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Economic parquet adhesive, meets the requirements of DIN EN 14293 for “soft” adhesives

**45 Shore A**

Basis: silane-terminated polyether

<table>
<thead>
<tr>
<th></th>
<th>SILLITIN V 85</th>
<th>SILLITIN Z 86 PURISS</th>
<th>SILFIT Z 91</th>
</tr>
</thead>
<tbody>
<tr>
<td>V44303.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geniosil STP-E 10</td>
<td>(1) 15.5</td>
<td>15.5</td>
<td>15.5</td>
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<tr>
<td>Caradol ED 56-200</td>
<td>(2) 25.0</td>
<td>25.0</td>
<td>25.0</td>
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<tr>
<td>Geniosil XL 10</td>
<td>(1) 2.0</td>
<td>2.0</td>
<td>2.0</td>
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<tr>
<td>HDK H 18</td>
<td>(1) 2.5</td>
<td>2.5</td>
<td>2.5</td>
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<tr>
<td>SILLITIN V 85</td>
<td>(3) 47.0</td>
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<td>---</td>
</tr>
<tr>
<td>SILLITIN Z 86 PURISS</td>
<td>(3) ---</td>
<td>47.0</td>
<td>---</td>
</tr>
<tr>
<td>SILFIT Z 91</td>
<td>(3) ---</td>
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<td>47.0</td>
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<tr>
<td>Geniosil GF 96</td>
<td>(1) 1.0</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td><strong>Total parts by weight</strong></td>
<td><strong>93.0</strong></td>
<td><strong>93.0</strong></td>
<td><strong>93.0</strong></td>
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</tbody>
</table>

**Recommendation**

[9] **SILLITIN V 85**
   very cost-effective
   low viscosity

[10] **SILLITIN Z 86 PURISS**
   high strength

   low moisture content
   white and color-neutral
   low viscosity

**Remarks**
The sagging behavior of the formulation can be adjusted by the rheological additive. Further cost savings are possible (without compromising strength) by increasing the filler content up to 54 parts by weight.

**Suppliers**

(1) Wacker Chemie
(2) Shell Chemicals
(3) HOFFMANN MINERAL

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, plasticizer Caradol ED 56-200 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

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<th>SILFIT Z 91</th>
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<tr>
<td>V44303.2</td>
<td>[9]</td>
<td>[10]</td>
</tr>
</tbody>
</table>

Properties

Complex viscosity DIN 54458
@ 50 % deformation Pa·s 38 48 31
@ 0.1 % deformation Pa·s 63 69 42

Hardness DIN ISO 7619-1 Shore A 44 45 50
Tensile strength DIN 53504, S2 MPa 2.7 3.7 3.2
Elongation at break DIN 53504, S2 % 159 173 156

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 2.5 2.7 2.5
Displacement mm 3.0 3.0 2.7
Adhesion (visual assessment) + + +

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