

RESINS FOR PAINTS & COATINGS PRODUCT GUIDE





### INDUSTRY KNOWLEDGE

Lubrizol employs experienced paint, coating, ink and plastic specialists. A constant dialogue with our customers and continuous learning enables us to understand the needs of the industry and successfully work on dynamic paint, coating and plastic needs.

### **TECHNICAL SUPPORT**

Lubrizol staffs fully-equipped labs in Europe, North America, Latin America and Asia, all dedicated to helping our customers, answering technical questions and delivering solutions.





### QUALITY PRODUCTS

From product development to production and distribution, we carefully control all processes to ensure the quality of our products and to enable customers to gain a competitive edge.

### **BEST SOLUTION**

Lubrizol specializes in providing the right product to meet specific coating needs.





### ON TIME DELIVERY

Product availability and on-time delivery are vital to any business. To answer these needs, Lubrizol has a worldwide network of distribution points. This comprehensive network provides immediate access to customer service.

#### Visit us at www.lubrizol.com/coatings

#### **WOOD COATINGS**

Lubrizol has the key ingredients to improve many wood coating formulations. With a wide variety of resin technologies for residential and commercial applications, we help formulators meet performance and aesthetic preferences while maintaining regulatory requirements and sustainability targets.



#### **BUILDING & CONSTRUCTION COATINGS**



Lubrizol specialty chemical solutions deliver value for coatings manufacturers, architects, builders, and building owners. Our advanced portfolio of resins and polymers are commonly used in masonry coating, concrete coating, elastomeric coating, liquid roof coating, mortar modification and other building and construction coating products to beautify and strengthen a diverse range of interior and exterior surfaces. With advanced Lubrizol technologies, formulators can improve coating performance and production efficiency. Contractors and architects can shorten construction schedules and reduce labor costs. Property owners will enjoy long-lasting, visually appealing surfaces.

#### **INDUSTRIAL COATINGS**

Lubrizol innovates technologies for a variety of industrial metal coating applications. Our resin technologies enhance key performance attributes, imparting superior corrosion resistance, scratch and mar resistance and improved overall performance. Lubrizol offers primer, topcoat and direct-to-metal resin technologies that offer a superior balance of durability and gloss.



### TRANSPORTATION COATINGS



Lubrizol innovates cutting-edge chemical solutions for automotive OEM and vehicle refinish applications, such as interior, exterior and underbody coating technologies. We address the challenges that face coating manufacturers, automotive manufacturers and consumers, providing customized solutions and value-added, long-lasting coatings. Our technologies help formulators meet the functionality needs of the most demanding transportation coatings.

## ACRYLIC TECHNOLOGIES FOR WOOD COATINGS

					APP	LICATIONS			MEET	% WEIGHT	% VOLUME		VISCOSITY	SPECIFIC
PRODUCT	POLYMER TYPE	KEY BENEFITS	FLOORS	CABINETS	FURNITURE	WINDOWS & DOORS	INTERIOR TRIMS AND PRIMERS	STAINS	(°C)	SOLIDS	SOLIDS	pН	(CPS)	GRAVITY
Carboset® 2951	Self-crosslinking Acrylic Copolymer Emulsion	Low VOC exceptional chemical & block resistance, early hardness & external durability also suitable for use in eco-label paints & coatings.			Х	X	X	Х	<b>&lt;</b> 5	44	43	8	30 - 250	1.01
Carboset® 2968	Self-crosslinking Acrylic Emulsion	Early hardness, sandability with superior chemical resistance; blend vehicle with polyurethanes	X	Х	Х				57	41.5	39	7.5	10 - 300	1.04
Carboset® 7722	Acrylic Emulsion	Low VOC, adhesion, stain blocking, & scrub resistance in all sheens					X		<b>&lt;</b> 5	50	48	8.4	40 - 800	1.06
Carboset® 7733	Acrylic Emulsion	Low VOC, exterior durability & scrub resistance in high gloss formulations					X		21	50	46	8.4	40 - 800	1.06
Carboset® AMO 400	Acrylic Oil Modified Copolymer	Renewable, low VOC, high melt temperature for high speed sanding, improved toughness, black heel mark & abrasion resistance; blend vehicle with other resins	X	Χ	X	X		Χ	12	40	37.5	7.5	₹500	1.06
Carboset® CR 726*	Self-crosslinking Acrylic Emulsion	Low VOC & excellent hardness	X	Χ	X	X			35	42	41	8	50 - 600	1.05
Carboset® CR 7181	Self-crosslinking Acrylic Emulsion	Hard, excellent chemical resistance, air & forced dry compatible; adhesion to wood, metal, & plastic		Χ	X				90	42	39.1	9	50	1.06
Carboset® 3142	Styrene Acrylic Emulsion	Low VOC, high gloss, exceptional block & chemical resistance, multi-substrate adhesion, exterior durability; alkyd-like application			X	X	X		7	41	40	7	10-500	1.02
Carboset® CA 7147	Acrylic Emulsion	High gloss, fine particle size, fast drying, non-yellowing, water, weather, & dirt pick-up resistant					X	Х	6	46	45	8.5	300 - 1200	1.01

