

**Buzzi Unicem Next** is the name of a family of hydraulic binders based on sulfoaluminate clinker, which is obtained by burning a mixture of bauxite, gypsum and limestone at a temperature of approximately 1,350°C and subsequently ground.

**Next base** is formulated with the optimal proportions of **Next clinker** and anhydride for most applications.

**Next base** ensures consistent performances over time and excellent storage stability in the products in which it is used.

**Next base** can be used as a rapid binder or in combination with Portland cement to produce products characterized by low shrinkage and rapid development of strength after a short curing time.

**Next base** can be used to formulate products for a wide range of applications due to its compatibility with all types of setregulating admixtures, superplasticizers, viscosifiers, expansive agents, accelerators, retarders, etc.

**Next base** confers exceptional durability, low permeability to aggressive substances and very high resistance to sulfates to the products in which it is used.

## Buzzi Unicem Next base SR03 Hydraulic binder based on sulfoaluminate clinker



“German Technical Approval Z - 3.15 - 2130” issued by Deutsches Institut für Bautechnik (DIBt)

### Properties

**Next base SR03** is classified as a hydraulic binder that is highly resistant to sulfates.

#### Main chemical ingredients

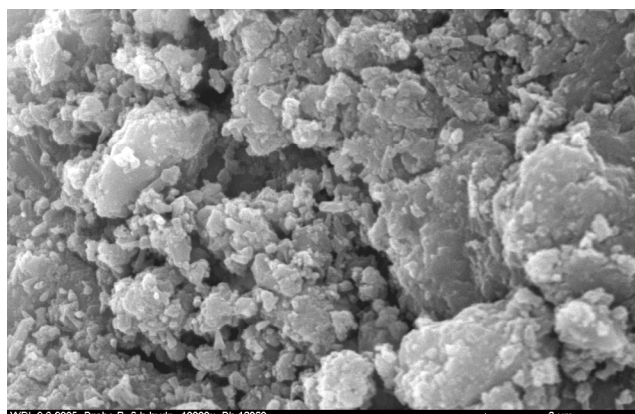
CaO	41 – 45%
Al <sub>2</sub> O <sub>3</sub>	22 – 26%
SiO <sub>2</sub>	8 – 9%
SO <sub>3</sub>	17 – 19%
Cl <sup>-</sup>	< 0,1%
Cr VI	< 2,0 ppm

#### Main ingredients of the hydraulic binder

Clinker CSA	(81 ± 5)%
CaSO <sub>4</sub>	(19 ± 5)%

#### Calcium sulfoaluminate content

C <sub>4</sub> A <sub>3</sub> $\bar{S}$	(45 ± 5)%
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<b>Density</b>	2.800 kg/m <sup>3</sup>
<b>Blaine specific surface area</b> UNI EN 196-6]	> 4.000 cm <sup>2</sup> /g
<b>Color</b>	light gray
<b>Initial set time</b> [UNI EN 196/3]	< 20 min
<b>Water requirement</b>	33 ± 2%

#### Average compressive strength

In compliance with UNI EN 196-1

Time	[ MPa ]
3 hours	> 20
8 hours	> 30
28 days	> 42,5

## Applications

**Next base** can be used alone or in combination with Portland cement for a large number of applications in the premix and precast sectors.

- Adhesives and technical mortars
- Rapid hardening, premixed plasters, mortars and grouts
- Premixed plasters, mortars and grouts for use at low temperatures
- Premixed mortars and grouts with low permeability and high resistance to sulfates
- Premixed, bagged mortars and grouts whose performance remains intact after the bag has been open for a longer period of time than the same products prepared with aluminous cements
- Sprayable or injectable products
- Latest generation self-leveling slabs
- Quick drying self-leveling slabs
- Self-leveling slabs with low risk of alkali-silica reaction (ASR)
- Self-leveling slabs subject to sulfate attack or freezing-thawing cycles
- Precast structural and non-structural components requiring rapid removal of formwork
- Precast components of any color
- Precast components with high resistance to sulfates and freezing-thawing cycles

## Warnings

- When designing different formulations of ternary binders, we recommend that the **Next base** - Portland cement components remain within the 40%-60% (in weight) range of the total binder.
- The set times and speed of strength development can be customized by varying the retardant admixture (citric or tartaric acid) and the accelerant admixture (lithium carbonate).
- If **Next base** is used as a set accelerator for Portland cements, we recommend that it comprises between 10%- 20% of the total binder

- We recommend against using Next base in the preparation of materials that will be exposed to extremely high temperatures such as firebrick or mortars used in kiln or similar construction.
- Next base is supplied in bulk, 25 kg bags or big-bags.
- Please see the Buzzi Unicem Next user manual for further information.
- The safety sheet can be downloaded from the website: [www.buzziunicem.it](http://www.buzziunicem.it).

## CSA-based product line

### Next base

Binder based on calcium sulfoaluminate and anhydride designed for formulating products characterized by low shrinkage and rapid development of mechanical strength.

### Next binder

Ready-to-use ternary binder (consisting of a combination of sulfoaluminate clinker, anhydride and Portland cement) for applications in the precast, premix and readymix concrete sectors where rapid development of strength, low shrinkage and rapid drying are necessary.



### Environmental sustainability

Because of the low carbon and calcium content in the raw materials, the production cycle of Next formulations reduces the CO<sub>2</sub> emissions into the atmosphere.

**Nota:** The instructions provided above are the result of our best experience and are for indicative purposes only. We cannot be held liable for any defect or damaged caused by the improper use of the product or if it is not used under the recommended conditions. Our Technical Assistance Department is available to provide further advice on the correct use of the product and to conduct technical tests.

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