OrmoStamp® for Polymer Working Stamps

Transparent working stamps for NIL and related techniques

Process flow
1. Substrate primed with OrmoPrime®08
2. UV exposure
3. De-moulding
4. Negative replica of master stamp

Release treatment

Unique features
- Mechanically and thermally stable
- Excellent pattern replication
- Processing with standard lithography equipment
- Enhanced anti-adhesive properties for low release forces
- Highly transparent for UV and visible light

Applications
- Working stamp fabrication
- Cost efficient alternative to quartz stamps
- For UV-based and thermal imprinting

Technical data

<table>
<thead>
<tr>
<th>Thermal stability</th>
<th>up to 270 °C (short term)</th>
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<tbody>
<tr>
<td>CTE (20 – 100 °C)</td>
<td>105 ppm K⁻¹</td>
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<tr>
<td>Hardness (nanoindentation)</td>
<td>36 ± 1 MPa</td>
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<tr>
<td>Shrinkage (during curing)</td>
<td>~ 6%</td>
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<tr>
<td>Young's modulus</td>
<td>650 MPa</td>
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Next steps:

IMPRINT UV-based or/and thermal