to EN 197-1 shall be continually evaluated on the basis of testing of spot samples. The properties, test methods and the minimum testing frequencies for the autocontrol testing by the manufacturer are specified in Table 6 of EN 197-1 and in EN 197-2. Alternative test methods could be used provided that they have been validated in accordance with the appropriate provisions in the cited standards of the reference test methods. In the event of a dispute, only the reference methods are used.

For certification of conformity by a notified body, conformity of cement with standard EN 197-1 is evaluated in accordance with EN 197-2.
System of assessment and verification of constancy of performance - 1+

The manufacturer shall carry out:
- Factory production control (FPC) that includes parameters to all characteristics of table ZA.1 relevant for the intended use
- Further testing of samples taken at the factory to all characteristics of table ZA.1 relevant for the intended use

The notified certification body shall issue the certificate of constancy of performance on the basis of:
- Initial type testing of those characteristics of Table ZA.1 relevant for the intended use
- Initial inspection of factory and of FPC to parameters related to all characteristics of Table ZA.1, relevant for the intended use
- Continuous surveillance, assessment and approval of FPC to parameters related to all characteristics of Table ZA.1, relevant for the intended use
- Audit testing of samples taken at factory of those characteristics of Table ZA.1 relevant for the intended use

EN 13043:2002 Aggregates for bituminous mixtures and surface treatments for roads, airfields and other trafficked areas
EN 13055-1:2002 Lightweight aggregates - Part 1: Lightweight aggregates for concrete, mortar and grout
EN 13055-2:2004 Lightweight aggregates - Part 2: Lightweight aggregates for unbound and bound applications
EN 13450:2002 Aggregates for railway ballast
EN 12620:2002+A1:2008 specifies the properties of aggregates and filler aggregates obtained by processing natural, manufactured or recycled materials and mixtures of these aggregates for use in concrete. It covers aggregates having a density greater than 2 000 kg/m$^3$ for all concrete, including concrete in conformity with EN 206 and concrete used in roads and other pavements and for use in precast concrete products.

It also covers recycled aggregate with densities between 1 500 kg/m$^3$ and 2 000 kg/m$^3$ with appropriate caveats and recycled fine aggregate (4 mm) with appropriate caveats.

The standard specifies a factory production control system for aggregates to ensure that they conform to the relevant requirements of EN 12620:2002+A1:2008
Requirements

The necessity for testing and declaring all properties specified in EN 12620 shall be limited according to the particular application at end use or origin of the aggregate. When required, the specified tests shall be carried out to determine appropriate properties.

When the value of a property is required but not defined by specified limits the value should be declared by the producer as a category.

When a property is not required, a “No requirement” category can be used.

Guidance on selection of appropriate categories for specific applications can be found in national provisions in the place of use of the aggregate (national annexes).
Aggregates – definitions, requirements, test methods

**Geometrical requirements**

- Aggregate sizes
- Grading for:
  - coarse aggregates
  - fine aggregates-sand
  - natural graded 0/8 mm aggregate
  - all-in aggregate
  - filler aggregate
  - special use aggregate.
- Shape of coarse aggregate:
  - flakiness index
  - shape index
- Shell content of coarse aggregate
- Fines content
- Fines quality:
  - sand equivalent value
  - methylene blue test

**Test methods**

- **EN 933-1:2012**
- **EN 933-1:2012**
- **EN 933-1:2012**
- **EN 933-1:2012**
- **EN 933-10:2009**
- **ISO 565:1990**
- **EN 933-3:2012**
- **EN 933-4:2008**
- **EN 933-7:2000**
- **EN 933-1:2012**
- **EN 933-8:2012**
- **EN 933-9:2009**
Physical requirements

- Resistance to fragmentation of coarse aggregate
  - Los Angeles coefficient
  - resistance to impact
- Resistance to wear of coarse aggregate
  - micro-Deval coefficient
- Resistance to polishing
  - polished stone value
- Resistance to surface abrasion
  - aggregate abrasion value
- Resistance to abrasion from studded tyres
  - Nordic abrasion value
- Particle density
- Water absorption
- Bulk density
- Durability
  - freeze/thaw resistance of coarse aggregate
  - volume stability - drying shrinkage
  - alkali-silica reactivity

