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Adhesive based on silane-terminated polyether
Maximum Strength
80 Shore A

Basis: silane-terminated polyether

<table>
<thead>
<tr>
<th></th>
<th>SILLITIN V 85</th>
<th>SILFIT Z 91</th>
<th>AKTIFIT VM</th>
</tr>
</thead>
<tbody>
<tr>
<td>V44303.2</td>
<td>[23]</td>
<td>[25]</td>
<td>[27]</td>
</tr>
<tr>
<td>Geniosil STP-E 10</td>
<td>(1)</td>
<td>42.1</td>
<td>42.1</td>
</tr>
<tr>
<td>Geniosil XL 10</td>
<td>(1)</td>
<td>2.3</td>
<td>2.3</td>
</tr>
<tr>
<td>SILLITIN V 85</td>
<td>(2)</td>
<td>54.4</td>
<td>---</td>
</tr>
<tr>
<td>SILFIT Z 91</td>
<td>(2)</td>
<td>---</td>
<td>54.4</td>
</tr>
<tr>
<td>AKTIFIT VM</td>
<td>(2)</td>
<td>---</td>
<td>54.4</td>
</tr>
<tr>
<td>Geniosil GF 96</td>
<td>(1)</td>
<td>1.2</td>
<td>1.2</td>
</tr>
<tr>
<td>Total parts by weight</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Recommendation

[23] **SILLITIN V 85**
very cost-effective
high strength

[25] **SILFIT Z 91**
low moisture content
white and color-neutral
cost effective
very high strength

[27] **AKTIFIT VM**
very low moisture content and practically no moisture absorption at damp conditions
white and color-neutral
very high strength
excellent hot water resistance

Remarks

The sagging behavior of the formulation can be controlled by adding a rheological additive (e.g. HDK H 18, Wacker Chemie).

Our applications engineering advice and the information contained in this formulation are based on experience and are made to the best of our knowledge and belief, they must be regarded however as non-binding advice without guarantee. Working and employment conditions over which we have no control exclude any damage claim arising from the use of our data and recommendations. Furthermore we cannot assume any responsibility for patent infringements, which might result from the use of our information.

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Preparation

For the preparation a planetary mixer equipped with two kneading tools and scraper is suitable.
The formulation is prepared at room temperature in typically 10-15 min.

- charge polymer Geniosil STP-E 10 and drying agent Geniosil XL 10
- add rheological additive HDK H 18 while stirring
- add filler (not pre-dried) while stirring
- disperse 2 min at 600 rpm
- add adhesion promoter Geniosil GF 96
- disperse 1 min at 600 rpm under vacuum
- remove compound from the stirrer
- disperse 1 min at 600 rpm under vacuum
- degas 1 min at 200 rpm under vacuum
- fill into a cartridge

Suppliers

(1) Wacker Chemie
(3) HOFFMANN MINERAL

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Properties

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Complex viscosity DIN 54458

@ 50 % deformation Pa·s 48 48 35

@ 0.1 % deformation Pa·s 59 59 46

Loss factor tan δ @ 0.1 % deformation > 10 > 10 > 10

Hardness DIN ISO 7619-1 Shore A 75 80 80

Tensile strength DIN 53504, S2 MPa 6.9 10.2 10.0

Elongation at break DIN 53504, S2 % 125 134 117

Lap shear test, DIN EN 14293, substrate: oak

1 mm adhesive layer – „soft“ parquet adhesive
required: lap shear strength > 0.5 MPa, displacement > 2 (@ 1 mm adhesive layer)

Lap shear strength MPa 5.2 5.8 6.0

Displacement mm 1.9 2.1 2.1

Adhesion (visual assessment) + + +

approx. 0.1 mm adhesive layer – „hard“ parquet adhesive
required: lap shear strength after 3 d > 3.0 MPa, after 28 d > 3.5 MPa

Lap shear strength 3 d MPa 3.8 4.9 5.7

Lap shear strength 28 d MPa 5.0 6.0 6.6

Adhesion (visual assessment) + + +

Remarks: In the test the strength of the wood is approached, so that partly wood fiber breakouts are to be seen.

More information on this topic is available in this technical report:
Neuburg Siliceous Earth in Adhesives Based on Silane-terminated Polyether, e. g. Parquet Adhesives