

HaTelit® Asphalt Reinforcement Grid

Installation Guidelines



HUESKER

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Installation Guidelines for HaTelit® C, HaTelit® XP, HaTelit® G

1. Transportation and storage

HaTelit® asphalt reinforcement grid is supplied in roll form and packaged to protect against transport damage and site exposure. The rolls should be checked on arrival for any damage caused in transit and, if faulty, should be set aside.

The rolls should be stored on a clean and level base.

The wrapped material should be carefully moved around the construction site.

2. Surface preparation

HaTelit® must always be installed between two bituminous layers. A non-bituminous surface should be covered with a bituminous regulating course. The high resistance of HaTelit® to mechanical damage allows an installation directly onto milled surfaces.



The surface should be prepared in accordance with recognised technical standards to ensure a good bond between the asphalt layers; it should be dry, clean and free of loose material.

The surface has to be even to ensure that the HaTelit® has full contact with the sublayer and that no voids are present.

A very uneven sublayer has to be either profiled or milled. Milled surfaces should not present channels deeper than 10 mm.

Loose residue should be removed.

Cracks of 3 mm width and less can be left untreated. However, cracks wider than 3 mm should be treated with a bituminous sealing after cleaning.

The prepared surface should be sprayed evenly with an unstable cationic emulsion of 70 % bitumen content (U70K) at a minimum rate of 0.6 kg/m² to ensure a good bond between the asphalt layers. On rough or open-textured surface the minimum rate needs to be further increased. On milled surfaces an amount of 1.0 – 1.2 kg/m² can be required.



When using a 60 % bitumen content the minimum rate of emulsion (considering the residual bitumen) needs to be adjusted accordingly.

The tack coat should be sprayed evenly.

When having warm weather conditions HaTelit® should be placed onto the broken emulsion. When having cool weather conditions, HaTelit® should be placed into partly-broken emulsion.

The emulsion break can be recognised by a colour change from brown to black. Ensure all spraying conditions of the tack coat are followed.



3. HaTelit® installation

The asphalt reinforcement grid should be pulled out over the prepared surface and stay in a flat, crease-free condition.



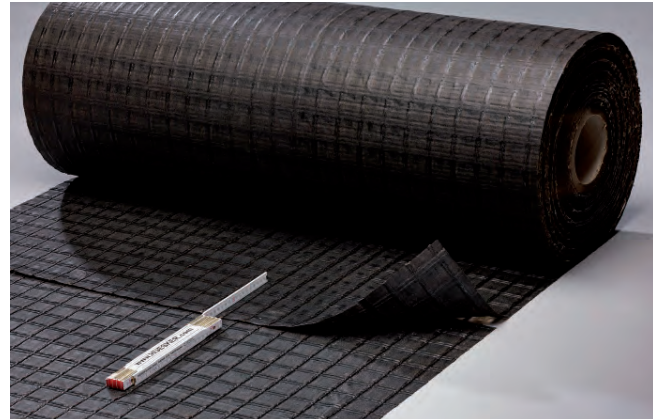
The unrolling can be undertaken with the help of a simple system, either manually, or mechanically when using wider, heavier rolls.

The grid should be pulled equally on both sides of the roll, in order to prevent the development of folds and creases. To ensure a good adhesion, HaTelit® should be pressed onto the base during or after the installation, e.g. using a street broom. If necessary, HaTelit® can be additionally pressed down using a lightweight tandem roller.



An installation plan should be considered for difficult and complicated area shapes.

To accommodate gullies and channels HaTelit® can be cut with a knife. The grid-covered surface should not carry normal road traffic until the covering asphalt course has been placed.



In the length direction the jointing of the rolls should be with a 250 mm overlap. The end of a roll should always be placed over the beginning of the next, ensuring the overlap is not lifted during the asphalt covering operation.



In the cross direction the overlap should be 150 mm. When placing several roll widths side by side the joints should be staggered. The overlaps should be treated with a minimum of 0.15 kg/m² of bitumen emulsion.



4. Asphalt laying

The normal specifications and procedure are followed for placing the asphalt course. HaTelit® has to be covered with a minimum 40 mm thick asphalt layer (in compacted condition).

However, when using reinforcing grids special attention should be paid to the quality of the asphalt and the installation in order to achieve a high-quality asphalt layer. Laying the asphalt should follow the installation of the HaTelit® without delay.

Before placing the subsequent asphalt course, the tack coat should be completely broken, with all solvent and water having evaporated. Both the underlying base layer and the reinforcement must be dry. If it rains after installation special steps must be undertaken.



The reinforcement grid must be laid free of folds and waves. However, if a slight wave builds up in front of the paving machine, this will not detrimentally affect the performance of the reinforcement. Joints in the asphalt pavement must not coincide with overlaps in the rolls of reinforcement grid. The current technical requirements for the compaction of asphalt layers must be observed when using HaTelit®.



The paver and delivery vehicles should move carefully over the grid-covered surface to avoid grid displacement. Sharp turns, rapid changes in speed and hard braking should be avoided, when moving to the front of the paver. The supply vehicle in front of the paver should be driven and not pushed.

5. Conclusion

The installation of a reinforced asphalt layer should follow normal technical procedures. A few additional points have to be borne in mind when using HaTelit® and the installation crew should be informed. We are freely available to answer further questions, particularly covering special applications. We reserve the right to introduce changes and improvements to the product and installation guidelines to ensure the advance of technical progress. No warranty claims can be derived from these instructions.



HaTelit® Installation Advice

A summary of the most important points covering the installation of HaTelit®

1. Surface preparation

Ensure the surface is clean, dry and free of any loose material.

2. Tack-coat spraying

An unstable cationic emulsion of 70 % bitumen content (U70K) should be evenly applied at a rate of 0.6 kg/m^2 – 1.2 kg/m^2 (to be adjusted on site); adequate enough to hold down the HaTelit®.

3. Tack-coat 'break'

HaTelit® shall be placed on the partly broken – or, in warm weather conditions, on the broken – emulsion (colour change from brown to black).

4. Laying the grid

The grid should be pulled out over the surface by using a pulling system. The HaTelit® roll has to lay on the sublayer, while being unrolled, and not hang in the air. To ensure a good adhesion, HaTelit® should be pressed onto the base during or after the installation, e.g. using a street broom. Laying of the asphalt (minimum 40 mm in compacted condition) should follow the installation of the HaTelit® without delay. If it rains after installation special treatment must be undertaken.

5. Joints/overlaps

In the cross direction 150 mm and in the length direction 250 mm. The end of a roll always being placed over the beginning of the next, ensuring the overlap is not lifted during the covering operation. The overlaps should be treated with a minimum of 0.15 kg/m^2 of bituminous emulsion.

6. Bends and curves

On curves HaTelit® is cut to shorter lengths and laid with overlaps. The length of the pieces depends on the radius of the curve.

7. Trafficking the grid

The grid-covered surface should not carry normal road traffic until the covering asphalt course has been placed. When moving vehicles on the HaTelit®, sharp turns, rapid changes in speed and hard braking must be avoided.

Note:

Special measures are required in case of very high ($> 30^\circ\text{C}$) or very low ($< 5^\circ\text{C}$) air temperatures and for steep gradients. Please contact HUESKER in such cases.

HaTelit® installation must follow the detailed Installation Leaflet!

HaTelit® is a registered trademark of HUESKER Synthetic GmbH.



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