Test method

- EN 1097-2:2010 clause 5
- EN 1097-2:2010 clause 6
- EN 1097-1:2011
- EN 1097-8:2009
- EN 1097-8:2009, annex A
- EN 1097-9:2014
- EN 1097-6:2013
- EN 1097-6:2013
- EN 1097-3:1998
- EN 1367-1:2007 or EN 1367-2:2009
- EN 1367-4:2008
- provisions valid in the place of use
Aggregates – definitions, requirements, test methods

Chemical requirements

- Chlorides
- Sulfur containing compounds
  - acid-soluble sulfate
  - total sulfur
  - water soluble sulfate content of recycled aggregates
- Constituents which alter the rate of setting and hardening of concrete
- Constituents which affect the volume stability of air-cooled blast furnace slag
- Carbonate content of fine aggregates for concrete pavement surface courses
- Dangerous substances:
  - Emission of radioactivity (for aggregates from radioactive sources intended for use in concrete in buildings)
  - Release of heavy metals
  - Release of polyaromatic carbons
  - Release of other dangerous substances

EN 1744-5:2006 and EN 1744-6:2006 (for recycled aggregates)
Evaluation of conformity

The producer shall undertake initial type tests and factory production control to ensure that the product conforms to EN 12620 and to declared values as appropriate.
Aggregates – definitions, requirements, test methods


**Systems** of assessment and verification of constancy of performance:

*2+* for uses with high safety requirements (where third party intervention is required)

*4* for uses without high safety requirements (where third party intervention is required)

Safety requirements are defined by Member States in their national laws, regulations and administrative provisions.

**Tasks of evaluation of conformity** for aggregates and fillers under **system 2+**

**The manufacturer** shall carry out:
- Initial type testing of all relevant characteristics of Table ZA.1a or Table ZA.1b
- Factory production control (FPC) that includes parameters related to all relevant characteristics of Table ZA.1a or Table ZA.1b

**The notified production control certification body** shall issue the **certificate of conformity** of the **factory production control** on the basis of:
- Initial inspection of factory and of FPC to parameters related to all characteristics of Table ZA.1a or Table ZA.1b
- Continuous surveillance, assessment and approval of FPC to parameters related to all characteristics of Table ZA.1a or Table ZA.1b
EN 13279-1:2008 Gypsum binders and gypsum plasters - Part 1: Definitions and requirements

EN 12859:2011 – Gypsum blocks
EN 14246:2006 – Gypsum elements for suspended ceilings
EN 15283-1:2008+A1:2009   - Gypsum boards with fibrous reinforcement
The Standard **EN 13279-1** specifies the characteristics and performance of powder products based on gypsum binder for building purposes. This includes premixed gypsum building plasters for plastering of walls and ceilings inside buildings where they are applied as a finishing material which can be decorated. Gypsum and gypsum based building plasters for manual and mechanical applications are included.

**EN 13279-1** also applies to gypsum binders both for direct use on site and for further processing into gypsum blocks, gypsum plasterboards, gypsum boards with fibrous reinforcement, gypsum fibrous plasterwork and gypsum ceiling elements. Gypsum mortar for internal not load bearing partitions not exposed to water is also included.
# Gypsum – definitions, requirements, test methods

