

## PRODUCT DATA SHEET

## Sika® Set-1 GV

Set accelerating admixture for two component injection grout

## DESCRIPTION

Sika® Set-1 GV is a set and hardening accelerating admixture for cement / bentonite injection grouts commonly used in backfilling operations during tunnels excavations with shield EPB or shield TBM.

Sika® Set-1 GV is supplied in liquid form and is added via a separate hose to injection grouts immediately before the injection point (double component system).

It gives a strong acceleration of setting time of the grout thus allowing the hardening of an injected mix even if it has been retarded for 24 - 72 hours by means of the Sika® SikaTard® or Retarder admixture system.

## USES

Sika® Set-1 GV is normally used in tunnel excavation with shield EPB or TBM. The shield during progression leaves an empty ring space between concrete lining and the excavated soil. Injection and filling of this space is commonly done with a cement or cement/bentonite grout that is stabilized by Sika® set retarding or hydration stabiliser admixture.

The re-activation of setting properties is done by adding Sika® Set-1 GV and depending on the dosage used is shortened down to few seconds or few minutes.

## FEATURES

Sika® Set-1 GV has the following characteristics:

- Ensures a controlled hardening of injected grout
- Allows perfect pumpability of retarded and stabilized grout
- Stops the down flow of injected grout thus avoiding loss of material
- Ensures good mechanical strengths (comparable to ground strengths)
- Ensure full hydration of cement
- Stops segregation and bleeding after injection

## PRODUCT INFORMATION

|                       |                                                                                                                                               |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Composition           | Silicate based                                                                                                                                |
| Packaging             | Bulk supply                                                                                                                                   |
| Appearance and colour | Clear to cloudy liquid.                                                                                                                       |
| Shelf life            | 12 months if stored properly                                                                                                                  |
| Storage conditions    | Store in cool and dry conditions in unopened, undamaged and sealed original packaging at temperatures between +5 °C and +40 °C protected from |

direct sunlight.

|           |                        |
|-----------|------------------------|
| Density   | ~ 1.38 kg/l (at 20 °C) |
| pH-Value  | 11 - 13                |
| Viscosity | 100-300 cP at 20° C    |

## APPLICATION INFORMATION

|                    |                                                                                                                                                                                          |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Recommended dosage | Typical dosage range of Sika® Set-1 GV is 5–25 % by weight of cement. Pre-trials to confirm the actual required dosage for the materials and mix design in use must be done by the user. |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## BASIS OF PRODUCT DATA

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

## IMPORTANT CONSIDERATIONS

Addition of Sika® Set-1 GV is through a special injector that pushes the admixture into the grout flow hoses. Sika® Set-1 GV must only be added to cement grout immediately before injection of the grout. To evaluate setting time jobsite and laboratory trials are recommended.

## 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 Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.

## LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the declared data for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product 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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