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A TOTAL SOLUTIONS APPROACH

As a leader in digital print solutions for textile, film and paper applications, Lubrizol’s strength is collaborating with supply chain partners to understand unique challenges and to formulate differentiated performance. Only through a total solutions approach, including in-depth market knowledge, expertise in coating and ink layer interaction and a dedication to continued innovation and global capabilities can we deliver premium ink receptive coating technology that meets dynamic market needs. For the right balance of aesthetics, durability and quality, count on Lubrizol to help solve the challenges that work best for your projects.

PRINTRITE™ DP FOR DIGITAL PRINT

PrintRite™ DP ink receptive coating technologies offer solutions that improve the efficiency of your operations and help your customers’ products stand out.

FEATURE | BENEFIT | END RESULT
---|---|---
Print definition Color gamut | Higher quality image | Potential for increased sales
Less ink use Faster ink dry time | Lower cost | Potential for increased profit
Substrate adhesion Scratch resistance Water resistance UV & Heat resistance | Increased durability | Potential for enhanced product states
Water-borne technology Environmentally-conscious | Potential for enhanced company reputation

OPTIMAL ABSORPTION. MAXIMUM PERFORMANCE.

The key function of an ink receptive coating is to control the ink droplet spread, or dot gain, by rapidly absorbing the ink carrier fluid, thereby leaving the colorant at or near the substrate surface. This gives the best image definition and color strength, while improving the ink dry time and durability of the printed image.

With an effective ink receptive coating, your images have maximum impact and leave an impression of quality and substance.

CONSIDERATIONS WHEN SELECTING AN INK RECEPTIVE COATING

- Will the printed material be used outdoors?
  - For outdoor graphics, coatings can provide UV- and water-resistance properties to withstand exposure to the elements.
- How will the end product be used?
  - Many products that undergo harsh shipping and storage conditions can benefit from a coating with enhanced durability. For example, a coating with superior rub and scratch resistance can deliver significant protection and aesthetics to the end product.
- Cost?
  - Finding the right balance between value and performance is important. Optimising desired end-use properties with total processing costs can help avoid excessive spending when identifying the right coating.
- What type of ink is being used?
  - UV, latex, solvent-based or water-based inks can all benefit from the right coating. The unique processing and performance characteristics of each ink type should be considered.
- What printer/print speeds?
  - Printing speed is an important consideration. Specific ink receptive coatings work better with faster line speeds.
- Who will develop the formulation?
  - With a staff of coatings experts, it may be possible to formulate in-house. Otherwise, outsourcing development could be a more viable option.
**PRINTRITE™ DP READY-TO-USE PRODUCTS**

PRINTRITE™ DP ready-to-use formulations are designed to be coater-ready and work hand-in-hand with specific inks and substrates to deliver desired end-use properties.

