



SPECIALTY PAPER, FILTRATION & NONWOVENS PRODUCT GUIDE

Lubrizon

Performance Coatings

www.lubrizon.com/coatings

INNOVATIVE TECHNOLOGIES, CUSTOMIZED SOLUTIONS

Compliance & Safety Focused

Lubrizol's extensive portfolio of polymers and custom-formulated solutions for filtration and specialty paper applications include an excellent choice of formaldehyde-free and NMP-free options within our Hycar[®], Carboset[™], Vycar[™] and Sancure[™] product lines.

Our formaldehyde-free technologies mean that formaldehyde is not known to be present in raw materials used, added as a preservative, or generated during the curing process. Ultimately, this means the formaldehyde level is below the detectable limit of 2 ppm. Similarly, products designated as NMP-free mean no N-Methyl Pyrrolidone is intentionally used in the formulation, but trace amounts may be detectable from common equipment cross-contamination sources at a level less than 0.1% and typically less than 0.05%.

Customer-Driven R&D and Custom-Tailored Solutions

Lubrizol research scientists use statistical modeling and have access to virtually thousands of monomer combinations, providing them with the right tools for continuous innovation. If the right solution for a given application is not available from Lubrizol's existing portfolio, we can modify existing technology or forge new product development to meet customer needs.



FOCUS PRODUCTS

Solsperse[™] W100

Solsperse[™] W100 is a very good, general purpose dispersant effective in dispersing both organic and inorganic materials in aqueous systems. It can be used to disperse organic colorants, fillers, flame retardants and other materials into various water-based coating systems. Solsperse W100 also has less water sensitivity than other common dispersant and surfactant technologies.

Hystretch[™] V-90

Hystretch[™] V-90 is a formaldehyde-free, APEO-free acrylic copolymer that provides excellent softness with a low degree of tack. Hystretch V-90 has outstanding mechanical stability, excellent heat and light stability and is suggested for paper, polyester and fiberglass applications where flexibility and low tack are critical parameters.

Hycar[®] 27005

Hycar[®] 27005 is a firm, self-crosslinking polymer that delivers high wet and dry stiffness. This formaldehyde-free polymer is suggested for use in fiberglass and paper applications and can be used as either a saturant or coating. Hycar 27005 provides very low Cobb Size values and outstanding wet and dry tensile properties.



Vycar[™] 460x122

Vycar[™] 460x122 is a firm, APEO-free, vinyl chloride acrylic copolymer designed for paper and nonwoven applications. Vycar 460x122 provides abrasion resistance, flame-retardance and provides resistance to water, oils and other chemicals.

Carboset[®] 3076

Carboset[®] 3076 is a formaldehyde free, aqueous thermosetting resin designed for use in paper and fiberglass applications. This carboxylated acrylic solution polymer is based on approximately 85% renewable, bio-based materials. When fully crosslinked, this material provides outstanding tensile and solvent resistance properties with no formaldehyde emissions during the cure cycle. This material is also B stage curable if it has not gone through full cure cycle.

