Lubrizol

Imagined for Life. Enabled by Science.™

Resins Product Guide for Paints and Coatings

Enabling Customer Success

INDUSTRY KNOWLEDGE

With an experienced team of coating, ink, and composite specialists, Lubrizol is dedicated to close collaboration with customers and industry experts to gain and share industry knowledge, insights, and solutions.

QUALITY

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.

INNOVATIVE SOLUTIONS

Lubrizol invests in market-driven innovation to address relevant and timely coatings challenges and opportunities for customers.

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.

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 AND 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/PVDC Technologies

Product	Polymer Type	% Solids	Tg (°C)	MFFT (°C)	% Volume Solids	pH	Viscosity (CPS)	Specific Gravity	Formaldehyde-Free[1]
Acrylic Technologies									
Carboset® 2951	Self-Crosslinking Acrylic Copolymer Emulsion	44	–	<5	43	8	30 - 250	1.01	Yes
Carboset® 2968*	Self-Crosslinking Acrylic Emulsion	41.5	–	57	39	7.5	10 - 300	1.04	Yes
Carboset® 3142	Styrene Acrylic Emulsion	41	–	7	40	7	10 - 500	1.02	Yes
Carboset® 514H	Alkali Strippable Acrylic Emulsion	40	28	10	38	6.6	100 - 500	1.05	Yes
Carboset® 560	Alkali Strippable Acrylic Emulsion	27	47	17	24.5	7.6	<200	1.03	Yes
Carboset® 7722	Acrylic Emulsion	50	–	<5	48	8.4	40 - 800	1.06	No
Carboset® 7733	Acrylic Emulsion	50	–	21	46	8.4	40 - 800	1.06	No
Carboset® AE 960*	Acrylic Emulsion	56	-25	<5	55	8.2	<2000	1.02	Yes
Carboset® AMO 400	Acrylic Oil Modified Copolymer	40	–	12	37.5	7.5	<500	1.06	Yes
Carboset® CA 1009*	Acrylic-Polyurethane Polymer	55	5	2	53	8	150 - 800	1.1	Yes
Carboset® CA 600*	Self-crosslinking Acrylic Emulsion	42	55	35	41	8.3	41	1.06	Yes
Carboset® CA 7100RC	Styrene Acrylic Emulsion	48	-10	<5	49	8.3	8.000 - 11000	1.01	Yes
Carboset® CA 7107	Acrylic Emulsion	50	8	<5	47	8.5	9000	1.05	No
Carboset® CA 7120RC	Styrene Acrylic Emulsion	48	0	<5	47	8.3	8000 - 12500	1.01	Yes
Carboset® CA 7147	Acrylic Emulsion	47	–	6	46	8.8	300 -1200	1.01	Yes
Carboset® CA 7160RC	Styrene Acrylic Emulsion	50	18	21	49	8.3	2500 - 5000	1.01	Yes
Carboset® CR 3090*	Styrene Acrylic Emulsion	45	37	33	42	8.5	<500	1.05	Yes
Carboset® CR 7162E	Styrene Acrylic Emulsion	41.5	–	23	39	8	10 - 100	1.03	Yes
Carboset® CR 7181	Self-Crosslinking Acrylic Emulsion	42	–	90	39	9	50	1.06	Yes
Carboset® CR 7185*	Acrylic Emulsion	42	–	40	41	8.3	5 -120	1.03	Yes
Carboset® CR 765*	Styrene Acrylic Emulsion	41	–	34	40.7	8	10 - 150	1.03	Yes
Carboset® PL 958*	Peelable Acrylic Copolymer Emulsion	46	–	<5	43	8	40 -125	1.07	No
Carboset® RPT 3030*	Acrylic Emulsion	55	-35	<5	53	8	200 -1200	1.06	No
Carboset® SA 850*	Acrylic Copolymer Emulsion	55	10	<5	53	8.5	100 - 15000	1.04	Yes
Carbotac® 1811	Acrylic Emulsion	55	-43	<5	53	3.5	120	1.03	No
PVDC Technologies									
Permax™ 805	PVDC Emulsion	60	–	13.5	50.4	1.0 - 2.2	85	1.28	Yes
Permax™ 805B	PVDC Emulsion	60	–	13.5	50	1.8	85	1.28	Yes

[1] Ingredient not intentionally added to the composition of this product *Produced in multiple facilities; product name may vary