<sup>\*</sup>Produced in multiple facilities; product name may vary

## POLYURETHANE DISPERSION TECHNOLOGIES FOR WOOD COATINGS

				APPLIC	ATIONS			% WEIGHT	% VOLUME		VISCOSITY	SPECIFIC
PRODUCT	POLYMER TYPE	KEY BENEFITS	FLOORS	CABINETS	FURNITURE	WINDOWS & DOORS	MFFT (°C)	SOLIDS	SOLIDS	рН	(CPS)	GRAVITY
Aptalon™ W8o6o	Self-crosslinking Polyurethane Dispersion - Polyamide	Renewable, superior chemical resistance, balance of hardness, abrasion & scratch resistance	Х		Х		59	36	33	7.5	₹500	1.05
Aptalon™ W8o62	Self-crosslinking Polyurethane Dispersion - Polyamide	Lower VOC, improved scuff & black heel mark resistance	X	X	X		31	36	33	7.5	<b>&lt;</b> 500	1.04
Aptalon™ W8o3o	Self-Matting Polyurethane Dispersion - Polyamide	Low gloss without matting agents & excellent abrasion resistance	X	X	X		61	35	34.2	7.5	<b>&lt;</b> 500	1.04
Aptalon™ W8o34	Self-Matting Polyurethane Dispersion - Polyamide	Low VOC, low gloss without matting agents & excellent abrasion resistance	X	X	X		5	35	33	8	<b>&lt;</b> 500	1.03
Aptalon™ 8080HS	High-solids Polyurethane Dispersion - Polyamide	Renewable, rapid hardness, excellent chemical, mar & scuff resistance, crosslinkable	X		Х	X	45	50	50	7.5	₹500	1.05
Sancure <sup>™</sup> 970	Polyurethane Dispersion - Polyester	Adhesion to multiple substrates, excellent hardness & chemical resistance, crosslinkable	Х		Х	Х	50	42	41	8	<b>&lt;</b> 500	1.06
Turboset™ 1000	Self-crosslinking Polyurethane Hybrid Dispersion	Rapid hardness, excellent chemical, mar & scuff resistance, crosslinkable	Х	X	X		23	39	36	7.5	<b>&lt;</b> 500	1.05
Turboset <sup>™</sup> 2027	Self-crosslinking Polyurethane Dispersion - Polyester	Excellent chemical & stain resistance	Х		Х		22.5	40	35	8	<b>&lt;</b> 500	1.07
Turboset™ Ultra Eco	Self-crosslinking Polyurethane Dispersion - Polyester	Low VOC, superior black heel mark resistance, excellent hardness & chemical resistance	Х		Х		<b>&lt;</b> 5	36	35	7.5	<b>400</b>	1.04
Sancure <sup>™</sup> AU 4050	Self-crosslinking Acrylic/Polyester Polyurethane Hybrid Dispersion	Non-yellowing, excellent chemical, abrasion & scuff resistance	Х		Х	Х	15	36	32	8	<b>&lt;125</b>	1.05