Specialty Paper Market Segment

Lubrizol Product	Typical Physical Properties						Typical Performance Properties						
	Tg °C	Solids	pH	Viscosity	Heat Reactive	Carbox-ylated	Tensile	Solvent Resistance	Water Resistance	Tear Resistance	Internal Bond	MIT Fold	Mullen Burst
Hystretch™ V-60	-60	50.5	7.1	40	Yes	Yes			○				
Hystretch™ V-43	-43	50	8.5	200	Yes	Yes	●		○				○
Hystretch™ V-90	-43	50	4.5	150	No	Yes	●		○				○
Hystretch™ V-95	-29	46	4	25	Yes	Yes	○	○	○			●	●
Carbobond™ 26387	-23	61	5	275	Yes	Yes	○	○	●	○	●		
Hycar® 26477	-20	48	5.7	125	Yes	Yes	●	○	●	●	○	○	○
Hycar® 26083	-15	52.5	6	55	Yes	Yes	○	○	○	●	●	○	●
Hycar® 26322	-15	51	4	40	Yes	Yes	●	○	○	●	○	○	
Hycar® 26552A	-15	47	4.5	110	Yes	Yes	●	○	●				○
Hycar® 26120E	-11	50	3.8	115	Yes	No	●	●	●	○	●	●	●
Hycar® 2671	-11	53	5	170	Yes	Yes	●	●	○	○	●	●	●
Hycar® 26345	-6	50	3.6	20	Yes	Yes	●	●	○		●	●	●
Hycar® 2679	-3	49	3.7	100	Yes	Yes	●	●	○		●	●	●
Hycar® 26796	0	48	5	120	Yes	Yes	●	●			●	●	●
Hycar® FF-26916	2	50	8.5	65	Yes	Yes	●			●	●		
Carbobond™ 26373	5	58	2.6	90	Yes	Yes	○		●		●		
Vycar™ 460X46	7	49	7	35	Yes	Yes		●	○		●	○	
Hycar® 26084	8	49	6.1	100	Yes	Yes	○	●	○	●	●		
Hycar® 26349	12	49	4.6	135	Yes	No	●	●	○		●		●
Hycar® 26091	20	50	6.8	35	Yes	Yes	●	●	○	○	●		
Hycar® 26288	20	49	4	60	Yes	Yes			●				
Hycar® 26138	25	49	5.5	60	Yes	No	●	●	●		○		●
Hycar® 26523	27	42	5.2	17	No	Yes		●					
Hycar® 26869S	29	48	6	200	Yes	No	●	●	●				●
Hycar® FF-26921	29	44	8	65	Yes	Yes	●	●					
Hycar® 26348	30	48.5	6	200	Yes	No	○	●	○	○	●		
Hycar® 26907	31	48	6	100	No	Yes	●		●				
Vycar® VA-450	32	45	3	500	Yes	No	○						
Hycar® 26450	32	46	4	25	Yes	Yes	●	●	○				●
Hycar® 26391E	36	50	3.6	125	Yes	Yes	●	○	●				●
Vycar™ 460x122	40	51	5.0	50	Yes	Yes	●	○	○				●
Vycar™ 460x58	40	50	6	20	Yes	Yes	●	○	○				●
Hycar® 26599	42	45	3	20	Yes	Yes	●		●				
Hycar® 26315	55	49.5	2.1	36	Yes	Yes	●	○	●				●
Hycar® 27005	53	48	4	150	Yes	Yes	●	○	●				
Hycar® 26968	59	46.5	3	100	Yes	Yes	●	○	●			●	
Vycar™ 352	69	57	10.3	20	No	No	○	○	○		●		
Carbocure™ TSR-72	72	35	4.6	50	Yes	Yes	●	●	○				●
Vycar™ 460X104	73	51	5	20	No	Yes	●	●					
Carboset® 3076	N/A	46	3.4	700	Yes	Yes	●	●	○				
Hycar® 26459	105	45	3.5	50	Yes	Yes	○		●				