<table>
<thead>
<tr>
<th>PRODUCT NAME</th>
<th>DESCRIPTION/ SUGGESTED USES</th>
<th>TYPE</th>
<th>TEXTILE</th>
<th>FILM</th>
<th>PAPER</th>
<th>SUGGESTED SUBSTRATES</th>
<th>SUGGESTED INK SYSTEM</th>
<th>FINISH</th>
<th>SUGGESTED APPLICATION METHOD</th>
<th>TYPICAL Viscosity (cPs)</th>
<th>TG (°C)</th>
<th>SOLIDS (%)</th>
<th>HAND</th>
<th>FLAME RETARDANT</th>
<th>FORMALDEHYDE-FREE</th>
<th>NMP-FREE*</th>
<th>APE-FREE*</th>
</tr>
</thead>
<tbody>
<tr>
<td>PrintRite™ DP 204</td>
<td>Phthalate and formaldehyde-free for resistant to DIBACu (B), cross-linkable</td>
<td>Ready-To-Use</td>
<td>●</td>
<td>Woven Polyester</td>
<td></td>
<td>Solvent, Eco-Solvent and UV Inks</td>
<td>Semi-Gloss</td>
<td>Knife</td>
<td>1,200</td>
<td>N/A</td>
<td>47</td>
<td>Soft/Elastic</td>
<td>●</td>
<td></td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>PrintRite™ DP 220</td>
<td>Gloss coat for natural and synthetic textile substrates</td>
<td>Ready-To-Use</td>
<td>●</td>
<td>Art Canvas, Woven Polyester</td>
<td></td>
<td>Inkjet Solvent, Eco-Solvent and UV Inks</td>
<td>Gloss Finish</td>
<td>Knife</td>
<td>6,500</td>
<td>-23</td>
<td>45</td>
<td>Medium</td>
<td>●</td>
<td></td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>PrintRite™ DP 225</td>
<td>Robust at high print speeds</td>
<td>Ready-To-Use</td>
<td>●</td>
<td>Art Canvas, Natural &amp; Synthetic Fibers</td>
<td></td>
<td>Inkjet Solvent, Eco-Solvent and UV Inks</td>
<td>Semi-Gloss</td>
<td>Knife</td>
<td>6,500</td>
<td>-12</td>
<td>54</td>
<td>Soft</td>
<td>●</td>
<td></td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>PrintRite™ DP 234</td>
<td>Matte coating for solvent ink types on film</td>
<td>Ready-To-Use</td>
<td>●</td>
<td>Graphic Films</td>
<td></td>
<td>Inkjet Solvent, Eco-Solvent and UV Inks</td>
<td>Matte</td>
<td>Reverse Graucure</td>
<td>550-600</td>
<td>38</td>
<td>Firm</td>
<td>●</td>
<td></td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>PrintRite™ DP 265*</td>
<td>*Glass coat for synthetic films, especially polyolefins</td>
<td>Ready-To-Use</td>
<td>●</td>
<td>Graphic Films</td>
<td></td>
<td>Inkjet Solvent, Eco-Solvent and UV Inks</td>
<td>Gloss Finish</td>
<td>Various</td>
<td>65-70</td>
<td>N/A</td>
<td>42</td>
<td>Firm</td>
<td>●</td>
<td></td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>PrintRite™ DP 287</td>
<td>Matte finish, outstanding print properties, excellent adhesion and scratch resistance on polyolefin and other film substrates without the need for a primer</td>
<td>Ready-To-Use</td>
<td>●</td>
<td>Graphic Films</td>
<td></td>
<td>Subvent and UV Inks</td>
<td>Matte</td>
<td>Various</td>
<td>85-100</td>
<td>N/A</td>
<td>40</td>
<td>Firm</td>
<td>●</td>
<td></td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>PrintRite™ DP 316*</td>
<td>Pre-treatment concentrate for pigment inks on cotton and cotton-polyester blends</td>
<td>Concentrate</td>
<td>●</td>
<td>Wide Format Textiles</td>
<td></td>
<td>Inkjet Water-Based Inks - Pigment</td>
<td>Inverable Finish</td>
<td>Padding</td>
<td>10</td>
<td>N/A</td>
<td>20</td>
<td>Soft</td>
<td>●</td>
<td></td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>PrintRite™ DP 317*</td>
<td>Pre-treatment concentrate for direct disperse printing on polyester</td>
<td>Concentrate</td>
<td>●</td>
<td>Wide Format Textiles</td>
<td></td>
<td>Inkjet Water-Based Inks - Disperse Dyeh</td>
<td>Inverable Finish</td>
<td>Padding</td>
<td>10</td>
<td>N/A</td>
<td>40</td>
<td>Soft</td>
<td>●</td>
<td></td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>PrintRite™ DP 328</td>
<td>A tough, absorbent, matte coating suitable for ink jet printing with excellent image quality, color fidelity and water resistance</td>
<td>Ready-To-Use</td>
<td>●</td>
<td>●</td>
<td>Woven Polyester</td>
<td></td>
<td>Inkjet Water-Based Inks</td>
<td>Matte</td>
<td>Various</td>
<td>750</td>
<td>N/A</td>
<td>25</td>
<td>Medium</td>
<td>●</td>
<td></td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>PrintRite™ DP 337*</td>
<td>A tough, absorbent, matte coating suitable for ink jet printing with excellent image quality, color fidelity and water resistance</td>
<td>Ready-To-Use</td>
<td>●</td>
<td>●</td>
<td>Polypropylene</td>
<td></td>
<td>Inkjet Water-Based Inks - Pigment</td>
<td>Matte</td>
<td>Various</td>
<td>750</td>
<td>N/A</td>
<td>34</td>
<td>Medium</td>
<td>●</td>
<td></td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>PrintRite™ DP 338*</td>
<td>A tough, absorbent, matte coating suitable for ink jet printing with excellent image quality, color fidelity and water resistance</td>
<td>Ready-To-Use</td>
<td>●</td>
<td>●</td>
<td>Polypropylene</td>
<td></td>
<td>Inkjet Water-Based Inks - Pigment</td>
<td>Matte</td>
<td>Various</td>
<td>750</td>
<td>N/A</td>
<td>36</td>
<td>Medium</td>
<td>●</td>
<td></td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>PrintRite™ DP 351</td>
<td>Excellent color yield, suitable for evaporation</td>
<td>Ready-To-Use</td>
<td>●</td>
<td>Woven Polyester</td>
<td></td>
<td>Inkjet Water-Based Inks</td>
<td>Gloss</td>
<td>Reverse Graucure, Roll, Roll Coater</td>
<td>850</td>
<td>N/A</td>
<td>20</td>
<td>Soft</td>
<td>●</td>
<td></td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

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Ingredients not intentionally added to this product, but may be present in trace residual amounts of components from the production process.

