

DOROSOL®

Special binders for improving cohesive soils

Technical Approval no. 015-07/166-2014, issued by Central Laboratory CCF SA Bucharest



DOROSOL®

Technical Sheet

DOROSOL® is a range of special binders produced as a combination of hydraulic compounds, Portland cement clinker and quicklime, in accordance with the technical specifications in force (SR EN 197-1:2011, SR EN 459-1:2011).

The range of DOROSOL® special binders includes several products, depending on their CaO content:

- DOROSOL® C30
- DOROSOL® C50
- DOROSOL® C70
- DOROSOL® F

Application fields

For special geotechnical works, civil works and communication ways in order to:

- improve the soil with reduced mechanical strength (soil sensitive to humidity, compressible, swampy soils etc.)
- stabilize embankments and slopes
- increase the bearing capacity of capping layers for road construction

Properties

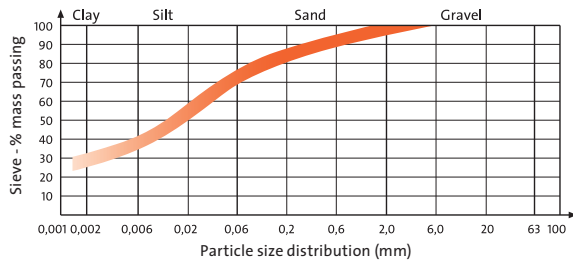
DOROSOL® is a grey pulverulent type material with a high fineness.

DOROSOL® is produced in the binder mixing plants of Holcim to match the need of compressive strength improvement for various categories of cohesive soils used for civil works and communication ways.

In combination with cohesive soil, DOROSOL® generates a homogenous material easy to be profiled and compacted, finally leading to the increase of bearing capacity of the soil being used for.

Depending on the soil properties and on the requirements of the Project Technical Specifications, the type of binder is chosen from the DOROSOL® range.

Improving cohesive soil



Instructions for use

DOROSOL® may be used by complying the following steps:

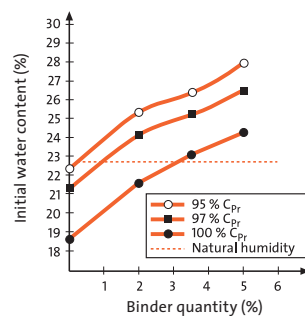
1. direct spreading over the material used for the mix
2. mixing the material in-situ with specialized equipment (mixing mills, soil recyclers etc.)
3. leveling with specific equipment (motograder, bulldozer etc.)
4. compacting with the rollers
5. protection

Depending on the nature and humidity of the soil to be improved, the type of binder to be used is chosen from the DOROSOL® range, after making the preliminary lab tests.

Depending on the preliminary lab tests, DOROSOL® may be used in a percentage of 2-6% mass of soil being mixed with, if earth treatment/stabilisation is achieved in one layer.

For multilayer works, when the improvement of the refill land is done in successive layers, the binder percentage will be established by a specialised laboratory, considering also the use of trial sections and the interpretation of the results thus obtained. If the special hydraulic binder is used to lower the natural earth moisture ($w_{nat} > w_{opt} + 15\%$ - such as swampy soils, or highly compressible soils), more than 8% can be used.

Example: DOROSOL® C30



Dosage suggestion:
 Natural humidity of soil:
 • $w_{nat} = 22,8\%$
 Quantity of hydraulic binder necessary after the lab testing
 • 3,2% ($D_{pr} = 100\%$)
 • 1,0% ($D_{pr} = 97\%$)
 • 0,5% ($D_{pr} = 95\%$)
 Under site conditions (high humidity of soil) the following quantities are recommended:
 • Execution of embankments 2%
 • Form layers and foundation bed lower than 0.5m 3%

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Produced in:	✓	✓
Delivered from:	✓	✓

Validity

- 60 days from the date of delivery, observing the transport and storage conditions provided in the product declaration of conformity

Packaging

- DOROSOL® is delivered in bulk.

Note

- In contact with water, DOROSOL® produces an alkaline reaction.
If accidentally in contact with skin, rinse thoroughly with water.
- If accidentally in contact with eyes, immediately request medical assistance.