# ACRYLIC TECHNOLOGIES FOR BUILDING & CONSTRUCTION COATINGS

PRODUCT	POLYMER TYPE	KEY BENEFITS	LIQU ROC	D VERTICAL	CATIONS HORZONTA MASONRY		MFFT (°C)	TG (°C)	% WEIGHT SOLIDS	% VOLUME SOLIDS	рН	VISCOSITY (CPS)	SPECIFIC GRAVITY
Carboset® 2951	Self-crosslinking Acrylic Copolymer Emulsion	Low VOC, Exceptional chemical & block resistance & early hardness		X	X		<b>&lt;</b> 5		44	43	8	30 - 250	1.01
Carboset® 2968	Self-crosslinking Acrylic Emulsion	Robust water resistance, high hardness, outstanding gloss/wet look, excellent chemical & mar resistance			Х		57		41.5	39	7.5	10 - 300	1.04
Carboset® 7722	Acrylic Emulsion	Low VOC, good scrub resistance, early block & print resistance, pigmentable		X	X		<b>&lt;</b> 5		50	48	8.4	40 - 800	1.06
Carboset® 7733	Acrylic Emulsion	Low VOC, high gloss, inherent stain removal & washability, early block resistance & great flow & leveling		Х	Х		21		50	46	8.4	40 - 800	1.06
Carboset® AE 960*	Acrylic Emulsion	Low VOC, excellent dirt pick-up, balance of elongation & tensile strength, outstanding water resistance, weathering & crack bridging also suitable for ASTM D6083 compliant paints & coatings.	Х	Х			<b>&lt;</b> 5	-25	56	55	8.2	₹2000	1.02
Carboset® CA 7147	Acrylic Emulsion	Low VOC, small particle size, alkali resistance, high water vapor permeability & low CO2 permeability		Х	X		6		47	46	8.8	300-1200	1.01
Carboset® CA 7107	Acrylic Emulsion	Low VOC, excellent water, alkali & weathering resistance	X	X			0	8	50	47	8.5	9000	1.05
Carboset® CA 7100RC	Styrene Acrylic Emulsion	Low VOC, balance of mechanical properties, excellent adhesion to most masonry substrates at high PVC loading, water & alkali resistance	Х	Х			0	-10	50	49	8.3	8.000-11000	1.01
Carboset® CA 716oRC	Styrene Acrylic Emulsion	Low VOC, alkali resistant, excellent adhesion to most masonry substrates at high PVC loading		Х	Х		21	18	50	49	8.3	2500-5000	1.01
Carboset® CA 7120RC	Styrene Acrylic Emulsion	Low VOC, excellent water, alkali & dirt pick-up resistance, balance of elasticity & tensile strength. Great adhesion to most masonry substrates including terracotta tiles.	Х	X			0	0	48	47	8.3	8000-12500	1.01
Carboset® CR 7185	Acrylic Emulsion	Excellent water retention, concrete curing properties & high alkali resistance			X		44		42	41	8.5	10-300	1.03
Carboset® CA 600*	Acrylic Emulsion	Early water resistance, fast drying, great substrate penetration, alkaline, blushing, efflorescence, chemical resistance, non-yellowing & exterior exposure			Х		35	55	42	41	8.3	41	1.06
Carboset® CA 1009*	Acrylic-Polyurethane Polymer	Low VOC, minimal water uptake & capillary absorption, superior water & bituman bleed through resistance, excellent exterior durability & heat stable.	Х	Х			2	5	55	53	8	150 - 800	1.1
Carboset® RPT 2000A	Acrylic Copolymer Emulsion	Low VOC, superior adhesion to wide range of substrates & great bitumen bleed through resistance	Х				<b>&lt;</b> 5	10	55	53	8.5	100 - 15000	1.04
Carboset® RPT 3030	Acrylic Emulsion	Low VOC, excellent low temperature elasticity, ASTM D6o83 compliance capable, & adhesion to EPDM	Х	Х			0	-35	55	53	8	200-1200	1.06
Carboset® SA 850*	Acrylic Copolymer Emulsion	Low VOC, robust crack-bridging performance & weatherability, resistant to chalking, fading, & water penetration, excellent dirt pick-up, efflorescence, alkali properties	Х	X			<b>(</b> 5	10	55	53	8.5	100 - 15000	1.04
Carboset® 3142	Styrene Acrylic Emulsion	Low VOC, high gloss coatings, exterior durability, good block & stain resistance, multi-substrate adhesion; alkyd-like application		Х			7		41	40	7	10-500	1.02
Carboset® X-Flex 100	High Solids Acrylic Emulsion	Low VOC, highly elastic cement compatible binder, excellent alkali & water resistance				Х		-40	60	60	8.5	100-1000	1.01
Carboset® XM200	Acrylic Emulsion	Low VOC, cement compatible binder, enhances adhesion & mechanical properties of cementitious formulations				Х	0	19	48.5	48	8.5	25	1.01
Carboset® PL 958*	Acrylic Emulsion	Low VOC, high tensile strength for clear & pigmented temporary protection & excellent chemical resistance. Peelable coatings.					0		46.8	43	8	40-125	1.07
Carbotac® 1811	Acrylic Emulsion	Low VOC, long open time polymer for bonding bridge masonry applications				X	o	-43	55	53	3.5	120	1.03

