

PRODUCT DATA SHEET

Sika® Stabilizer-600 DS

Dust suppressant and soil stabilizer for road embankments

DESCRIPTION

Sika® Stabilizer-600 DS may be used to eliminate dust problems in connection with unpaved roads, finely divided coal and mineral ores. Sika® Stabilizer-600 DS has also very good soil stabilization properties on unimproved roads, resulting on a hard and durable surface. It is also recommended for road edge sloping and gives good protection against soil and sand erosion in rural or desert areas.

USES

Sika® Stabilizer-600 DS has a diverse range of dust binding applications, and its use is recommended but not limited to the following situations:

- Dirt and gravel roads
- Unpaved roads
- Unimproved roads
- In rural and desert regions

Sika® Stabilizer-600 DS is used in these areas when the amount of traffic found on unsurfaced roads (where dust is not bound) increases to a point where road maintenance and repair costs escalate.

CHARACTERISTICS / ADVANTAGES

The soil stabilization with the use of Sika® Stabilizer-600 DS allows:

- To form a hard, firmly bound surface that adds traction, safety and comfort for vehicles
- To eliminate the sliding hazards of loose aggregates by binding with road soil into hard skid resistance surface
- To increase the load-bearing strength of all types of road soils, whether wet or dry
- To bind dust particles to the road and to stop dust clouds, therefore improving driving comfort and safety
- To hold the road material on the road and to allow building of the road stages. Aggregate is bound into the road surface and cannot be thrown by traffic, reducing the hazard of broken windscreens
- To decrease the rate of water penetration into the road, increasing run-off and reducing mud conditions
- To reduce heaves and breakup due to seasonal changes in weather conditions
- Roads sealed with Sika® Stabilizer-600 DS may be used immediately after treatment. This allows the treatment of vital transportation arteries and detours without tying up the traffic
- To be applied easily and cheaply with equipment commonly available and used for regular road maintenance

PRODUCT INFORMATION

Composition	Aqueous polymer dispersion
Packaging	1000 L flowbins
Shelf life	12 months minimum if stored properly in original sealed packaging.
Storage conditions	Store in cool and dry conditions in unopened, undamaged and sealed original packaging at temperatures between +5°C and +45°C. Protect from direct sunlight, heat and moisture.
Appearance and colour	White liquid (clear after application)

TECHNICAL INFORMATION

Specific advice

Sika® Stabilizer-600 DS can also be used for stabilizing base courses prior to covering with the bituminous or concrete wearing mat, because it adds stability to the sub-surface and useful life to the mat. In this case it is desirable to add aggregate and stabilize the top 250 to 300 mm of the road to provide a good and hard wearing surface. The strength of a well graded soil is increased in direct proportion to the quantity of Sika® Stabilizer-600 DS added. Maximum strength improvement comes with between 2 and 3 % by weight of Sika® Stabilizer-600 DS in the soil.

APPLICATION INFORMATION

Dispensing

Sika® Stabilizer-600 DS is best applied when the surface of the soil is slightly damp. If binding soil is to be added, spreading should take place shortly afterwards. Under normal conditions, best results are obtained when the road surface is watered shortly before the spreading of Sika® Stabilizer-600 DS. Watering should be as a light sprinkling of approximately 0.5 – 1.0 liter of water per square meter.

1. Grade the road to remove all corrugations and potholes, and to loosen the road surface material to the desired depth of penetration. Some roads work easier if a light application of Sika® Stabilizer-600 DS is used before the first grading to soften the surface.
 2. Blade most of the loose material into windrows on both sides of the road to prevent run-off of valuable Sika® Stabilizer-600 DS and to assure uniform penetration into the surface.
 3. After the windrows are formed Sika® Stabilizer-600 DS is applied by spraying it onto the road from a tank truck. The rate of application may be regulated by valves or by truck speed with gravity flow equipment. Pressure regulated trucks can also be used. For best results Sika® Stabilizer-600 DS should be thoroughly mixed with the soil. For stabilization of the top 70 – 80 mm of the road material, the following steps are commonly used to ensure good mixing: Spray Sika® Stabilizer-600 DS specified for total treatment between windrows, and blade or mechanically mix with a grader or pulveriser.
 4. The road is now ready for the final forming. Since rapid surface drainage normally is important to treated roads, the best type of crown is a modified Type A slope to the road. This crown is also favourable when using Sika® Stabilizer-600 DS though it is not critical. The rounded crown commonly used is not favourable for stabilized roads, as it allows pools of water to collect on the relatively flat centre part of the road. This standing water can increase the plasticity of the road material to the point where traffic can cause potholes to develop.
 5. After the final shaping and formulation of the A type crown, a top dressing of Sika® Stabilizer-600 DS should be used to touch up any dry spots which may have been exposed during grading. This should be a relatively light spray, especially when the soil is wet, in order to avoid excess surface plasticity and run-off of valuable binder.
 6. The final step is compaction. This is best done with a multiple wheeled or metal roller, but very satisfactory results can be obtained by letting traffic do the compaction. Compaction should be done before Sika® Stabilizer-600 DS dries, while the road material is still somewhat plastic.
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Consumption

The quantity of Sika® Stabilizer-600 DS used depends largely on the kind of road required and the road material itself.

Soil classification

	First spreading Sika® Stabilizer-600 DS (l/m ²)	Maintenance spreading Sika® Stabilizer-600 DS (l/m ²)
Mainly dust suppression		
▪ Plastic soils	0.25 - 0.50	0.15 - 0.25
▪ Slightly or nonplastic soils	0.50 - 0.80	0.25 - 0.40
Mainly soil stabilization	0.80 - 1.60	0.30 - 0.50

BASIS OF PRODUCT DATA

All technical data stated in this Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

IMPORTANT CONSIDERATIONS

For a better long term stability, the addition of 5-7 % of cement, by weight of soil, may be added, prior to spraying the Sika® Stabilizer-600 DS, and mixing the road materials all together.

Additional mixing may be required to ensure even distribution of the cement and the Sika® Stabilizer-600 DS within the soil.

ECOLOGY, HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for exact product data and uses.

LEGAL NOTES

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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Lloyd's Register
Sika UAE LLC,
Sika International Chemicals LLC
SIO 9001, 14001, 45001 – SGS
Sika Gulf S.S.C. O.
SIO 9001, 14001 – SGS,
Sika Saudi Arabia Limited

All products are supplied under
a management system certified
to conform to the requirements
of the quality, environmental
and occupational health &
safety standards ISO 9001, ISO
14001 and ISO 45001.



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