FleXZi
Flexible film which provides a Zero iridescence for plastic film

Description
FleXZi is a high refractive index metalloxane polymer solution designed to virtually eliminate iridescence from PET plastic substrates as well as to promote adhesion. FleXZi is available as a coated PET-film and as a liquid ready-to-coat solution. Iridescence is a rainbow effect which is observed in most polyester films when viewing from certain angles. FleXZi forms a highly transparent, optically clear and flexible coating on substrates like PET films. The coating can be used as a Primer layer prior to coating our other product FleXHC which is Optitune’s Hard Coat.

Main applications
- Touchscreens
- Cover glass replacements
- Appliance overlays, white goods industry
- Membrane switches
- Automotive films

Key features of FleXZi coating
- Iridescence removal
- Excellent visual outlook
- Good chemical resistance
- Process flexibility
- Truly flexible and bendable
- Excellent second surface printability with solvent & UV inks

Technical Background
Plastics are everywhere due to their light weight and design flexibility. However, most of the commonly used plastics tend to scratch very easily and are susceptible to degrading by various chemicals. Optitune’s flexible hard coats can vastly improve these issues observed in plastics without sacrificing their flexibility or optical properties.

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 curing. Coating can be carried out using slot/die, gravure, reverse gravure, bar or other means of coating. After final curing, a stable coating performance is achieved. R2R processing enables coating in high volumes whereas sheet processing is easily set up for small series production and R&D purposes.

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<table>
<thead>
<tr>
<th>Key properties of FleXZi Coating</th>
<th>Result</th>
<th>Standards</th>
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<tr>
<td>Mechanical performance</td>
<td>Adhesion</td>
<td>5B</td>
</tr>
<tr>
<td></td>
<td>ReCoatability</td>
<td>Excellent</td>
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<tr>
<td></td>
<td>Flexibility</td>
<td>No cracking</td>
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<tr>
<td>Optical performance</td>
<td>Visible light transmittance% (400-700nm)</td>
<td>&gt;89 (Blank PET typically ~89)</td>
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<td></td>
<td>Haze %</td>
<td>~0.16 (Blank PET typically ~0.035) Haze improvement 0.2</td>
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* Test results reported for 100 nm coating thickness on 125 µm thick PET MELINEX® ST506

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.