Element Concrete PP35

Pumpable self-compacting concrete

Product description

Marlon Element Concrete PP35 is a factory-made dry concrete product that is ready for use after blending thoroughly with water. The product is made of Portland cement, additives and oven-dried and sorted silica sand with a controlled grain curve. In its mixed state, Marlon Element Concrete PP35 is an expanding plastic and pumpable self-compacting concrete that can be used for very different concreting tasks. Marlon Element Concrete PP35 is screed after pouring and can be applied with an incline. The product satisfies the material requirements for aggressive environments according to +DS/EN 206 DK NA:200.

Benefits

- Pumpable Plastic consistency
- Self-compacting
- Expanding
- Layer thicknesses of up to 150 mm
- Just add water

Area of use

Marlon Element Concrete PP35 is well suited for use in pouring of joints in element construction. Marlon Element Concrete PP35 can be used in thicker layers, e.g. for pump concreting between floor slabs or in places where traditional concreting can be difficult.

Preparation

Marlon Element Concrete PP35 is well suited for concreting of joints in construction with elements. Marlon Element Concrete PP35 can be used in thicker layers, e.g. for pump concreting between floor slabs or in places where traditional concreting can be difficult. The surface must be well-suited, firm and free of any loose particles, cement slurry, dust or other impurities that could prevent sufficient adhesion to the surface. It is important that the concrete is slightly absorbent, and prewatering may therefore be needed in warm and dry periods.

Mixing

Marlon Element Concrete PP35 is mixed with 2.8–3.2 L of cold water per bag and then thoroughly blended in a suitable compulsory mixer until a workable consistency is achieved. The mixing time is min. 5 min. Alternatively, an automatic mortar pump can be used.

Concreting in general

Marlon Element Concrete PP35 is used for various tasks and can generally be poured in layer thicknesses between 10–150 mm. In normal circumstances at +20°C, the preparation time is approx. 30 min. Lower temperatures will lengthen, and higher temperatures will shorten the processing and hardening times. Depending on the nature of the surface, large variations in the surface can result in contraction cracks. Consideration must be given to contraction and expansion joints according to the same guidelines as for ordinary concrete pouring. Adding more water than described will reduce the strength and increase the likelihood of contraction cracks.

Pouring of floor slabs

Pump the mixed concrete via hose directly into the hollowed joint in thicknesses corresponding to the element thickness and to approx. 150 mm wide. From experience, Marlon Element Concrete PP35 can be used for concreting of up to 350 mm. Level off the surface and, optionally, brush to achieve a rough surface with improved adhesion.

Aftercare

Newly poured concrete must be protected as soon as possible from rapid drying with the help of close-fitting plastic film, seals or other suitable approved materials that protect against rapid drying.

Limitations

Marlon Element Concrete should not be used at temperatures below +5 or over +30°C. The product does not tolerate frost during the hardening and setting period.

Cleaning

A solid solution

MARLON

Product information

Producer
Marlon Tørmørtel A/S
Virkelyst 20
8740 Brædstrup

Material type
Cement-based dry concrete.

Filler material
Oven-dried and sorted silica sand, (D_{max}) 4 mm.

Additives
Plasticizer and stabilising additives.

Added water
Approx. 12% of the dry powder weight (2.8–3.2 L per 25 kg).

Mixing time
Min. 5 min.

Pouring temperature
+5°C to +30°C.

Beginning setting
Approx. two hours, depending on temperature.

Yield
Approx. 13 L per 25 kg.

Layer thickness
Approx. 10–150 mm Recommended. From experience, up to 350 mm

Storage time
Min. 12 months in dry and suitable conditions in unopened original packaging.

Packaging
25 kg plastic sacks and big bags.

Technical data	**Value**	**Method**
Typical internal values as per EN 196-1 / EN 1015-11 (40x40/160 mm prisms)		
Compressive strength, 2 days	20 MPa	DS/EN 12190
Compressive strength, 7 days	30 MPa	DS/EN 12190
Compressive strength, 28 days	> 45 MPa	DS/EN 12190
Bending tensile strength, 28 days	> 6 MPa	DS/EN 12190
Density, wet	Approx. 2100 Kg/m^3	DS/EN 1015-6
Adhesive strength	> 2 MPa	DS/EN 1542
Expansion of fresh mortar	0,3-0,5%	
E-module	E_{sec} 20 GPa	DS/EN 13412
Resistivity	< 6,7 k0hm cm	APM 219
Chromate content	< 2 mg/kg cement	
Chloride content	< 0,003 weight %	DS/EN 1015-17

Information

Items no.	1000740
Pr no.	2481259
DB-no.	1939650
Version	07.18 repl. 07.14

Compressive strengths as per Bulletin no. 5
Yield according to DS/EN 206 DK NA:2020 Measured on 150 x 300 mm cylinders
Element Concrete PP35

Compressive strength 28 days	f_{ck} > 40 MPa
Correction building site uncertainty	f_{ck} > 35 MPa
	03.2017

CE

Marlon Tørmørtel A/S
Virkelyst 20
8740 Brædstrup
Year 12
DoP 1000740

EN 1504-3
1073-CPR-171-01
Concrete repair product for construction repairs. CC mortar, based on hydraulic cement.

Compressive strength	> 45 MPa Class R4
Adhesion	≥ 2,0 MPa
Chloride content	≤ 0,05 weight %
Fire resistance	Class A1
Carbonatisation	Passed
Elasticity module	≥ 20 GPa
Thermal compatibility	Part 1 ≥ 2,0 MPa
Capillary absorption	≤ 0,5 kg x m^{-2} x h^{-5}
Hazardous substances	

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