**Agenda**

- The substrates – natural mica vs. artificial flakes
- LUXAN and other interference pigments
- Spectacular measurable effects
Natural mica vs. glassflakes

- **natural mica**
  - thickness deviation within one flake

- **synthetic glass**
  - homogeneous thickness within one flake

- Microscopic view of uncoated substrates (mica vs. glass)

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Natural mica vs. glassflakes

- **Mica**
- **Glass**

- Microscopic view of uncoated substrates (mica vs. glass)
Natural mica vs. Glassflake

Microscopic view of TiO$_2$-coated substrates (glass vs. mica)

Natural mica vs. glassflakes

MICA | GLASS

Seite 5  
LUXAN Nov.2010  
Dr. Andrea Fetz
Glassflakes – artificial mica

Artificial Mica

Different Glassflakes – the surface

ECKART’s patented coating technology guarantees a very smooth surface of our LUXAN® products. This results in increased gloss and diminished scattering of LUXAN® pigments.
**Advantages:**

- removal of fine particles → high transparency
- narrow fraction (span) → high colour purity
- very smooth surface → maximum gloss

Different Glassflakes – the particles themselves

The narrow particle size distribution of the LUXAN® pigments guarantees a high colour purity of metal oxide coated interference products.
Non-metallic effect pigments in comparison

What do the differences in
• particle shape,
• particle size distribution and
• surface
mean
➢ on lightness
➢ on gloss
➢ on sparkling

and can the effects be measured?

Product Portfolio

<table>
<thead>
<tr>
<th>Luxan</th>
<th>Colour</th>
<th>Fineness [µm]</th>
</tr>
</thead>
<tbody>
<tr>
<td>C001</td>
<td>Silver</td>
<td>15 - 60</td>
</tr>
<tr>
<td>C261</td>
<td>Blue</td>
<td>15 - 60</td>
</tr>
<tr>
<td>D001</td>
<td>Silver</td>
<td>20 - 100</td>
</tr>
<tr>
<td>D393</td>
<td>Gold</td>
<td>20 - 100</td>
</tr>
<tr>
<td>E001</td>
<td>Silver</td>
<td>35 - 150</td>
</tr>
<tr>
<td>E221</td>
<td>Gold</td>
<td>35 - 150</td>
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<tr>
<td>E241</td>
<td>Red</td>
<td>35 - 150</td>
</tr>
<tr>
<td>CFX C001</td>
<td>Silver</td>
<td>15 - 60  coated</td>
</tr>
<tr>
<td>CFX C261</td>
<td>Blue</td>
<td>15 - 60  coated</td>
</tr>
<tr>
<td>CFX D393</td>
<td>Gold</td>
<td>20 - 100 coated</td>
</tr>
</tbody>
</table>
LUXAN shows an excellent gloss compared to other glassflakes with a similar particle size distribution. This is a result of ECKART’s patented coating technology and classification know-how.

Sparkling – Luxan in different concentrations

Sparkling intensity and sparking area on face depend only on a low level on loading.

Results help to find the ideal pigmentation rate
Sparkling – Artificial Mica in different concentrations

Sparkling intensity on face nearly independent on pigmentation rate, area increasing by number of particles

Sparkling – Luxan vs. artificial Mica

Same sparkling area achieved by different loading results in different intensities on face
Sparkling – Luxan vs. artificial Mica

Same intensity achieved by different loading results in different area.

Lightness – Luxan on black base

Low pigmentation does not influence lightness in the angles.
Sparkling – Luxan on black base

Low pigmentation has a big influence on sparkling intensity and area on face and none in the angle.

Lightness – Luxan on silver base

Only a higher pigmentation has influence on lightness on face.
Sparkling – Luxan on silver base

Some additional sparkling keeps the elegance of classical silver and makes it exciting.

Thank you for listening.