

Lubrizol

DIGITAL PRINT



AESTHETICS,
DURABILITY,
QUALITY



INK RECEPTIVE TECHNOLOGIES GUIDE

Market Knowledge

Textiles, Film & Paper
Digital Print / Traditional Print
Performance & Functionality
Appearance & Feel
Fiber / TPU Technology
Adhesive Polymers
Fluid Dynamics, Rheology,
Piping Design

Global Accessibility, Local Response

Global Manufacturing, Warehouses,
Sales & Lab Locations
Reliable Supply
Regionalized Formulations
Performance Optimized for Local Needs

Collaborative Relationships

Connections throughout the industry:
Substrate Manufacturers
Printer OEMs
Ink Manufacturers
Print Head Manufacturers
Coaters/Converters
Printers
Brands
University Interactions

Lubrizol Digital Print Solutions

Testing Capabilities

Standard Test Methods
Proprietary Test Development
Predictive Testing
Formulation Development
System Performance
Structure/Property Relations
Regulatory Compliance

Surface Chemistry Innovation

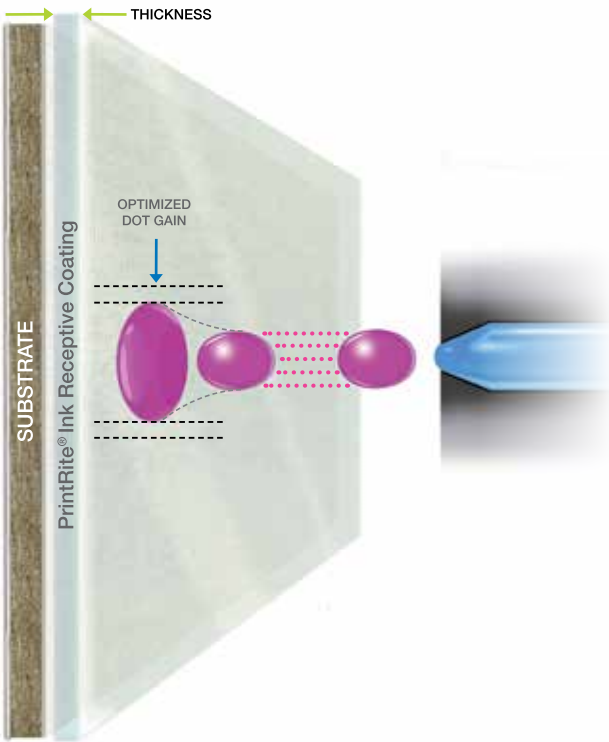
Resin Chemistry
Dispersant Technology
Component vs. Formulation
Layer Interaction – Ink Receptive & Ink
Surface Characterization
Predictive Capability

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 status
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. Optimizing 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.