<sup>\*</sup>Produced in multiple facilities; product name may vary

### POLYURETHANE DISPERSION TECHNOLOGIES FOR BUILDING & CONSTRUCTION COATINGS

				APPLICATIONS			% WEIGHT	% VOLUME		VISCOSITY	SPECIFIC
PRODUCT	POLYMER TYPE	KEY BENEFITS	LIQUID ROOF	VERTICAL MASONRY	HORZONTAL MASONRY	MFFT (°C)	SOLIDS	SOLIDS	рН	(CPS)	GRAVITY
Aptalon™ 808oHS	High-solids Polyurethane Dispersion - Polyamide	Renewable, rapid hardness, excellent chemical, mar & scuff resistance			X	45	50	50	7.5	<b>&lt;</b> 500	1.05
Aptalon™ W8o34	Self-Matting Polyurethane Dispersion - Polyamide	Low VOC, low gloss without matting agents & excellent abrasion resistance			X	5	35	33	8	<b>&lt;</b> 500	1.03
Aptalon™ W8o6o	Self-crosslinking Polyurethane Dispersion - Polyamide	Renewable, superior chemical resistance, balance of hardness & abrasion resistance & scratch resistance			X	59	36	33	7.5	<b>&lt;</b> 500	1.05
Aptalon™ W8o62	Self-crosslinking Polyurethane Dispersion - Polyamide	Lower VOC, improved scuff & black heel mark resistance			X	31	36	33	7.5	<b>&lt;</b> 500	1.04
Aptalon™ M8100	Self-crosslinking Polyurethane Dispersion - Polyamide	Balance of hardness & abrasion resistance, superior chemical & hydrolytic resistance			X	58	37	34	7.5	<b>&lt;</b> 500	1.04
Sancure <sup>™</sup> 20041	Polyurethane Dispersion - Polyester	Cosolvent-free, excellent hardness, compatible with acrylics; crosslinkable	X		X	22	34	30	8	150	1.05
Sancure <sup>™</sup> 861	Polyurethane Dispersion - Polyether	Low VOC, cosolvent-free, hydrolytic & aging stability, alkali, abrasion & chemical resistance	X	X		<b>&lt;</b> 5	40	39	7.5	<b>190</b>	1.02
Sancure <sup>™</sup> 20025F	Aliphatic Polyurethane Dispersion - Polyester	Low VOC, provides enhanced durability when blended with acrylics	X	X		<b>&lt;</b> 5	48	45	8	<b>&lt;</b> 500	1.05
Sancure <sup>™</sup> 970	High Solids Polyurethane Dispersion - Polyester	Chemical & abrasion resistance; crosslinkable			X	50	42	41	8	<b>&lt;</b> 500	1.06
Sancure <sup>™</sup> AU4050	Self-crosslinking Acrylic/ Polyester Polyurethane Hybrid Dispersion	Non-yellowing, excellent chemical, abrasion & scuff resistance			X	15	36	32	8	<b>&lt;125</b>	1.05
Turboset™ Ultra Eco	Self-crosslinking Polyurethane Dispersion - Polyether	Low VOC, superior black heel mark resistance, excellent hardness & chemical resistance			Х	<b>&lt;</b> 5	36	35	7.5	<b>&lt;400</b>	1.04
Turboset <sup>™</sup> 2027	Self-crosslinking Polyurethane Dispersion - Polyester	Cosolvent-free, excellent chemical resistance & durability			Х	22.5	40	35	8.7	<b>&lt;</b> 500	1.07

## SOLUTION ACRYLIC TECHNOLOGIES FOR BUILDING & CONSTRUCTION COATINGS

				APPLICATIONS	;		ACID	TG	% WEIGHT	VISCOSITY	SPECIFIC
PRODUCT	POLYMER TYPE	KEY BENEFITS	LIQUID ROOF	VERTICAL MASONRY	HORZONTAL MASONRY	SOLVENT	NUMBER	(°C)	SOLIDS	(CPS)	GRAVITY
Doresco® L91-1X	Solvent-borne Acrylic Polymer in Xylene	Hard solvent-borne acrylic designed for general purpose concrete coating		X		Xylene	<b>&lt;</b> 10	57	49	5000 - 8000	0.985
Doresco® M6A	Solvent-borne Thermoplastic Acrylic in Xylene	Exterior durability & adhesion to multiple substrates	X	X	X	Xylene	<b>&lt;10</b>	61	50	5.7	0.98
Doresco® T6T	Solvent-borne Thermoplastic Acrylic in Toluene	Quick drying road-markings for high traffic areas			X	Toluene	<b>&lt;10</b>	61	50	3700	0.97
Doresco® T5T6o	Solvent-borne Thermoplastic Acrylic in Toluene	Quick drying road-marking for medium traffic areas; internally plasticized version of Doresco T6T			Х	Toluene	₹10	43	60	7000	1.00



