

CEM III/A 42,5N

slag cement

Cement suitable for massive structures and stabilization of soils



Cement for all conventional concrete works requiring high final strengths with a slower increase in strengths and a longer workability. Cement suitable for the production of ready-mixed concrete and for stabilization of soils. The lower development of heat of hydration also pre-determines it to concreting in warm weather and to massive structures.

Charakteristika

CEM III/A 42,5N is a cement produced by fine grinding of Portland clinker, granulated blast-furnace slag and gypsum. It attains 2-day strengths ranging from 15 to 20 MPa and standard 28-day strengths of 48 to 55 MPa.

Use

- monolithic and massive concrete structures
- plain concrete and reinforced concrete of common strength classes
- concrete structures within water structures
- hard surfaces made of concrete
- concretes and concrete elements exposed to mechanical load
- subconcretes and cement screeds
- production of small concrete elements
- stabilization of soils

Advantages

- very good workability of concretes and soundness
- low development of heat of hydration and a gradual increase in strengths
- high final strengths which increase continuously within 90 days from the creation of the mix
- a light colour of the resulting concrete
- the optimum slag content causes higher resistance to moderately aggressive environment (XA1 environment)

Quality

The quality of cements is supervised by the TSÚS (Building Testing and Research Institute), Bratislava. CEMMAC is a holder of an ISO 9001: 2008 quality management certificate and an ISO 14001: 2004 environmental management certificate.

Essential Properties	Harmonized Standard EN 197-1	CEMMAC CEM III/A 42,5N
2-day compressive strength (MPa)	≥ 10	15 – 20
28-day compressive strength (MPa)	≥ 42,5 ≤ 62,5	48 – 55
Initial setting time (min)	≥ 60	200 ± 260
Volume stability (expansion) – Le-Chatelier (mm)	≤ 10	0,0 – 3,0
SO ₃ sulphate content (%)	≤ 4,0	2,8 – 3,2
Chloride content (%)	≤ 0,10	0,03 – 0,08

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



Increase in strengths

