Combimix datasheet

Expansion Concrete Std Winter

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Area of use

Expansion Concrete Std Winter is used in concrete casting where all sides of the casting site are available and there is a requirement for total filling. The product is intended for use in temperatures down to -10 °C. Used during the undercasting of steel and concrete pillars, concrete elements and machines, as well as for the setting of railings and pillars. The product provides high strength and good adherence to the adjacent surfaces, as well as good corrosion protection for the casting components of untreated steel. The product provides a good sealing and thus a good protection against external influences: for example, from detergents, light acid corrosion, salt solutions and the like. The product is pumpable.

Pre-treatment

For the best results, the temperature in the work area should be between 10–25 $^{\circ}$ C. Store the dry mortar and other materials so that they will remain at over 10 $^{\circ}$ C before use. At temperatures lower than 5 $^{\circ}$ C, the strength development will cease. If the product is used in temperatures below 5 $^{\circ}$ C, then winter measures should be implemented. The substrate should be clean and free from dust, a cement skin, grease or other impurities that can prevent adhesion. Smooth and glossy surfaces should be roughened and elutriated, when necessary. Pre-water before the casting begins. There must not be free water in the casting form. Aluminium may not be casted on. Galvanised castings shall be protected by painting in the part to be casted.

Mixing

The dry powder is mixed with 2.4 litres of warm water (12 %) per 20 kg bag. The temperature of the water is recommended to be 20–30 °C. The mixing is done in a paddle mixer or a free fall mixer for approx. 3–7 minutes, or with a drill and a whisk. The mortar is mixed into a homogeneous mass. If the product is used with more water than is recommended, it will result in a lower strength and a risk of separation and shrinkage. Use the pre-mixed mass within approx. 30 minutes.

Application

Fill the form with the pre-mixed mortar. Work in a direction so that no air-pockets are formed. Vibrate sparingly. Mortar that has started to cure may not be mixed with more water and must be discarded.

Post-treatment and curing

Protect the newly-cast surfaces immediately from direct sunshine, rain and high wind. Postwatering should always be done for at least three days in dry and warm weather, as well as in the case of strong winds. Use a water hose with a fine spray nozzle. The strength increases with the post-watering of the cured material. Cover the post-watered surface with plastic. At temperatures lower than 0 $^{\circ}$ C, do not post-water, but cover the surface with plastic. The concrete surface must not be exposed to frost before the strength has reached 5 MPa.

Storage time and packaging

Store in a dry environment. The storage life is 12 months from the date of production in the unopened original packaging. The date of production is printed on the packaging. The product is delivered in bags of 20 kg and big bags.

Residual products and safety information

Empty bags can be burned. Any remaining, dry powder that has been stored properly can be used again. Hardened material should be disposed of as construction waste. Do not wash the product into the sewage system. The cement in the product has a reduced level of chromate. Follow regulations in each respective country.

Health, environment, safety and technical service documents

For current version of product information, contact Combimix at info@combimix.se. Previously undated and dated issues are no longer valid. For more information contact our sales organization.

Technical data

Binder	Portland cement
Grain size	≤ 3 mm
Compressive strength class	C45/55
Expansion	< 4 %
Water demand	2.4 liters/20 kg
Water cement ratio	0.40
Air content	approx. 5 %
Workable 20 °C	approx. 30 min
Begins to cure	in approx. 3-4 hrs
Application depth	30–150 mm
Frost resistance	good
Material consumption	approx. 2,0 kg/m²/mm
Color	grey

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