## Types of gypsum binders and gypsum plasters

<table>
<thead>
<tr>
<th>Designation</th>
<th>Notation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gypsum binders e.g.:</strong></td>
<td></td>
</tr>
<tr>
<td>— gypsum binders for direct use or further processing (dry powder products);</td>
<td>A1</td>
</tr>
<tr>
<td>— gypsum binders for direct use on site;</td>
<td>A2</td>
</tr>
<tr>
<td>— gypsum binders for further processing (e.g. for gypsum blocks, gypsum</td>
<td>A3</td>
</tr>
<tr>
<td>plasterboards, gypsum elements for suspended ceilings, gypsum boards with</td>
<td></td>
</tr>
<tr>
<td>fibrous reinforcement).</td>
<td></td>
</tr>
<tr>
<td><strong>Gypsum plaster:</strong></td>
<td>B</td>
</tr>
<tr>
<td>— gypsum building plaster;</td>
<td>B1</td>
</tr>
<tr>
<td>— gypsum based building plaster;</td>
<td>B2</td>
</tr>
<tr>
<td>— gypsum-lime building plaster;</td>
<td>B3</td>
</tr>
<tr>
<td>— lightweight gypsum building plaster;</td>
<td>B4</td>
</tr>
<tr>
<td>— lightweight gypsum based building plaster;</td>
<td>B5</td>
</tr>
<tr>
<td>— lightweight gypsum-lime building plaster;</td>
<td>B6</td>
</tr>
<tr>
<td>— gypsum plaster for plasterwork with enhanced surface hardness.</td>
<td>B7</td>
</tr>
<tr>
<td><strong>Gypsum plaster for special purposes:</strong></td>
<td>C</td>
</tr>
<tr>
<td>— gypsum plaster for fibrous plasterwork;</td>
<td>C1</td>
</tr>
<tr>
<td>— gypsum mortar;</td>
<td>C2</td>
</tr>
<tr>
<td>— acoustic plaster;</td>
<td>C3</td>
</tr>
<tr>
<td>— thermal insulation plaster;</td>
<td>C4</td>
</tr>
<tr>
<td>— fire protection plaster;</td>
<td>C5</td>
</tr>
<tr>
<td>— thin coat plaster, finishing product;</td>
<td>C6</td>
</tr>
<tr>
<td>— finishing product.</td>
<td>C7</td>
</tr>
</tbody>
</table>
Requirements linked to the end use conditions

Test methods

- Reaction to fire
  - Class A1 or classification to EN 13501-1

- Fire resistance
  - classification to EN 13501-2

- Acoustic performance
  - direct airborne sound insulation - EN ISO 140-3 (EN ISO 10140-2), EN ISO 717-1
  - EN ISO 354
  - EN ISO 6946 / EN 12664
  - not release any dangerous substances in excess of the maximum permitted levels

- Thermal resistance

- Dangerous substances
Gypsum – definitions, requirements, test methods

Requirements for gypsum binders
- Calcium sulphate content shall be at least 50%.
  Other agreements may be defined in a specific contract between producer and user.

Requirements for gypsum plasters
- Gypsum binder content
- Initial setting time
- Flexural strength
- Compressive strength
- Surface hardness
- Adhesive strength
  Test method EN 13279-2:2014

Requirements for gypsum plasters for special purposes
- Gypsum binder content
- Fineness
- Initial setting time
- Flexural strength
- Compressive strength
- Surface hardness
Designation of gypsum binders and gypsum plasters

Gypsum binders and gypsum plasters shall be designated as follows:
- type of gypsum binder or gypsum plaster
- reference to the EN 13279-1:2008
- notation as given in Table 1 of the EN 13279-1:2008
- initial setting time
- compressive strength.

EXAMPLE OF DESIGNATION
GYPSUM BUILDING PLASTER  EN 13279-1 – B1/50/2
Projection gypsum building plaster (B1) with an initial setting time > 50 min and a compressive strength ≥ 2,0 N/mm².
Evaluation of conformity

The compliance of products with the requirements of this standard and with the stated values (including classes) shall be demonstrated by:

- Initial Type Testing (ITT);
- Factory Production Control by the producer (FPC).

For the purposes of testing, products may be grouped into families, where it is considered that the selected property is common to all products within that family. The decision on those products or properties which fall within a family shall be made by the producer.
Annex ZA of EN 13279-1:2008

**Essential characteristics** from the Mandate:
- Reaction to fire (for exposed situations)
- Direct airborne sound insulation (in end use conditions)
- Thermal resistance

**Systems** of assessment and verification of constancy of performance:
3 for uses in walls, partitions, ceilings or claddings, as relevant intended for fire and/or fire compartmentation in protection of structural elements buildings
4 for uses in walls, partitions, ceilings or claddings, as relevant intended for applications not mentioned above

**Tasks of evaluation of conformity** for gypsum binders and gypsum plasters

*system 3*

The manufacturer shall carry out:
- Initial type testing of thermal resistance (if design values are not used)
- Factory production control (FPC) that includes parameters related to Reaction to fire. Controlling the content of organic additives/admixtures, if any

The notified testing laboratory shall carry out determination on product type on the basis of type-testing of reaction to fire
Thank you very much for your attention!
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