## ACRYLIC & PVDC TECHNOLOGIES FOR INDUSTRIAL COATINGS

				APPLIC	CATIONS				% WEIGHT	% VOLUME		(CPS) GR	SPECIFIC
PRODUCT	POLYMER TYPE	KEY BENEFITS	DTM	PRIMER	TOPCOAT	TEMPORARY COATING	MFFT (°C)	TG (°C)	SOLIDS	SOLIDS	рН		GRAVITY
Carboset® 514*	Alkali Strippable Acrylic Dispersion	High gloss, fast drying, excellent hardness & adhesion				X	10	28	40	38	6.6	100 - 500	1.05
Carboset® 560	Alkali Strippable Acrylic Dispersion	Water & UV resistance, excellent mechanical stability & adhesion				Х	17	47	27	24.5	7.6	₹200	1.03
Carboset® 441	Peelable Acrylic Emulsion	Balance of adhesion & cohesion for strippability, excellent toughness & durability				Х	18	23	45	42	8	100	1.04
Carboset® CR 3090	Stryrene Acrylic Emulsion	Great corrosion & weathering resistance; adhesion to CRS, Phasphated & galvanized steel	Х	Х	Х		33	37	45	42	8.5	<b>&lt;</b> 500	1.05
Carboset® CR 3100	Stryrene Acrylic Emulsion	Low VOC, great corrosion & weathering resistance; adhesion to CRS, HRS & galvanized steel	Х	Х	Х		9	28	43.5	41	8	<b>&lt;</b> 500	1.05
Carboset® CR 7185	Acrylic Emulsion	Fast dry, resistant to gas, solvents, impact, water & humidity; adhesion to Phasphated & stainless steel	Х	Х	Х		40		42	40	8.3	5-120	1.03
Carboset® CR 765*	Stryrene Acrylic Emulsion	Balance of performance properties, high gloss, water & humidity resistance, reactive pigment stability; adhesion to CRS, Phasphated, aluminum, copper, stainless steel	X	Х	Х		34		41	40.7	8	10 - 150	1.03
Carboset® PL 3127	Peelable Acrylic Copolymer Emulsion	Low VOC, fast drying, & corrosion resistance				Х	5	15	44	42.8	7.8	150	1.05
Carboset® PL 958*	Peelable Acrylic Copolymer Emulsion	Low VOC , high elasticity, solvent & breaking resistance				Х	۲3		46	43.4	7	40 - 125	1.07
Carboset® CR 7162E	Styrene Acrylic Emulsion	Air & force dry, gloss & semi-gloss, corrosion & humidity resistance; adhesion to plastic, metal & masonry	Х	Х	Х		23		41.5	39	8	10-100	1.03
Carboset® 3142	Styrene Acrylic Emulsion	Gloss & semi-gloss, wet adhesion, block & sag resistance, interior & exterior architectural; alkyd like application	Х	Х	Х		7		41.5	40	8.5	10-500	1.02
Permax <sup>™</sup> 805*	PVDC Emulsion	Low VOC, humidity resistant, increased shelf-life & in-can stability; adhesion to aluminum, CRS, Bonderite 1000, ground & galvanized steel	Х	Х			13.5		60	50.4	1.0 - 2.2	85	1.28
Permax™ 8o5B	PVDC Emulsion	Low VOC, small particle size, low MVTR, excellent corrosion resistance & durability, adhesion to aluminum, CRS, ground & galvanized steel	X	X			13.5		60	50	1.8	85	1.28

<sup>\*</sup>Produced in multiple facilities; product name may vary

### POLYURETHANE TECHNOLOGIES FOR INDUSTRIAL COATINGS

PRODUCT	POLYMER TYPE	MEN DENEGITO		APPLICATIONS	;	MFFT (°C)	% WEIGHT	% VOLUME	На	VISCOSITY	SPECIFIC
PRODUCT	POLIMER TIPE	KEY BENEFITS	DTM	PRIMER	TOPCOAT	MIFFI (°C)	SOLIDS	SOLIDS	рп	(CPS)	GRAVITY
Aptalon™ M8100	Self-crosslinking Polyurethane Dispersion - Polyamide	Balance of hardness & abrasion resistance, superior chemical & hydrolytic resistance			Х	58	37	34	8	<b>&lt;</b> 500	1.04
Aptalon™ M8120	Self-crosslinking Polyurethane Dispersion - Polyamide	Excellent adhesion to metal surfaces, extraordinary hardness and durability in a 1k WB DTM, outstanding chemical & corrosion resistance.	X	X	X	50	37	34	8.5	<b>&lt;</b> 500	1.09
Aptalon™ W8o3o	Self-Matting Polyurethane Dispersion - Polyamide	Low gloss without matting agents & excellent abrasion resistance			Х	61	35	34.2	7.5	<b>&lt;</b> 500	1.04
Aptalon™ W8o34	Self-Matting Polyurethane Dispersion - Polyamide	Low VOC, low gloss without matting agents & excellent abrasion resistance			Х	5	35	33	8	<b>&lt;</b> 500	1.03
Sancure <sup>™</sup> 825	Aliphatic Polyurethane Dispersion - Polyester	High gloss, UV stable, resistant to water, alcohol, alkali, & abrasion; adhesion to ferrous & non-ferrous metals	X	Х	Х	<b>&lt;</b> 5	34	31	8.5	<b>42</b> 5	1.04
Sancure <sup>™</sup> 970	Polyurethane Composite - Polyester	Great chemical, abrasion, & alkali resistance, crosslinkable; adhesion to ferrous & non-ferrous metals	X	X	Х	50	42	41	8	₹500	1.06

