

# Injektering 30

CEM I 52,5 N - SR 3 LA



## APPLICATIONS

Injektering 30 is a micro cement with excellent penetration characteristics ideal for very demanding injections. It has been very finely ground to a specific particle size distribution, that makes it ideal to meet the requirements for injection. The unique combination of the special grinding process and the specially selected clinker produce a cement with an excellent penetration capacity in rock and soil.

Injektering 30 is sulphate resistant, chromate reduced and low alkaline injection cement.

## INJECTION CHARACTERISTICS

Injektering 30 makes it possible to manufacture injection grout with excellent flow and penetration properties, even at low water cement ratios. Test results show excellent stability, flow and filtering characteristics at temperatures of 20 °C and 8 °C.

The temperature of the grout should be at least 5 °C before injecting in order to achieve the desired rheology, penetrability and strength development.

## STANDARDS AND INSPECTION

Injektering 30 complies with the requirements in SS-EN 197-1 part 1: *Composition, Specifications and Conformity Criteria for Common Cements*.

Designation in accordance with SS-EN 197-1 and SS 134203 CEM I 52,5 N - SR 3 LA.

## QUALITY AND ENVIRONMENTAL MANAGEMENT SYSTEM

Production and sales are covered by Cementa's quality system in accordance with ISO 9001. The system indicates quality supervisors, routines for in-house inspection, and documentation routines. The buyer is fully entitled to make sure that the seller implements quality routines in accordance with the system. Cementa is also environmentally certified in accordance with ISO 14001 and continuously works for the environmental improvement of products and production. Both systems are certified by DNV, Det Norske Veritas.

The certificate for the quality system is; No. 2001-SKMAQ-1623 and for the environmental management system is No. 2001-SKM-AE-480.

## MANUFACTURING

Injektering 30 is manufactured at Cementa's terminal in Degerhamn using a fine grinding process developed by Cementa. Injektering 30 is based on the same clinker as Anlægningscement.

## PACKING AND DISTRIBUTION

Injektering 30 is supplied in 20 kg sacks, in big bags or in bulk, in order to meet the needs of our customers wide variety of construction applications. The 20 kg sacks are supplied in unit loads of 48 sacks on pallets completely enclosed in plastic.

## STORAGE

Injektering 30 is more sensitive than normal cement.

Storage in environments with damp air or direct contact with ground moisture damages the cement very quickly causing negative effects on rheology, penetrability and strength development. Unbroken bags or sacks can be stored, regardless temperature, without risking the quality and performance of the product.

Since the chromate reduction succesively loses its effect the storage time is limited to:

- 18 months from date of package for unbroken 20 kg sacks.
- 6 months from the date of delivery when stored in unbroken bigbag or in a dry and sealed silo.

Additives used together with Injektering 30 should be stored and used in accordance with the manufacturer's recommendations.

## SETTING TIME AND BET SPECIFIC SURFACE AREA

	Specific surface area guideline value (m <sup>2</sup> /kg)
Injektering 30	1355

The specific surface area of Injektering 30 is determined using the BET method (nitrogen absorption). The product has a very high specific surface area and difficult to determine using the traditional Blaine method.

## PARTICLE SIZE DISTRIBUTION

Injektering 30 has a particle size distribution where 95 percent of the material is less than 30 µm.

## SULPHATE RESISTANCE

Injektering 30 has a low C<sub>3</sub>A content and satisfies the requirements for sulphate resistance of SR 3 type cement in EN 197-1. Injektering 30 normally has tricalcium aluminate (C<sub>3</sub>A) content of 2 percent.

## ALKALI-SILICA REACTIONS

Injektering 30 complies with the requirement for low alkaline content in accordance SS 144203 ( $\leq 0.6$  percent by weight calculated as equivalent to Na<sub>2</sub>O). Therefore, the cement reduce the risk for the concrete-damaging reactions with alkali reactive aggregate. Injektering 30 has an alkali content of approx. 0.5 percent.

## CHROMATES

Portland cement normally includes small quantities of chrome compounds of both the non soluble and soluble types. The latter are considered to be able to contribute to hypersensitivity to chrome and cause eczema in persons already allergic.

Since 1983, therefore, CEMENTA has produced cement with a reduced chromate content. Nevertheless persons with a developed hypersensitivity to chrome should avoid all contact with cement.

## PHYSICAL PROPERTIES

Compact density	approx 3100 - 3200 kg/m <sup>3</sup>
Bulk density	approx 800 - 1500 kg/m <sup>3</sup>

## CHEMICAL PROPERTIES

The chemical composition is basically the same as for Anlåggningscement, but can vary in detail. A quality certificate is obtainable upon request.

MgO	max. 5,0 % by weight
SO <sub>3</sub>	max. 3,5 % by weight
Chlorides, calculated as Cl	max. 0,1 % by weight

## HEALTH RISKS

Cement should be stored out of reach of children. It is dangerous if consumed. If cement gets into the eyes it can lead to serious eye injuries. Moist cement forms calcium hydroxide which is an irritant to the skin.

For detailed information and safety instructions please see the *Material Safety Data Sheet*.

## CEMENTA AB

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