PRODUCT NAME	DESCRIPTION/ SUGGESTED USES	TYPE	SUBSTRATE			SUGGESTED SUBSTRATES	SUGGESTED INK SYSTEM	FINISH
			TEXTILE	FILM	PAPER			
PrintRite™ DP 220	Gloss coat for natural and synthetic textile substrates	Ready-To-Use	●			Art Canvas; Woven Polyester	Inkjet Solvent, Eco-Solvent and UV Inks	Gloss Finish
PrintRite™ DP 225	Robust at high print speeds	Ready-To-Use	●			Art Canvas; Natural & Synthetic Fibers	Inkjet Solvent, Eco-Solvent and UV Inks	Semi-Gloss
PrintRite™ DP 234	Matte coating for solvent ink types on film	Ready-to-Use		●		Graphic Films	Inkjet Solvent, Eco-Solvent and UV Inks	Matte
PrintRite™ DP 265³ PrintRite™ DP 265E²	Gloss coat for synthetic films, especially polyolefin	Ready-To-Use		●		Graphic Films	Inkjet Solvent, Eco-Solvent and UV Inks	Gloss Finish
PrintRite™ DP 287	Matte finish, outstanding print properties, excellent adhesion and scratch resistance on polyolefin and other film substrates without the need for a primer	Ready-To-Use		●		Graphic Films	Solvent and UV inks	Matte
PrintRite™ DP 316² PrintRite™ DP 316A³	Pre-treatment concentrate for pigment inks on cotton and cotton-polyester blends	Concentrate	●			Wide Format Textiles	Inkjet Water-Based Inks- Pigment	Invisible Finish
PrintRite™ DP 317² PrintRite™ DP 317A³	Pre-treatment concentrate for direct disperse printing on polyester	Concentrate	●			Wide Format Textiles	Inkjet Water-Based Inks- Disperse Dye	Invisible Finish
PrintRite™ DP 318	Pre-treatment concentrate for pigment inks on cotton and cotton-polyester blends	Concentrate	●			Wide Format Textiles	Inkjet Water-Based Inks- Pigment	Invisible Finish
PrintRite™ DP 328	A tough absorbent matte coating suitable for ink jet printing with excellent image quality, color fidelity and water resistance	Ready-To-Use	●	●	●	Woven Polyester	Inkjet Water-Based Inks	Matte
PrintRite™ DP 338E²	A tough absorbent matte coating suitable for ink jet printing with excellent image quality, color fidelity and water resistance	Ready-To-Use	●	●	●	Polypropylene	Inkjet Water-Based Inks - Pigment and Dye	Matte
PrintRite™ DP 339	A tough absorbent matte coating suitable for ink jet printing with excellent image quality, color fidelity and water resistance	Ready-To-Use	●	●	●	Polypropylene	Inkjet Water-Based Inks-Pigment	Matte
PrintRite™ DP 351	Excellent color yield; suitable for lamination	Ready-To-Use	●		●	Woven Polyester	Inkjet Water-Based Inks	Gloss

The products in this guide represent a sample of our overall portfolio. Please contact your Lubrizol representative to discuss custom formulations if your needs are outside what these products provide.

REACH compliance is supply-specific. To obtain information on the REACH compliance status of this product, please visit Lubrizol.com/REACH, or e-mail us at REACH_MSDS_INQUIRIES@Lubrizol.com.

¹Ingredients not intentionally added to this product, but may be present in trace residual amounts of <200ppm from the production process.

²European Product Ordering Code.

³North American Product Ordering Code.

	SUGGESTED APPLICATION METHOD	TYPICAL VISCOSITY (CPS)	TG (°C)	SOLIDS (%)	HAND	FLAME RETARDANT	FORMALDEHYDE-FREE ¹	NMP-FREE ¹	APE-FREE ¹
	Knife	6,500	-23	45	Medium			●	●
	Knife	6,500	-12	54	Soft		●	●	●
	Reverse Gravure	550-600		38	Firm		●	●	●
	Various	65-70	N/A	42	Firm		●	●	●
	Various	65 - 100	N/A	40	Firm		●	●	●
	Padding	10	N/A	20	Soft		●	●	●
	Padding	10	N/A	40	Soft		●	●	●
	Padding	10	N/A	20	Soft			●	●
	Various	750	N/A	25	Medium			●	●
	Various	750	N/A	36	Medium		●	●	●
	Various	600	N/A	36	Medium		●	●	●
	Reverse Gravure, Rod, Roll Coater	650	N/A	20	Soft		●	●	●