<sup>\*</sup>Produced in multiple facilities; product name may vary





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## SOLUTION ACRYLIC TECHNOLOGIES FOR INDUSTRIAL COATINGS

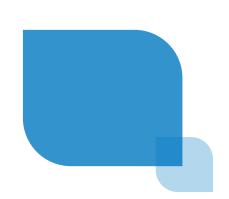
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PRODUCT	POLYMER TYPE	KEY BENEFITS	DTM	PRIMER	TOPCOAT	SOLVENT	NUMBER	(°C)	SOLIDS	(CPS)	GRAVITY
Doresco® AC4-74	Solvent-borne Thermoplastic Acrylic	Adhesion promoted resin, tough & flexible, exterior durability, block resistance & bake system capable; adhesion to aluminum, primed & unprimed steel	X			Toluene	N/A	50	45	8000	0.96
Doresco® OH6o	Hydroxylated Acrylic (3% OH Solids)	High gloss, balance of hardness, flexibility & impact resistance; adhesion to galvanized steel; crosslinkable with isocyanates	X	X	X	MPA/Xylene (1:1)	<b>&lt;10</b>	14	50	1000-2500	0.96
Doresco® OH65	Hydroxylated Acrylic (2% OH Solids)	High gloss, balance of hardness, flexibility & impact resistance; adhesion to metal surfaces; crosslinkable with isocyanates	X	X	X	Xylene	<b>&lt;11</b>	27	50	1000-3000	0.96
Doresco® OH38	Hydroxylated Acrylics (4% OH Solids)	Excellent gloss & hardness, quick drying, chemical, UV & weather resistance; adhesion to wood, plastics, & metal	X	X	Х	MPA/Xylene (1:1)	<b>&lt;12</b>	50	42	300-700	0.98
Doresco® M6A	High Solids Solvent-borne Thermoplastic Acrylic	Non-yellowing, quick dry, excellent chemical resistance & weathering; adhesion to metal surfaces	X	X	Х	Xylene	<10	61	50	800-2500	1.00
Doresco® Cl7208	Solvent-borne Thermoplastic Acrylic	Adhesion to galvanized steel, multipurpose primers, gloss enamels	X	X	X	Xylene	<b>&lt;10</b>	39	49	250-1000	0.97

### TRANSPORTATION COATING TECHNOLOGIES

### RESIN TECHNOLOGIES FOR TRANSPORTATION COATINGS

PRODUCT	POLYMER TYPE	KEY BENEFITS	APPLIC	CATIONS	MFFT (°C)	% WEIGHT SOLIDS	% VOLUME SOLIDS	рН	VISCOSITY (CPS)	SPECIFIC GRAVITY
ACRYLIC TECHNOLO	GIES		PRIMER	TOPCOAT						
Carboset® CR 7181	Self-Crosslinking Acrylic Emulsion	High gloss, excellent UV resistance; adhesion to a variety of plastics including ABS, Lexan, Melamine, & Noryl	X	Х	90	42	39	9	6 - 50	1.06
Carboset® PC 27	Self-Crosslinking Acrylic Emulsion	Superior chemical resistance to sunscreens, insect repellents, surface cleaners & protectants, excellent scratch, abrasion & print resistance; adhesion to a to a variety of plastics including ABS, Lexan, Noryl	Х	Х	90	42	40	8.5	50 - 200	1.05
POLYURETHANE TEC	HNOLOGIES		PRIMER	TOPCOAT						
Sancure <sup>™</sup> 20025F	Aliphatic Polyurethane Dispersion - Polyester	Low VOC, durable, elastic, crosslinkable; adhesion to nylon & polyester, heat sealable		Х	<b>&lt;</b> 5	48	45	8	<b>&lt;</b> 500	1.05
Sancure <sup>™</sup> PC 55	Aliphatic Polyurethane Dispersion - Polyester/Polycarbonate	Low VOC, balance of mar resistance with soft tactile feel, superior chemical resistance to sunscreens, insect repellents, surface cleaners & protectants, & excellent UV resistance		Х	<b>&lt;</b> 5	42	39	7	<b>&lt;</b> 500	1.05
Aptalon™ M8100	Self-crosslinking Polyurethane Dispersion - Polyamide	Balance of hardness & abrasion resistance, superior chemical & hydrolytic resistance		Х	58	37	34	7.5	<b>&lt;</b> 500	1.04





