Paper & Board Coating Chemicals

Pilot Coating Center
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Our Pilot Coating Center underlines BASF’s ongoing commitment to the paper and board industry. The combination of a pilot plant, an extensive product portfolio, a paper-specific testing laboratory and experienced, qualified employees reinforces our market position as a leading supplier of paper and board coating chemicals.

For our customers and interested third parties
We offer our customers and interested third parties the possibility to benefit from our excellent technical infrastructure, which allows us to simulate and optimize customer processes – from paper coating to printing.

At our Pilot Coating Center, we offer all industry-standard coating application methods on our state-of-the-art paper coating machine, including roll / blade, jet / blade, roll / varibar and film press. Recently we expanded our offering by investing in a new curtain coater to strengthen our application expertise and increase our strategic focus on packaging and barrier applications.

Coating colors can be produced on site. All necessary preparation facilities are available, including options for dispersing pigments at variable shear rates and preparing starch solutions with both batch and jet cookers. A 12-roll supercalender enhances sheet smoothness and gloss development. The paper produced can be cut, packaged and shipped as required.

Paper coating laboratory
Experienced lab technicians and paper-specific test equipment enable us to perform all common tests and evaluations.

Pilot coaters
Our state-of-the-art equipment, operated by our highly-skilled team, facilitates the safe and efficient transfer of technical solutions from lab to paper mill.

Printing
Close relationships with commercial printing houses give BASF access to all relevant printing methods.

Analytics
Our broad analytical capabilities enable detailed investigation of problems and their causes.

Equipment
- Coating color preparation facilities
- 2 Pilot coaters
- Supercalender
- Rewinder
- Sheet cutter
- Paper testing equipment

Lab testing equipment
Our lab, located at the Pilot Coating Center, offers the following measurements during trials:

Coating colors
- pH value
- Brookfield low-shear viscosity
- Solid content (microwave and oven)
- ACAV high-shear viscosity
- Gradek water retention (2 μm and 5 μm membranes)

Paper tests
- Bendtsen air permeability
- PPS smoothness
- Calliper (thickness)
- Lehmann paper gloss (Tappi / DIN 45° and 75°)
- Elrepho CIE/LAB

Additionally, with our fully-equipped paper-coating laboratory, we can perform all common tests and evaluations.
# Technical details: Pilot coaters

<table>
<thead>
<tr>
<th></th>
<th>Pilot coater 1 (Small)</th>
<th>Pilot coater 2 (Big)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Machine width</strong></td>
<td>320 mm</td>
<td>800 mm</td>
</tr>
<tr>
<td><strong>Machine speed</strong></td>
<td>10 – 150 m/min</td>
<td>120 – 3300 m/min</td>
</tr>
<tr>
<td><strong>Unwind diameter</strong></td>
<td>max. 600 mm</td>
<td>max. 1500 mm</td>
</tr>
<tr>
<td><strong>Core diameter</strong></td>
<td>70, 76 and 150 mm</td>
<td>76, 100 and 150 mm</td>
</tr>
<tr>
<td><strong>Coating application</strong></td>
<td>• Roll applicator</td>
<td>• Roll applicator • Curtain coater</td>
</tr>
<tr>
<td><strong>Metering system</strong></td>
<td>• Stiff blade or bent blade • Airknife</td>
<td>• Stiff blade or bent blade</td>
</tr>
<tr>
<td></td>
<td>• Metering bar (Barflex)</td>
<td>• Metering bar (Vari-Bar)</td>
</tr>
<tr>
<td><strong>Drying system</strong></td>
<td>• 6 drying tunnels</td>
<td>• Up to 45 lines GAS IR Dryers</td>
</tr>
<tr>
<td></td>
<td>• Temperature max. 170°C</td>
<td>• 3 hot air dryer hoods</td>
</tr>
</tbody>
</table>

![Image: Curtain Coater with Voith DF](image1.png)

- **Modular Combiblade with Jetcoat**
- **Filmpress with 2 Airturns**
- **Curtain Coater with Voith DF**
- **Combiblade**
- **Unwind Station**
- **Rewind Station**

# Supercalender

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>Web width</strong></td>
<td>800 mm</td>
</tr>
<tr>
<td><strong>Number of rolls</strong></td>
<td>12 (avg. diameter 320 mm)</td>
</tr>
<tr>
<td><strong>Paper rolls</strong></td>
<td>Hardness: 84 Shore D ±1 Material: FiberunWB 1A white (cotton)</td>
</tr>
<tr>
<td><strong>Machine speed</strong></td>
<td>50 – 400 m/min</td>
</tr>
<tr>
<td><strong>Linear pressure</strong></td>
<td>110 – 300 N/mm</td>
</tr>
<tr>
<td><strong>Core diameter</strong></td>
<td>70, 76 and 150 mm</td>
</tr>
<tr>
<td><strong>Heating and cooling system</strong></td>
<td>Flexitherm (2 circuits, max. 90°C surface)</td>
</tr>
<tr>
<td><strong>Measuring systems</strong></td>
<td>Honeywell 4012 device measuring moisture; Lehmann (75°) devices measuring gloss (TS &amp; BS); infrared moisture</td>
</tr>
</tbody>
</table>

![Image: Supercalender (Bruderhaus)](image2.png)
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