**Efka® PX 4703**

Highly efficient dispersing agent for organic pigments

**Performance Highlights**
- Strong viscosity reduction
- Excellent storage stability
- Broad compatibility towards different ink systems and pigments
- Improves color strength of organic pigments
- Excellent in stabilizing organic pigments in low viscosity systems
- Tin-free

**Characteristic Values**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Amber to brownish liquid</td>
</tr>
<tr>
<td>Amine Value</td>
<td>~56mg KOH/g</td>
</tr>
<tr>
<td>Active Ingredients</td>
<td>&gt;99%</td>
</tr>
</tbody>
</table>

Suitable for printing ink and high performance industrial coatings
Efka® PX 4703
High molecular-weight dispersing agent for high performance inkjet, flexographic ink systems and carbon blacks

Efka® PX 4703 is an 100% acrylic block copolymer active dispersing agent based on our advanced polymer technology. It is especially recommended for high performance systems such as inkjet inks (UV-curable and solvent-based) and UV-curable flexographic inks.

Efka® PX 4703 is also well suited for high performance pigments in UV oligomer and monomer formulations, which makes it a general purpose dispersant. It can be applied in both solvent-based and solvent-free industrial coatings applications.

**Flexo ink based on Paliotol® Yellow D 1155 (PY 185)**
*Pigmentation: 16%
DaoP: app. 19%

<table>
<thead>
<tr>
<th></th>
<th>Efka® PX 4703</th>
<th>Market Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viscosity (23°C, D=100sec⁻¹, mPas)</td>
<td>800</td>
<td>1,935</td>
</tr>
<tr>
<td>Shortness Ratio (23°C, Viscosity D=20sec⁻¹ / D=200sec⁻¹)</td>
<td>1.35</td>
<td>3.31</td>
</tr>
<tr>
<td>Yield Point (23°C, Pa)</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>Thixotropy (23°C, Pa•s⁻¹)</td>
<td>969</td>
<td>8,329</td>
</tr>
<tr>
<td>Ink Density</td>
<td>1.35</td>
<td>1.31</td>
</tr>
</tbody>
</table>

**Advantages with PY 185:**
- Stronger reduction of viscosity
- Significant lower yield value and thixotropy in final ink

**Flexo ink based on Paliotol Yellow D 1819 (PY 139)**
*Pigmentation: 16%

<table>
<thead>
<tr>
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<th>Efka® PX 4703</th>
<th>Market Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>DaoP</td>
<td>~6%</td>
<td>~12.5%</td>
</tr>
<tr>
<td>Viscosity (23°C, D=100sec⁻¹, mPas)</td>
<td>684</td>
<td>628</td>
</tr>
<tr>
<td>Shortness Ratio (23°C, Viscosity D=20sec⁻¹ / D=200sec⁻¹)</td>
<td>1.32</td>
<td>1.23</td>
</tr>
<tr>
<td>Yield Point (23°C, Pa)</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Thixotropy (23°C, Pa•s⁻¹)</td>
<td>540</td>
<td>19</td>
</tr>
<tr>
<td>Ink Density</td>
<td>1.22</td>
<td>1.69</td>
</tr>
</tbody>
</table>

**Advantages with PY 139:**
- Strong viscosity reduction
- Low thixotropy and yield value – excellent flow (even in pigment concentrate)
- Improved ink density

No pigment dispersion possible because mill base does not distribute properly on the roller of the three-roll mill

Please contact our technical service department for more help on formulating with products from the dispersing agents product line.

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