PRINTRITE™ DP RESINS

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

PRODUCT NAME	DESCRIPTION/ SUGGESTED USES	TYPE	SUBSTRATE			SUGGESTED SUBSTRATES	SUGGESTED INK SYSTEM	FINISH
			TEXTILE	FILM	PAPER			
PrintRite™ DP 283	Waterborne acrylic polymer dispersion giving excellent print properties for solvent, eco-solvent, latex and UV inkjet printing systems. Suitable for use with high ink loadings.	Resin for Further Formulation	●	●	●	Mainly used for Paper and Film	Eco-Solvent Inks	Gloss
PrintRite™ DP 261	High clarity for transparent applications; excellent adhesion and scratch resistance on polyolefin, metallics, and other film substrates without a primer; can be formulated into a primer	Resin for Further Formulation		●		Graphics Films	Inkjet Solvent and Eco-Solvent and UV Inks	Semi-Gloss
PrintRite™ DP 279³ PrintRite™ DP 279E²	Enhanced flame retardance, excellent ink dry times, hard coating	Resin for Further Formulation	●	●	●	Graphics Films	Inkjet Solvent, Eco-Solvent and UV Inks	Gloss
PrintRite™ DP 281	Enhanced flame retardance, excellent ink dry times, hard coating; can be repulped	Resin for Further Formulation			●	Graphics Films	Inkjet Solvent, Eco-Solvent and UV Inks	Gloss
PrintRite™ DP 282	Excellent print properties, high level of gloss, excellent UV and heat stability	Resin for Further Formulation		●	●	Graphics Films	Inkjet Solvent, Eco-Solvent, Latex and UV Inks	Gloss
PrintRite™ DP 360	Used in pre-treatments for pigment inks on cotton, cotton-polyester blends and paper	Resin for Further Formulation	●		●	Inkjet Water-Based Inks-Pigment	Invisible finish	
PrintRite™ DP 375	Non-ionic for flexibility in formulation; high moisture vapor transmission rate (HMVT), good water resistance	Resin for Further Formulation	●	●	●	Woven Polyester	Inkjet Water-Based Inks	Gloss
PrintRite™ DP 377	Waterborne polymer dispersion for use in digital print formulations used with aqueous pigment inkjet printing systems	Resin for Further Formulation	●	●	●	Woven Polyester	Inkjet Water Based Inks	Gloss
PrintRite™ DP 378	Non-ionic for flexibility in formulation; high moisture vapor transmission rate (HMVT), good water resistance	Resin for Further Formulation	●	●	●	Woven Polyester	Inkjet Water Based Inks	Gloss
PrintRite™ DP 460	Good image quality, water resistance and lightfastness; designed for use with laser toner	Resin for Further Formulation		●	●	Polyester Film, Paper	Dry Toner for Laser Printing	Gloss
PrintRite™ DP 675	Waterborne cationic polymer dispersion for use in pre-treatments for aqueous pigment inkjet printing systems	Resin for Further Formulation	●	●	●	Inkjet Water-Based Inks-Pigment	Gloss	
PrintRite™ DP 676	Waterborne cationic polymer dispersion for use in pre-treatments for aqueous pigment inkjet printing systems	Resin for Further Formulation	●	●	●	Inkjet Water-Based Inks-Pigment	Gloss	

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	SUGGESTED APPLICATION METHOD	TYPICAL VISCOSITY CPS	TG (°C)	SOLIDS (%)	HAND	FLAME RETARDANT	FORMALDEHYDE-FREE ¹	NMP-FREE ¹	APE-FREE ¹
	Various from Impregnation to Knife Coating	20-300	-12	48-52	Soft		●	●	●
	Rod, Bar, Gravure	65-70	0	44	Medium		●	●	●
	Paste, Roller, Bar, Impregnation	150	Heat Sealable, 19	56.5	Medium to Firm	●	●	●	
	Paste, Roller, Bar, Impregnation	60	N/A	57	Soft		●	●	●
	Knife, Roller, Bar, Gravure, Impregnation	200	23	47.5-50.5	Firm		●	●	●
	Paste, Roller, Impregnation	20-65	N/A	30-36	Soft		●	●	●
	Various	500	N/A	32	Soft		●	●	●
	Paste, Roller, Impregnation	1000	N/A	42	Soft		●	●	●
	Various	750	N/A	35	Soft		●	●	●
	Various	60	-11	50	Soft			●	●
	Paste, Roller, Impregnation	60-250	N/A	40-44	Medium		●	●	●
	Paste, Roller, Impregnation	20	N/A	30-36	Medium		●	●	●



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WHAT WE ADD MAKES THE DIFFERENCE.™

Lubrizol is a market-driven innovator of specialty chemicals that solve today's challenges in the paints and coatings, printing and packaging, paper and textiles, plastics and composites and digital print markets. More than just a supplier, we are a collaborator with extensive experience in surface protection, dispersion, adhesion and barrier properties that enables us to enhance the performance, simplicity and sustainability benefits of our customers' products. With a commitment to collaboration, applied science and demonstrated value, our team of experts is dedicated to exceeding customer expectations for both the simplest and toughest requirements. Count on Lubrizol to make the difference.



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