

PRODUCT DATA SHEET

Sika® Dust Seal SA

WATERBASED DUST SUPPRESSANT AND SOIL STABILIZER FOR ROAD EMBANKMENTS

DESCRIPTION

Sika® Dust Seal SA may be used to eliminate dust problems in connection with unpaved roads, finely divided coal and mineral ores. Sika® Dust Seal SA also has very good soil stabilization properties on unimproved roads, resulting in 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.

Suitable for use in tropical and hot climatic conditions.

USES

Sika® Dust Seal SA 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® Dust Seal SA 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

Soil stabilization with the use of Sika® Dust Seal SA allows:

- Formation of a hard, firmly bound surface that adds traction, safety and comfort for vehicles
- To eliminate sliding hazards of loose aggregates by binding them with road soil forming a hard skid resistant 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
- That roads sealed with Sika® Dust Seal SA may be used immediately after treatment. This allows the treatment of vital transportation arteries and detours without tying up traffic
- Easily and cheaply applied with equipment commonly available and used for regular road maintenance

PRODUCT INFORMATION

Packaging	1000 L flowbins
Appearance / Colour	Brown liquid
Shelf life	12 months from date of production if stored properly
Storage conditions	Store in undamaged, unopened, original sealed packaging in dry conditions at temperatures between +5 °C and +45 °C. Protect from direct sunlight and frost.
Density	~1.17 kg/l (+25 °C)

APPLICATION INFORMATION

Consumption

The quantity of Sika® Dust Seal SA used depends largely on the kind of road required and the road material itself.

Soil classification	First spreading Sika® Dust Seal SA (l/m ²)	Maintenance spreading Sika® Dust Seal SA (l/m ²)
Mainly dust suppression		
▪ Plastic soils	0.25 - 0.50	0.15 - 0.25
▪ Slightly or non-plastic soils	0.50 - 0.80	0.25 - 0.40
Mainly soil stabilization	0.80 - 1.60	0.30 - 0.50

APPLICATION INSTRUCTIONS

APPLICATION

Sika® Dust Seal SA 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® Dust Seal SA. Watering should be as a light sprinkling of approximately 0.5 - 1.0 L 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® Dust Seal SA 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® Dust Seal SA and to assure uniform penetration into the surface.

3. After the windrows are formed Sika® Dust Seal SA 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® Dust Seal SA 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 1/3 to 1/2 of Sika® Dust Seal SA specified for total treatment between windrows;
- Blade windrows to the centre, spreading evenly;
- Spray approximately 1/3 of the total specified Sika® Dust Seal SA onto the surface and blade or mechanically mix with a grader or pulveriser. Save the remaining part of Sika® Dust Seal SA for final top dressing treatment.

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® Dust Seal SA though it is not critical. The rounded crown commonly used is not favourable for lignin treated 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® Dust Seal SA 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 roller, but very satisfactory results can be obtained by letting traffic do the compaction. Compaction should be done before Sika® Dust Seal SA dries, while the road material is still somewhat plastic. Sika® Dust Seal SA 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 - 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® Dust Seal SA added. Maximum strength improvement comes with between 2 and 3 % by weight of Sika® Dust Seal SA in the soil.

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.

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 the exact product data and uses.

ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

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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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 OHSAS
18001.

Product Data Sheet

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