○ Good ● Very Good

Specialty Paper Market Segment

Lubrizol Product	Further Description/Other Information
Hystretch™ V-60	Controlled tack; ultra-soft, dust holding performance in filtration; non-skid coatings
Hystretch™ V-43	Very soft and elastic
Hystretch™ V-90	Very soft, formaldehyde-free ¹ , non-skid coatings
Hystretch™ V-95	Flexible binder for conformable products; elastic recovery
Carbobond™ 26387	High solids heat reactive saturant for tape and wallcoverings; very good elongation and fold endurance
Hycar® 26477	Soft binder with balance of strength and toughness properties; excellent mechanical stability; hydrophobic polymer
Hycar® 26083	White-water color; low temp flex; excellent resistance to discoloration; saturant for tape and pre-mask
Hycar® 26322	Tape saturant; high elongation, high tear and delamination
Hycar® 26552A	Formaldehyde-free ¹ , sterilizable binder; highly dispersible until cured
Hycar® 26120E	Highly redispersible; excellent stability in machine processing; balance of physical properties and heat stability; general purpose, sterilizable binder; cationic compatible
Hycar® 2671	General purpose saturant with balance of physical properties; solvent resistance; mechanical and heat stability; sterilizable binder; excellent light fastness
Hycar® 26345	Excellent cold flex, solvent resistance and heat stability
Hycar® 2679	Flexible saturant; balance of strength and toughness properties; excellent abrasion & solvent resistance; block resistance
Hycar® 26796	Paper saturant that has outstanding fold endurance properties; self-thickening
Hycar® FF-26916	Formaldehyde-free ¹ with excellent wet & dry tensile; internal bond and very scrub resistant
Carbobond™ 26373	Heat sealable; tough; high solids; very broad FDA compliance; hydrophobic; high solids
Vycar™ 460X46	Flame retardant tough polymer with good abrasion and chemical resistance
Hycar® 26084	Heat sealable; tough polymer with broad FDA approvals
Hycar® 26349	Excellent abrasion, solvent & plasticizer resistance; coatings provide toughness and block resistance; can be used as is or with filler addition
Hycar® 26091	Broad FDA compliance; oil and grease resistance
Hycar® 26288	Heat sealable; broad FDA compliance
Hycar® 26138	Tape release coatings; excellent abrasion, solvent & water resistance; coatings provide toughness and block resistance; printable; excellent re-adhesion properties
Hycar® 26523	Tape release coatings; hydrophilic; excellent oil & solvent resistance
Hycar® 26869S	Durable hydrophobic binder with excellent abrasion and solvent resistance; hot tensile strength
Hycar® FF-26921	Formaldehyde-free ¹ ; excellent for fiberglass and synthetic media, fast curing, hot tensile strength
Hycar® 26348	Tape release coatings; hydrophobic; excellent solvent resistance; excellent release & re-adhesion properties
Hycar® 26907	Firm, hydrophobic; excellent wet properties, low extractables, methanol stable
Vycar® VA-450	General purpose binder for polyester fiber, glass and paper; vinyl acetate polymer
Hycar® 26450	Broad FDA compliance, high crosslink density; oil resistant and hydrophilic
Hycar® 26391E	Pleatable; stiff; highly water resistant; very good color, filtration paper and nonwoven coatings
Vycar™ 460x122	Stiff, flame retardant polymer for paper and nonwoven applications
Vycar™ 460x58	Stiff flame retardant polymer; works well in paper with antimony oxide; filtration; durable paper coatings
Hycar® 26599	Firm, good wet strength hydrophilic polymer; suitable for food grade filtration and packaging applications
Hycar® 26315	Heat sealable; excellent strength & stiffness; broad FDA compliance, methanol stable
Hycar® 27005	Formaldehyde-free ¹ polymer; paper coating and saturant; wall paper, card stock, filtration; excellent color
Hycar® 26968	Stiff hydrophobic binder for paper and synthetics; low formaldehyde
Vycar™ 352	Tape release coatings; excellent chemical resistance; flame retarding; formaldehyde-free ² ; printable; excellent re-adhesion properties
Carbocure™ TSR-72	Stiff, thermosetting polymer with excellent oil and solvent resistance; high temperature dimensional stability; can replace melamine formaldehyde resins as an additive
Vycar™ 460X104	Flame retardant; crosslinkable; excellent color and mechanical stability; salt stable; paper and nowoven saturant; formaldehyde-free
Carboset® 3076	Thermosetting solution polymer; formaldehyde-free ¹ ; hydrophilic; firm
Hycar® 26459	Hydrophobic stiff binder; low formaldehyde

¹Limit of detectable measurement <2 ppm

Specialty Paper Additives				
Product Name	APE-Free ¹	% Active	Applications	Performance
Solthix™ A200	Yes	30	Alkali-swellable emulsion thickener for water-based coatings.	High efficiency, short rheology, develops viscosity upon addition of neutralizing base.
Solthix™ A300	Yes	18	Alkali-swellable emulsion thickener for water-based coatings.	High efficiency, imparts longer flow than Solthix™ A200 to control penetration, develops viscosity upon addition of neutralizing base.
Solthix™ A301	Yes	36	Alkali-swellable emulsion thickener for water-based coatings.	High efficiency, short rheology, develops viscosity upon addition of neutralizing base; Good suspension properties.
Solsperse™ 27000	Yes	100	Water-based dispersant for pigment dispersions; good for synthetic fibers.	Nonyl phenyl ethoxylate (NPE) free; Increase pigment concentration; Improved pigment wetting; Better tinctorial properties; Excellent storage stability.
Solsperse™ 40000	Yes	85	Water-based inorganic pigment dispersant.	Low foaming; Increase pigment concentration; Improved gloss/lower haze; No detrimental effect on water resistance; Improvements in flocculation resistance.
Solsperse™ 46000	Yes	40	Water-based dispersant for synthetic fibers (polyester and nylon).	Stable resin-free dispersions; Compatibility with a wide range of binders including: acrylic, epoxy, polyurethane, alkyd; Minimal affect on water resistance. Excellent viscosity stability.
Solsperse™ W100	Yes	40	General purpose dispersant for waterborne fillers, mineral and colorants.	Low foaming dispersant used to disperse fillers and pigments to optimal particle size. Delivers excellent water resistance.