### ACRYLIC/PVDC TECHNOLOGIES

PRODUCT	POLYMER TYPE	% WEIGHT SOLIDS	MFFT (ºC)	APEO- FREE <sup>1</sup>	FORMALDEHYDE- FREE <sup>1</sup>	AVAILABILITY <sup>2</sup>
ACRYLIC TECHNOLOGI	ES					
Carboset® 2951	Self-crosslinking Acrylic Copolymer Emulsion	44	<b>&lt;</b> 5	Yes	Yes	NA   EMEAI
Carboset® 2968	Self-crosslinking Acrylic Emulsion	41.5	57	Yes	Yes	NA   EMEAI
Carboset® 3142	Styrene Acrylic Emulsion	41	7	Yes	Yes	EMEAI
Carboset® 441	Peelable Acrylic Emulsion	45	18	Yes	No	NA
Carboset® 514³	Alkali Strippable Acrylic Emulsion	40	10	Yes	Yes	NA   EMEAI
Carboset® 560	Alkali Strippable Acrylic Emulsion	27	17	Yes	Yes	NA   EMEAI
Carboset® 7722	Acrylic Emulsion	50	<b>&lt;</b> 5	Yes	No	NA   EMEAI
Carboset® 7733	Acrylic Emulsion	50	21	Yes	No	NA   EMEAI
Carboset® AE 960³	Acrylic Emulsion	56	<b>&lt;</b> 5	Yes	Yes	NA   EMEAI
Carboset® AMO 400	Acrylic Oil Modified Copolymer	40	12	Yes	Yes	NA   EMEAI
Carboset® CA 1009³	Acrylic-Polyurethane Polymer	55	2	Yes	Yes	NA   EMEAI
Carboset® CA 600³	Acrylic Emulsion	42	35	Yes	Yes	NA   EMEAI
Carboset® CA 7100RC	Styrene Acrylic Emulsion	48	0	Yes	Yes	EMEAI
Carboset® CA 7107	Acrylic Emulsion	50	0	Yes	No	EMEAI
Carboset® CA 7120RC	Styrene Acrylic Emulsion	48	0	Yes	Yes	NA
Carboset® CA 7147	Acrylic Emulsion	47	6	Yes	Yes	EMEAI
Carboset® CA 7160RC	Styrene Acrylic Emulsion	50	21	Yes	Yes	EMEAI
Carboset® CR 3090	Styrene Acrylic Emulsion	45	33	Yes	Yes	NA
Carboset® CR 3100	Styrene Acrylic Emulsion	43.5	9	Yes	Yes	NA
Carboset® CR 7162E	Styrene Acrylic Emulsion	41.5	23	Yes	Yes	EMEAI
Carboset® CR 7181	Self-crosslinking Acrylic Emulsion	42	90	Yes	Yes	NA   EMEAI
Carboset® CR 7185	Acrylic Emulsion	42	40	Yes	Yes	NA   EMEAI
Carboset® CR 7263	Self-crosslinking Acrylic Emulsion	42	35	Yes	Yes	NA   EMEAI
Carboset® CR 765³	Styrene Acrylic Emulsion	41	34	Yes	Yes	NA   EMEAI
Carboset® CR 795	Acrylic Emulsion	45	24	Yes	Yes	NA   EMEAI
Carboset® PC 27	Self-crosslinking Acrylic Polymer	42	90	Yes	Yes	NA   EMEAI
Carboset® PL 3127	Peelable Acrylic Copolymer Emulsion	44	5	Yes	Yes	NA   EMEAI
Carboset® PL 9583	Peelable Acrylic Copolymer Emulsion	46	<b>4</b> 3	Yes	No	NA   EMEAI
Carboset® RPT 2000³	Acrylic Copolymer Emulsion	55	<b>&lt;</b> 5	No	Yes	NA   EMEAI
Carboset® RPT 3030	Acrylic Emulsion	55	0	Yes	No	NA   EMEAI
Carboset® SA 850³	Acrylic Copolymer Emulsion	55	<b>&lt;</b> 5	No	Yes	NA   EMEAI
Carboset® X-Flex 100	High Solids Acrylic Emulsion	60	0	-	No	EMEAI
Carboset® XM200	Acrylic Emulsion	48.5	Tg = 19	Yes	No	NA   EMEAI
Carbotac® 1811	Acrylic Emulsion	55	0	Yes	No	NA   EMEAI
PVDC TECHNOLOGY						
Permax™ 805	PVDC Emulsion	60	13.5	Yes	Yes	NA
Permax™ 805B	PVDC Emulsion	60	13.5	Yes	Yes	EMEAI

¹Ingredient not intentionally added to the composition or used in manufacture of Lubrizol product.

