

Nanoalps® System SOIL - The innovative ground stabilization

Nanoalps® System SOIL is an environmentally-friendly and non-toxic polymer additive that transforms even unsuitable and earth of inferior quality into valuable construction material. The water soluble material consolidates and stabilizes the earth in combination with hydraulic binders.

Characteristics:

- Consolidation, stabilization and toughening of roadways and base courses, whether in the new construction business or the restoration of roads
- Inerting and immobilization of contaminated grounds
- Binding with fresh and salt water and even with organic grounds (earth, silt, clay) possible
- Reduction in material-, transportation- and construction costs up to 30% possible, due to usability of on-site material and avoiding the transporting away of material
- Improvement in the elasticity and compressive strength of construction materials
- Higher resistance to frost
- Reduction in the water absorbance capacity
- Stabilization of road embankments
- Drastic reduction in construction time through faster binding and building process
- After 24 hours the road is often already passable
- Usable also without asphalt if needed
- Also applicable at low temperatures



Application areas:

Nanoalps® System SOIL is also usable with contaminated earth in combination with hydraulic binders and thereby immobilizes harmful substances.

- Base layer for national roads, state roads and highways
- Carparks, cycle tracks and foot paths
- Forest roads, country paths and skiing areas
- Foundations and access roads to construction sites
- Nature protected areas and protected landscapes
- Construction of hard shoulders by avoiding slip circles
- Storage areas and container platforms
- Harbours and airports
- Dams, dykes and water reservoirs

Service

The aggregates used are examined by specialists from the Nanoalps® laboratories. Depending on the individual requirements, the optimal mixture is created and produced. The successful application and use is guaranteed by suitability tests, field tests and post-implementation checks.



After several years without Nanoalps®



After several years with Nanoalps®

Technical Data:

Flexibility:	Tensile splitting strength from 0.5 -2.0 mPa adjustable
Strength:	Uni-axial compressive strength from 1.0 N/mm ² – 10.0 N/mm ² adjustable
Resistance to frost:	Depends upon the requirements and material available
Compressive strength:	100 MN/m ² EV2 – 250 MN/m ² EV2 adjustable

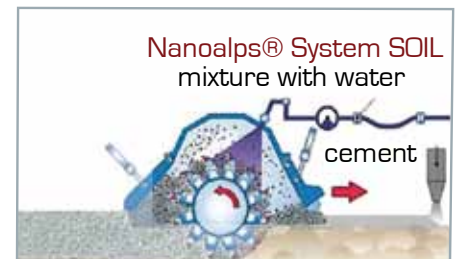
Microscopical exposures show a more compact structure by using Nanoalps® System SOIL



Without Nanoalps® System SOIL



With Nanoalps® System SOIL



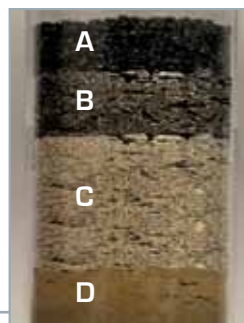
Processing

With Nanoalps® System SOIL layers can be diminished and costs reduced (new building and restoration)

By using Nanoalps® System SOIL layers can be reduced and costs saved (new building and restoration).

Build-up with Nanoalps® System SOIL

- A: 3 cm asphalt fine layer
- B: 6 cm asphalt binder layer
- C: 25-30 cm base and frost protection layer with Nanoalps® System SOIL
- D: Natural ground



Without the improving characteristics of the polymer additive, more material and layers are necessary.

Traditional build-up

- A: 3 cm asphalt fine layer
- B: 6 cm asphalt binder layer
- C: 10 cm asphalt base layer
- D: 8 cm stabilizing layer
- E: 40-70 cm base and frost layer
- F: Natural ground