Polyurethane Dispersions									
Lubrizon Product	Type	Typical Physical Properties							Description/Suggested Uses
		Solids	pH	Viscosity (CP)	COV (g/l)	100% Modulus (psi)	Tensile Strength (psi)	Elongation at Break %	
Aptalon™ M8100	Polyamide	37	8	300	25	1724	2303	227	Hard, abrasion resistant, heat resistant. Appropriate for decor paper, bookcover and specialty paper applications.
Permax™ 202	Polyether	40	5	500	<10	310	5000	750	Medium soft nonionic polyether, Good MVTR, NMP-free ² . Appropriate for medical and specialty applications.
Permax™ 232	Polyether	35	5	300	26	160	1300	650	Soft, flexible elastic polyether with good hydrolytic stability; high MVTR, nonionic low VOC ³ , NMP-free ² . Appropriate for medical and specialty applications.
Sancure™ 20025F	Polyester	48	8	500	27	300	4100	1000	Low VOC ³ , soft, elastic polymer; good heat stability, heat sealing, and abrasion resistance
Sancure™ 861	Polyether	40	8	650	30	650	2600	580	Soft, durable adhesives; low VOC ³ , for use in nonwoven, bookcover, decor paper and other specialty applications.
Sancure™ 2715	Polyether	38	9	750	31	1100	3300	425	Firm, hard, low VOC ³ , tough film with fast property development; medium hard aliphatic polyether urethane, NMP-free ¹

¹APE not intentionally used, but trace amounts may be detectable at low levels.
²NMP not intentionally used in the formulation and is <0.1% and typically < 0.05%.
³Defined by Lubrizon as <140 g/l as measured by EPA Method 24.

Product Selection – by Market													
Resins & Polymers	Tg °C	Abrasives	Air Filtration	Bookcover	Décor	Liquid Filtration	Gasketing	MAT/Facer	Medical	Paper Coatings	Tape Sarants	Wallpaper	Specialty
Hystretch™ V-60	-60		■							■			
Hystretch™ V-43	-43				■					■	■		■
Hystretch™ V-90	-43				■					■	■		■
Hystretch™ V-95	-29				■			■					■
Carbobond™ 26387	-23			■			■				■	■	
Hycar® 26477	-20	■		■				■				■	
Hycar® 26083	-15			■							■		
Hycar® 26322	-15										■		
Hycar® 26552A	-15							■	■				
Hycar® 26120E	-11		■	■			■		■			■	
Hycar® 2671	-11		■	■			■		■		■		
Hycar® 26345	-6	■		■									
Hycar® 2679	-3	■	■	■				■		■	■	■	
Hycar® 26796	0			■		■							
Hycar® FF26916	2		■	■					■	■		■	
Carbobond™ 26373	5				■					■			■
Vycar™ 460X46	7					■	■			■		■	
Hycar® 26084	8			■						■			
Hycar® 26349	12	■	■	■		■		■		■			
Hycar® 26091	20	■								■			
Hycar® 26288	20					■				■			
Hycar® 26138	25	■	■	■				■		■			
Hycar® 26523	27					■				■			■
Hycar® 26869S	29		■					■		■			
Hycar® FF-26921	29		■			■		■					
Hycar® 26348	30									■			
Hycar® 26907	31		■			■				■		■	
Vycar™ VA-450	32		■			■		■		■			
Hycar® 26450	32		■					■					
Hycar® 26391	36		■			■				■		■	
Vycar™ 460x58	40		■					■		■			
Vycar™ 460x122	42		■					■		■			
Hycar® 26599	42									■			
Hycar® 27005	53		■			■		■				■	
Hycar® 26315	55		■			■		■				■	
Hycar® 26968	59		■			■							
Vycar™ 352	69									■			
Carbocure™ TSR-72	72	■				■		■					■
Vycar™ 460X104	73	■	■					■					
Carboset™ 3076	N/A		■			■		■					
Hycar® 26459	105							■					■

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Lubrizol Performance Coatings is a market-driven innovator of specialty chemicals for advanced coatings, inks, and composites. Our portfolio of resin and additive technologies solve challenges across a wide range of markets and applications. Formulators choose Lubrizol to achieve unique performance, productivity, and sustainability benefits. More than just a supplier, we are a collaborator with extensive experience in surface protection, dispersion, adhesion, and barrier properties – working closely with customers to explore and develop truly differentiated solutions.



Performance Coatings

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