

DDC

CEM II/A-S 42,5 N

Portland slag cement MSZ EN 197-1:2011

Vác



DDC In harmony with the environment.

DUNA-DRÁVA CEMENT
HEIDELBERGCEMENT Group

Portland slag cement MSZ EN 197-1:2011

The CEM II/A-S 42,5 N type portland slag cement as construction binder is suitable for the following applications:

- monolithic reinforced concrete structures for structural and underground engineering
- paving exposed to mechanical stress, roadway pavement, abrasion resistant and frost resistant concretes
- moderately aggressive chemical environment resistant concrete, reinforced concrete structures
- to reduce the volume of efflorescence: exposed surfaces, concrete paving stones, kerbstones
- estrich concretes, plasters, mortars

Composition, cement components:

Portland cement clinker, additive content according to standard composition between 6-20%, the required amount of setting control material (gypsum, REA gypsum), chromate reducing agent.

Key features, areas of application:

The granular slag supplement in the CEM II/A-S 42,5 N portland slag cement actively participates in the solidification of the cement. It reacts with the hydration product from the reaction of clinker and water to become a strength carrier, thus increasing the strength of the cement stone formed. It is characterized by high early strength, high ultimate strength and medium heat evolution.

Its colour is medium grey, a shade lighter than the colour of portland cements.

Its use is beneficial in the production of concrete and reinforced concrete structures with strength classes C 16/20 to C 50/60. It can be used effectively in winter, at low ambient temperatures.

Its use is specifically recommended for the production of paving stones in order to reduce lime efflorescence on the surface of the products.

Suitable for the production of frost-resistant concrete (XF1 – XF4), abrasion resistant concrete (XK1 – XK4), watertight concrete (XV1 – XV3), radiation shielding concrete, and concrete resistant to moderately aggressive chemical effects (XA1), in summer as well as winter.

Suggested use for the production of concrete mix and the construction of concrete structures:

The use of cement requires basic construction knowledge. If you do not have sufficient professional knowledge, consult a concrete technologist.

Basic criteria for the production of durable concrete:

- low water content
- as high density as possible
- meticulous aftercare

When creating the concrete mix, the amount of added mixing water should be as little as possible. To improve the workability of the concrete, it is recommended to add plasticizer additives. In order to achieve higher strength and a more favourable concrete structure, care must be taken to ensure that the fresh concrete is properly compacted. Aftercare of the concrete must be started immediately after placing, by spraying and flooding it with water, covering it with plastic, keeping it in the formwork, and applying a vapour barrier coating. It is advised to keep the concrete moist for 7-21 days without interruption, depending on the composition of the concrete mix, the type of concrete structure and the ambient temperature. In the event of low ambient temperatures, the frost protection and thermal insulation of the concrete structure must be ensured until the critical strength required for the concrete's resistance to freezing is reached. Recommended placing temperature: above +5°C daily average temperature.

Technical characteristics: /DDC, Labor-MEO/

	Standard requirement	Average value Vác Plant
Compressive strength (MPa)		
■ at 2 days	≥10	23,2
■ at 28 days	≥42,5≤62,5	53,7
Setting time (min)		
■ beginning	≥60	178
■ end	-	252
Specific surface area (cm ² /g)	-	3835
Water demand (%)	-	29,5