FleXHC-UV
Enhanced Flexible Hard Coat with UV Blocking

Description
FleXHC-UV is a siloxane polymer solution designed for plastic substrates. It is a truly flexible hard coat which is highly effective at blocking ultraviolet (UV) radiation. FleXHC-UV combines excellent optical and mechanical properties with great resistance to various chemicals. FleXHC-UV is recommended for outdoor applications where UV exposure typically causes yellowing, print fade and overall material degradation.

As a film, FleXHC-UV can be applied to windows where it can block 99% of harmful UV light, making it ideal for shops, museums and other display areas.

Key features of FleXHC-UV
- Scratch resistant
- Easy-to-clean - smudge resistant
- Retention of UV blocking capability for at least 5 years in outdoor applications
- Superior durability in outdoor applications
- Excellent visual outlook
- Truly flexible and bendable
- Glass-like surface
- Provides superior abrasion, humidity and solvent resistance

How to Apply
The solution is applied as a single layer coating by using roll-to-roll (R2R) or sheet coating process followed by thermal and UV curing steps. Coating can be carried out using slot/die, gravure, reverse gravure, bar or other means of coating. After final curing, a stable coating performance achieved. R2R processing enables coating in high volumes whereas sheet processing is easily setup for small series production and R&D purposes.
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Key properties of FleXUV

<table>
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<tr>
<th>Mechanical performance</th>
<th>Result</th>
<th>Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pencil Hardness</td>
<td>750 g / 2H</td>
<td>ASTM D3363; Elcometer tester Mitsubishi pencils</td>
</tr>
<tr>
<td>Ball drop test 150 g from 40 cm</td>
<td>With coating - No scratch; without coating - heavy scratching</td>
<td></td>
</tr>
<tr>
<td>Adhesion</td>
<td>3B</td>
<td>ASTM D3359-09; Elcometer cross-hatch tester</td>
</tr>
<tr>
<td>Adhesion</td>
<td>5B</td>
<td>ASTM D3359-09; Elcometer tape test</td>
</tr>
<tr>
<td>Abrasion (steel wool)</td>
<td>500 g / 500 cycles</td>
<td>TABER® Linear Abraser (Abrader) - Model 5750</td>
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</tbody>
</table>

Optical performance

| Transmittance % (380 nm) | <3% |
| Transmittance % (400 nm) | <40% |
| Transmittance % (550 nm) | >91% |
| Lab color space a*b*     | <1% and <2% |

Environmental performance

| High temp / High humidity | PASS |
| Thermal cycle             | PASS |

* Test results reported for 1.6 µm coating thickness on MELINEX® PET

FleXHC-UV Transmission data

Solution properties, storage and handling

When purchased as a solution, the solution should be stored in a well-ventilated place. Keep containers tightly closed and protected from sources of heat and light. For working safety, consult product Material Safety Data Sheet.

Coated products

We also provide coated PET rolls with Optitune Flex-materials, see information contacts below.

The information given is based on our best knowledge at the date of issue, but carries no guarantee or acceptance of responsibility. For further data on products toxicological, ecological and safety aspects, please consult the MSDS. It is the responsibility of the user of the product to ensure to satisfaction that the product is suitable for the intended purpose and methods of use. We do not accept responsibility for any harm caused by the use of this information.

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