-Eurospace Product Ordering Code
-North American Product Ordering Code
-Designed to pass BS 5609 (label construction dependent).
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### PRINTRITE™ DP RESINS

PRINTRITE™ DP resins are designed to provide flexibility for those who prefer to formulate their own coatings.

<table>
<thead>
<tr>
<th>PRODUCT NAME</th>
<th>DESCRIPTION/ SUGGESTED USES</th>
<th>TYPE</th>
<th>TEXTILE</th>
<th>FILM</th>
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<th>SUGGESTED INK SYSTEM</th>
<th>FINISH</th>
<th>SUGGESTED APPLICATION METHOD</th>
<th>TYPICAL VISCOSITY CPS</th>
<th>TG (°C)</th>
<th>SOLIDS (%)</th>
<th>HAND</th>
<th>FLAME RETARDANT</th>
<th>FORMALDEHYDE-FREE</th>
<th>NMP-FREE</th>
<th>APE-FREE</th>
</tr>
</thead>
<tbody>
<tr>
<td>PrintRite™ DP 261</td>
<td>High clarity for transparent applications; excellent adhesion and scratch resistance on polyolefins, metallics, and other film substrates without a primer; can be formulated into a primer</td>
<td>Resin for Further Formulation</td>
<td>●</td>
<td>Graphics</td>
<td>Films</td>
<td>Injet Solvent and Eco Solvent and UV/Inks</td>
<td>Semi-Gloss</td>
<td>Rod, Bat, Gravure</td>
<td>65-70</td>
<td>0</td>
<td>44</td>
<td>Medium</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>PrintRite™ DP 279/ PrintRite™ DP 279E</td>
<td>Enhanced flame retardance, excellent ink dry times, hard coating</td>
<td>Resin for Further Formulation</td>
<td>●</td>
<td>●</td>
<td>Graphics</td>
<td>Injet Solvent, Eco Solvent and UV/Inks</td>
<td>Gloss</td>
<td>Paste, Roller, Bat, Impregnation</td>
<td>150</td>
<td>N/A</td>
<td>56.5</td>
<td>Medium to Firm</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>PrintRite™ DP 281</td>
<td>Enhanced flame retardance, excellent ink dry times, hard coating; can be repulped</td>
<td>Resin for Further Formulation</td>
<td>●</td>
<td>●</td>
<td>Graphics</td>
<td>Injet Solvent, Eco Solvent and UV/Inks</td>
<td>Gloss</td>
<td>Paste, Roller, Bat, Impregnation</td>
<td>60</td>
<td>N/A</td>
<td>57</td>
<td>Soft</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>PrintRite™ DP 282</td>
<td>Excellent print properties, high level of gloss, excellent UV and heat stability</td>
<td>Resin for Further Formulation</td>
<td>●</td>
<td>●</td>
<td>Graphics</td>
<td>Injet Solvent, Eco Solvent and UV/Inks</td>
<td>Gloss</td>
<td>Rod, Roller, Bat, Gravure, Impregnation</td>
<td>200</td>
<td>23</td>
<td>47.5-50.5</td>
<td>Firm</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>PrintRite™ DP 275</td>
<td>Non-ionic for flexibility in formulation; high moisture vapor transmission rate (HMVT), good water resistance</td>
<td>Resin for Further Formulation</td>
<td>●</td>
<td>●</td>
<td>Woven Polyester</td>
<td>Injet Water Based Inks</td>
<td>Gloss</td>
<td>Various</td>
<td>500</td>
<td>N/A</td>
<td>32</td>
<td>Soft</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>PrintRite™ DP 377</td>
<td>Waterborne polymer dispersion for use in digital print formulations used with aqueous pigment ink printing systems</td>
<td>Resin for Further Formulation</td>
<td>●</td>
<td>●</td>
<td>Woven Polyester</td>
<td>Injet Water Based Inks</td>
<td>Gloss</td>
<td>Paste, Roller, Impregnation</td>
<td>1000</td>
<td>N/A</td>
<td>42</td>
<td>Soft</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>PrintRite™ DP 278</td>
<td>Non-ionic for flexibility in formulation; high moisture vapor transmission rate (HMVT), good water resistance</td>
<td>Resin for Further Formulation</td>
<td>●</td>
<td>●</td>
<td>Woven Polyester</td>
<td>Injet Water Based Inks</td>
<td>Gloss</td>
<td>Various</td>
<td>750</td>
<td>N/A</td>
<td>35</td>
<td>Soft</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>PrintRite™ DP 460</td>
<td>Good image quality, water resistance and lightfastness, designed for use with laser toner</td>
<td>Resin for Further Formulation</td>
<td>●</td>
<td>Polyester Film, Paper</td>
<td>Dry Toner for Laser Printing</td>
<td>Gloss</td>
<td>Various</td>
<td>60</td>
<td>-11</td>
<td>50</td>
<td>Soft</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
</tr>
</tbody>
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