



**HOFFMANN
GREEN CEMENT**

Catalyst of
the Carbon
Transition

**TECHNICAL SERVICE &
INNOVATION**

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H-UKR N cement technical sheet

Alkali-activated slag based cement

- Decarbonized cement, 0% clinker
- Carbon footprint reduced by 85% compared to a CEM I
- Made in France

“ THE BEST CO₂
IS THE ONE YOU
DON'T PRODUCE ”

Domains of use

- Ready-mixed plant
- Construction site concrete
- Precast (with or without heat treatment)

Applications

- Buildings: walls, floors, posts, beams, superficial foundations, footings, rafts, paving, stairs, double walls
- Roads and public works: curbs, gutters, bases, retaining walls, and acoustic screens.
- Civil engineering: mixing towers and wind turbine foundations, storage silos.
- Exterior landscaping and sustainable cities: decorative, deactivated, draining concretes.

Properties

- Concrete with a compressive strength class of C16 to C50
- Concrete of any consistency class (S0 to self-placing SF1)
- Workability maintained up to 120 mins
- Continuation of wall formwork removal pace on worksites up to outside T° > 12°C (under this temperature, use H-UKR R)

Assessments

- Under Technical Assessments

Compressive Strength in MPa [N/mm²]

According to an internal protocol derived from EN 196-1

Properties	Requirements	Average values
Compressive strength at 1 day	-	20.1
Compressive strength at 2 days	≥ 20.0	31.1
Compressive strength at 7 days	-	45.8
Compressive strength at 28 days	≥ 52.5	58.3

Chemical characteristics (%)

Properties	Requirements	Average values
Corrected loss on ignition	≤ 8.5	7.4
Sulphate content (SO ₃)	≤ 4.0	0.10
Chloride content (Cl ⁻)	≤ 0.10	< 0.02
Sulphide content (S ²⁻)	-	0.60

Physical characteristics

Properties	Requirements	Average values
Heat of Hydration at 41 h (J/g)	≤ 270	157
at 120 h (J/g)	-	193
Fineness, specific surface (cm ² /g)	-	[5000-5500]
Density (g/cm ³)	-	2.65
Colorimetry	-	L* > 85
	-	a* > 0.30
	-	b* > 3.0

Al ₂ O ₃	CaO	Fe ₂ O ₃	K ₂ O	MgO	MnO	Na ₂ O	SiO ₂	TiO ₂
9.2%	35.1%	0.40%	0.40%	6.4%	0.20%	7.7%	30.2%	0.60%

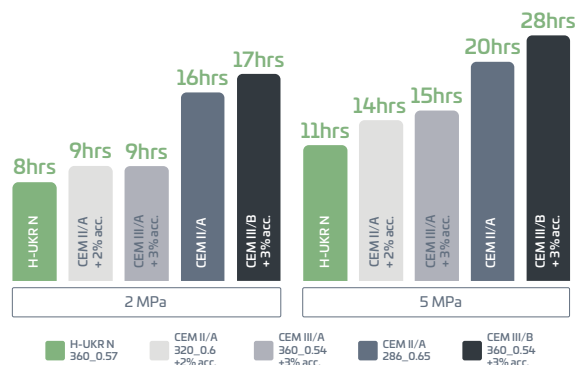
20°C

Maturity level

Results of maturity level studies at a young age of different cements.

In temperate conditions, the behavior of concretes based on H-UKR N cement and accelerated concretes based on CEM II/A and CEM III/A is similar.

Adding an accelerator to CEM III/B-based concrete does not achieve the performance of H-UKR N cement-based concrete.



Recommendations for use

- Use clean aggregates, free from organic matter
- Only use admixtures recommended by HOFFMANN GREEN CEMENT
- Take all precautions during horizontal pouring by systematically carrying out a cure. The curing products on the market are suitable. Water curing is prohibited.
- Use appropriate personal protective equipment (PPE): pants, long-sleeved clothing, waterproof gloves, waterproof shoes, safety glasses, etc.
- No pouring at temperatures below +12°C, to guarantee a normal rotation cycle for the formwork. No pouring at temperatures above +30°C

The shelf life of H-UKR N cement is 24 months
(in dry storage conditions).

Packaging is:

- in bulk (30-T tank maximum)
- in 1-T big bags
- in 25-kg bags



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