Quick-setting cement suitable for the production of high-strength concrete and for structures or concrete elements requiring a rapid increase in early strengths. The higher development of heat of hydration also predetermines it to concreting at lower ambient temperatures.

**Characteristics**
CEM II / B-S 42,5R is a cement produced by fine grinding of Portland clinker, granulated blast-furnace slag (6-20% according to EN 197-1) and gypsum. It attains 2-day strengths ranging from 26 to 32 MPa and standard 28-day strengths of 55 to 61 MPa.

**Use**
- concretes for difficult concrete structures
- concrete elements and structures requiring a rapid increase in early strengths
- prefabricated concrete elements and construction components (paving, permanent shuttering, kerbs, ...)
- industrial floors
- external hard surfaces made of concrete
- plain concrete and reinforced concrete even of higher strength classes
- cement screeds

**Advantages**
- a rapid increase in early strength and high final strengths
- very good workability and soundness
- higher development of heat of hydration
- moderate resistance to chemical aggression (up to the XA1 environment)
- moderate resistance to chemical aggression (up to the XA1 environment)

### Essential properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Harmonized Standard EN 197-1</th>
<th>CEMMAC CEM II/A-S 42,5R</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-day compressive strength (MPa)</td>
<td>≥ 20</td>
<td>26 – 32</td>
</tr>
<tr>
<td>28-day compressive strength (MPa)</td>
<td>≥ 42,5 ≤ 62,5</td>
<td>55 – 61</td>
</tr>
<tr>
<td>Initial setting time (min)</td>
<td>≥ 60</td>
<td>180 ± 30</td>
</tr>
<tr>
<td>Volume stability (expansion) – Le-Chatelier (mm)</td>
<td>≤ 10</td>
<td>0,0 – 1,5</td>
</tr>
<tr>
<td>SO3 sulphate content (%)</td>
<td>≤ 4,0</td>
<td>3,2 ± 0,2</td>
</tr>
<tr>
<td>Chloride content (%)</td>
<td>≤ 0,10</td>
<td>0,04 ± 0,03</td>
</tr>
</tbody>
</table>

The content of tricalcium aluminate in this cement is less than 5%.