

Architecturalbeton® e Colorbeton

Highly aesthetic concretes

Concretes with guaranteed performance

Compliant with standards UNI EN 206 and UNI 11104

ARCHITECTURALBETON

Special concrete for exposed structural elements
with minimum C30/37 compressive strength

Specifically for:

- infrastructures (bridges, viaducts, airports, railway stations, etc.) with partially or completely exposed elements;
- exposed internal walls of residential houses or public rooms, both load-bearing and those with an exclusively "decorative" function;
- external façades of public and private concrete buildings;
- internal and external stairs with exposed load-bearing structures;
- floor slabs of public and private buildings with exposed ceilings;
- cantilevered elements with exposed soffits; elements of street furniture such as retaining walls, benches, fences and low walls;
- architectural elements or works of art (sculptures).

Architecturalbeton is available in the following versions:

- Architecturalbeton C30/37 for structures indoors and outdoors when protected from rain (XC1, XC2, XC3);
- Architecturalbeton C32/40 or outdoor structures exposed to rain (XC4), environments where in contact with solutions containing chlorides (XD2) or in moderately chemically corrosive environments (XA2).

Architecturalbeton is available in the versions S4, S5 and SCC.

COLORBETON

Special coloured concrete for exposed structural elements
with minimum C30/37 compressive strength

In addition to the characteristics described above, **Colorbeton** can also be made available in a variety of colour tones on request by adding inorganic pigments.

Architecturalbeton and **Colorbeton** are special cement-based mixes which undergo stringent controls during production, both in terms of the ingredients and the composition of the mix, in order to guarantee that the concrete structure has an excellent visible surface. For example, a greater quantity of cement and fine materials is used than in an ordinary concrete mix, but never less than 350 kg/m³ in order to allow the concrete to

faithfully reproduce both particularly complicated shapes and detailed formwork textures (especially if made of wood or matrices).

Clearly, the final result will also depend on the construction phase of the structures, where appropriate measures must be adopted for an optimal result (tight formwork, uniform application of the release agent, effective vibration if not the SCC version, curing that will prevent the formation of stains).

The following table can help to define the characteristics of the architectural concrete that should be included in the specifications.

DEFINITION (AND ORDER)	STRENGTH CLASS	CONSISTENCY CLASS	EXPOSURE CLASS	MAXIMUM DIAMETER
ARCHITECTURALBETON and COLORBETON	from C30/37	from S4 to SCC	XC, XD, XA, XF	16

PHYSICAL AND MECHANICAL CHARACTERISTICS		
ARCHITECTURALBETON and COLORBETON	Normal strength	C30/37
	Standard hygrometric shrinkage with R.H. 50% after 6 months	480 µm/m
	Secant elastic modulus at 28 days	35000 mm
	Permeability at 28 days. Penetration of water under pressure (5 atm) in accord with UNI EN 12390-8	12
	Heating under adiabatic conditions	35 °C
	Normal strength	C32/40
	Standard hygrometric shrinkage with R.H. 50% after 6 months	325 µm/m
	Secant elastic modulus at 28 days	36500 mm
	Permeability at 28 days. Penetration of water under pressure (5 atm) in accord with UNI EN 12390-8	10
	Heating under adiabatic conditions	36 °C