



**HOFFMANN
GREEN CEMENT**
Catalyst of
the Carbon
Transition

TECHNICAL SERVICE & INNOVATION

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H-UKR R cement technical data sheet

Alkali-activated slag based cement



COLD WEATHER 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 resistance 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° > 5°C

Compressive Strength in MPa [N/mm²]

According to EN 196-1

Properties	Requirements	Average values
Compressive strength at 1 day	-	21.0
Compressive strength at 2 days	≥ 30.0	36.3
Compressive strength at 7 days	-	50.8
Compressive strength at 28 days	≥ 52.5	65.3

Chemical characteristics (%)

Properties	Requirements	Average values
Corrected loss on ignition	≤ 8.5	3.3
Sulphate content (SO ₃)	≤ 4.0	0.08
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) at 120 h (J/g)	≤ 270 -	215 229
Fineness, specific surface (cm ² /g)	-	[5000-5500]
Density (g/cm ³)	-	2.81
Colorimetry	-	L* > 87 a* > 0.20 b* > 4.0

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%	0.35%	0.38%	6.4%	0.24%	7.7%	30.2%	0.55%

Cycle
4-12°C

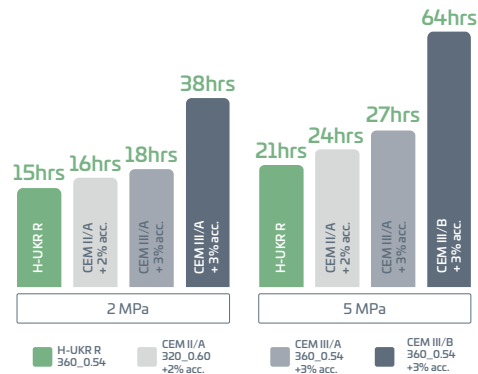


Maturity level: winter conditions

Results of maturity level studies at a young age of different cements subjected to a day/night temperature cycle of 4-12°C.

In winter conditions, the mechanical behavior of young concretes based on H-UKR R 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 R 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.
- To guarantee normal rotation cycles for formwork, no pouring at temperatures below 5°C.
- No pouring at temperatures above 18°C with H-UKR R.

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

Packaging is:

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



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