### POLYURETHANE DISPERSION TECHNOLOGIES

PRODUCT	POLYMER TYPE	% WEIGHT SOLIDS	MFFT (°C)	APEO- FREE <sup>1</sup>	NMP-FREE <sup>1</sup>	AVAILABILITY <sup>2</sup>
Aptalon™ 8o8oHS	High-solids Polyurethane Dispersion - Polyamide	50	45	Yes	Yes	NA   EMEAI
Aptalon™ M8100	Self-crosslinking Polyurethane Dispersion - Polyamide	37	58	Yes	Yes	NA   EMEAI
Aptalon™ M8120	Self-crosslinking Polyurethane Dispersion - Polyamide	37	50	Yes	Yes	NA   EMEAI
Aptalon™ W8o3o	Self-Matting Polyurethane Dispersion - Polyamide	35	61	Yes	Yes	NA   EMEAI
Aptalon™ W8o34	Self-Matting Polyurethane Dispersion - Polyamide	35	5	Yes	Yes	NA   EMEAI
Aptalon™ W8o6o	Self-Crosslinking Polyurethane Dispersion - Polyamide	36	59	Yes	Yes	NA   EMEAI
Aptalon™ W8o62	Self-Crosslinking Polyurethane Dispersion - Polyamide	36	31	Yes	Yes	NA   EMEAI
Sancure <sup>™</sup> 20025F	Aliphatic Polyurethane Dispersion - Polyester	48	<b>&lt;</b> 5	Yes	Yes	NA   EMEAI
Sancure™ 20041	Polyurethane Dispersion - Polyester	34	22	Yes	Yes	NA
Sancure™ 825	Aliphatic Polyurethane Dispersion - Polyester	34	<b>&lt;</b> 5	Yes	-	NA   EMEAI
Sancure™ 861	Polyurethane Dispersion - Polyether	40	<b>&lt;</b> 5	Yes	Yes	NA   EMEAI
Sancure <sup>™</sup> 970	Polyurethane Dispersion - Polyester	50	42	Yes	Yes	NA   EMEAI
Sancure <sup>™</sup> AU4050	Self-crosslinking Acrylic/Polyester Polyurethane Hybrid Dispersion	36	15	Yes	Yes	NA   EMEAI
Sancure™ PC 55	Aliphatic Polyurethane Dispersion - Polyester/Polycarbonate	42	<b>&lt;</b> 5	Yes	Yes	NA
Turboset™ 1000	Self-crosslinking Polyurethane Hybrid Dispersion	39	23	Yes	Yes	NA   EMEAI
Turboset <sup>™</sup> 2027	Self-Crosslinking Polyurethane Dispersion - Polyester	40	22.5	Yes	Yes	NA   EMEAI
Turboset™ Ultra Eco	Self-Crosslinking Polyurethane Dispersion - Polyester	36	<b>&lt;</b> 5	Yes	Yes	NA

<sup>&</sup>lt;sup>1</sup>Ingredient not intentionally added to the composition of Lubrizol product.

### SOLUTION ACRYLIC TECHNOLOGIES

PRODUCT	POLYMER TYPE	SOLVENT	% WEIGHT SOLIDS	TG (°C)	AVAILABILITY <sup>2</sup>
				` '	
Doresco® AC4-74	Solvent-borne Thermoplastic Acrylic	Toluene	45	50	NA
Doresco® Cl7208	Solvent-borne Thermoplastic Acrylic	Xylene	49	39	EMEAI
Doresco® L91-1X	Solvent-borne Acrylic Polymer	Xylene	49	57	NA
Doresco® M6A	Solvent-borne Thermoplastic Acrylic	Xylene	50	61	EMEAI
Doresco® OH38	Hydroxylated Acrylics (4% OH Solids)	MPA/Xylene (1:1)	42	50	EMEAI
Doresco® OH6o	Hydroxylated Acrylic (3% OH Solids)	MPA/Xylene (1:1)	50	14	NA   EMEAI
Doresco® OH65	Hydroxylated Acrylic (2% OH Solids)	Xylene	50	27	NA   EMEAI
Doresco® T5T6o	Solvent-borne Thermoplastic Acrylic	Toluene	60	43	NA   EMEAI
Doresco® T6T	Solvent-borne Thermoplastic Acrylic	Toluene	50	43	EMEAI

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<sup>&</sup>lt;sup>2</sup>Product availability is subject to change without notice. Please contact your local representative for current product information and availability in other regions.

<sup>&</sup>lt;sup>3</sup>Produced in multiple facilities; product name may vary.

<sup>&</sup>lt;sup>2</sup>Product availability is subject to change without notice. Please contact your local representative for current product information and availability in other regions.

 $<sup>^{1}\</sup>mbox{lngredient}$  not intentionally added to the composition of Lubrizol product.

<sup>2</sup> Product availability is subject to change without notice. Please contact your local representative for current product information and availability in other regions.

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