	Wood			Building & Construction			Industrial & Transportation					
Product	**Floors**	**OEM**	**Trims & Primers**	**Liquid Roof**	**Vertical Masonry**	**Horizontal Masonry**	**DTM**	**Primer**	**Topcoat**	**Temporary Coating**	**Key Benefits**	**Availability**
Acrylic Technologies												
Carboset® 2951		•	•		•	•					Low VOC, exceptional chemical and block resistance, early hardness and external durability also suitable for use in eco-label paints and coatings.	NA | EMEAI
Carboset® 2968*	•	•				•					Early hardness, sandability with superior chemical resistance; blend vehicle with polyurethanes. Robust water resistance, outstanding gloss/wet look.	NA | EMEAI
Carboset® 3142		•	•		•		•	•	•		Low VOC, high gloss, exceptional block and chemical resistance, multi-substrate adhesion including low porous ones, exterior durability; alkyd-like application.	EMEAI
Carboset® 514H							•	•	•	•	Dries to a clear, water-resistant, non-tacky thermoplastic film. Adhesion to to a metal and plastic substrate. Alkali removable temporary coatings.	NA | EMEAI
Carboset® 560							•			•	Designed for use in temporary coatings that require excellent water and UV resistance. Alkali removeable.	NA | EMEAI
Carboset® 7722			•		•	•					Low VOC, good scrub resistance, early block and print resistance, pigmentable.	NA | EMEAI
Carboset® 7733			•		•	•					Low VOC, high gloss, inherent stain removal and washability, early block resistance and great flow and leveling. High exterior durability.	NA | EMEAI
Carboset® AE 960*				•	•						Low VOC, excellent dirt pick-up, balance of elongation and tensile strength, weathering and crack-bridging; suitable for ASTM D6083 compliance.	NA | EMEAI
Carboset® AMO 400		•	•								Renewable, low VOC, high melt temperature for high speed sanding, improved toughness, blend vehicle with other resins (47% bio-based content).	NA | EMEAI
Carboset® CA 1009*				•	•						High end roof coatings. Low water uptake, bitumen bleed through resistance, excellent exterior durability. Concrete protection. Alkali resistance.	NA | EMEAI
Carboset® CA 600*	•	•	•			•					Early water resistance, fast drying, great substrate penetration, alkaline, blushing, efflorescence, chemical resistance, non-yellowing and exterior exposure. Blocking resistance.	NA | EMEAI
Carboset® CA 7100RC				•	•						Low VOC, balance of mechanical properties, excellent adhesion to most masonry substrates at high PVC loading, water and alkali resistance.	EMEAI
Carboset® CA 7107				•	•						Low VOC, excellent water, alkali and weathering resistance. Concrete protection.	EMEAI
Carboset® CA 7120RC				•	•						Low VOC,excellent water, alkali and dirt pick-up resistance, balance of elasticity and tensile strength. Great adhesion to most masonry substrates including terracotta tiles.	NA
Carboset® CA 7147			•		•	•					Small particle size for consolidating primers. Excellent humidity resistance for wet rooms. Low CO2 and high vapour permeability for protection concrete coatings.	EMEAI
Carboset® CA 7160RC					•	•					Low VOC, alkali resistant, excellent adhesion to most masonry substrates at high PVC loading. Under ceramic tiles.	EMEAI
Carboset® CR 3090*							•	•	•		Great corrosion and weathering resistance; adhesion to CRS, phosphated and galvanized steel.	NA
Carboset® CR 7162E							•	•	•		Air and force dry, gloss and semi-gloss, corrosion and humidity resistance; adhesion to plastic, metal and masonry.	EMEAI
Carboset® CR 7181		•						•	•		Hard, excellent chemical resistance, air and forced dry compatible; adhesion to wood, metal and plastic.	NA | EMEAI
Carboset® CR 7185*						•	•	•	•		Excellent water retention, concrete curing properties and high alkali resistance. Fast dry, resistant to gas, solvents, impact, water and humidity; adhesion to phosphated and stainless steel.	NA | EMEAI
Carboset® CR 765*	•	•	•				•	•	•		Balance of performance properties, high gloss, water and humidity resistance, reactive pigment stability; adhesion to CRS, phosphated, aluminum, copper, stainless steel.	NA | EMEAI
Carboset® PL 958*										•	Low VOC, high tensile strength for clear and pigmented temporary protection and excellent chemical resistance. Peelable coatings.	NA | EMEAI
Carboset® RPT 3030*				•	•						Excellent low temperature elasticity for cold climate areas, ASTM D6083 compliance capable, and adhesion to EPDM. Primers and top coat formulations.	NA | EMEAI
Carboset® SA 850*				•	•						High alkali resistance for self priming products. Crack-bridging performance and weatherability, resistant to chalking, fading, and water penetration, excellent dirt pick-up and efflorescence resistance.	NA | EMEAI
Carbotac® 1811					•	•					Long open time polymer for bonding bridge masonry applications.	EMEAI
PVDC Technologies												
Permax™ 805*							•	•			Low VOC, humidity resistant, increased shelf-life and in-can stability; adhesion to aluminum, CRS, Bonderite 1000, ground and galvanized steel. Rust Convertors and MVT.	NA | EMEAI
Permax™ 805B							•	•			Low VOC, small particle size, low MVTR, excellent corrosion resistance and durability; adhesion to aluminum, CRS, ground and galvanized steel, potable water applications.	NA | EMEAI

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Polyurethane Dispersion Technologies

Product	PUD Type	% Solvent	% Solids	% Volume Solids	MFFT (°C)	Specific Gravity	pH	Viscosity in cP	% Amin	100% Modulus PSI (MPA)	Elongation at Break (%)	Sward Rocker Hardness	Freeze Thaw Stability	Thermal Stability 120° F/30 Days	NMP-Free[1]
Aptalon™ M8120	Self-crosslinking Polyamide	0	35	34	50	1.05	8.5	<500	0.9	–	–	–	–	–	Yes
Aptalon™ W8030	Self-crosslinking Polyamide	0	35	33	61	1.04	8	<500	0.7	5129 (35.36)	176	–	No	–	Yes
Aptalon™ W8060	Self-crosslinking Polyamide	0	36	33	59	1.05	8	<500	1	4150 (32.68)	140	–	No	–	Yes
Permax™ 202	Polyether	0	41	–	–	–	5.4	1000	0	310 (2.44)	750	–	Yes	–	Yes
Permax™ 232	Polyether	0	35	–	–	–	5.4	750	0	160 (1.26)	650	–	Yes	–	Yes
Sancure™ 861	Polyether	0	40	39	<5	1.02	7.5	<90	1.3	600 (4.72)	770	21	1 Cycle	No	Yes
Sancure™ 970	Polyester	0	42	41	42	1.06	8.4	500	1.4	3100 (24.41)	360	–	no	–	Yes
Sancure™ 2715	Polyether	0	38	–	–	1.03	8	500	1.4	1100 (8.66)	350	14	3 Cycles	No	Yes
Sancure™ AU4050E	Acrylic/ Polyester	1.05	36	32	15	1.05	8	<125	–	–	–	–	–	–	Yes
Sancure™ 20025F	Polyester High Solids	0.02	47	45	<5	1.05	7.5	500	1.2	300 (2.36)	1100	5	Yes	Yes	Yes
Sancure™ 20041	Polyester	0	34	30	22	1.05	8	150	1.9	3400 (26.77)	330	–	–	–	Yes
Sancure™ 20072	Cationic Polyether	0	30	–	–	1.025	6	20	0.8	1000 (7.87)	900	–	–	–	Yes
Sancure™ 20898	Polyester	3.4	29	–	–	1.06	8	<400	1.8	4320 (34.02)	180	48	No	Yes	Yes
Sancure™ 20899	Polyester	0	35	–	–	–	8	<400	1.41	–	–	–	–	–	Yes
Sancure™ 942	Polyester	0	44	30	26	1.06	8	<500	1.56	3200 (22.06)	275	–	No	–	Yes
Turboset™ 5000HS	Self-crosslinking Polyether High solids	0	50	48	<5	1.04	7.5	<500	0.9	–	–	–	No	–	Yes
Turboset™ Ultra Eco	Self-crosslinking Polyether	0.04	36	35	<5	1.04	8.3	250	0.8	2200 (17.32)	330	–	No	–	Yes
Turboset™ 2027	Self-crosslinking Polyester	0	40	35	22.5	1.07	8	<500	1.6	2325 (18,32)	330	–	No	–	Yes

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	Wood		Building & Construction			Industrial & Transportation					
Product	**Floors**	**OEM**	**Liquid Roof**	**Vertical Masonry**	**Horizontal Masonry**	**DTM**	**Primer**	**Topcoat**	**Flexible Substrates**	**Description/Suggested Uses**	**Availability**
Aptalon™ M8120	•	•			•	•	•	•		35% Bio C14, amide based, self-crosslinking PUD for direct-to-metal applications, excellent adhesion and outstanding topcoat properties. DTM applications as a single coat solution for a variety of protective and industrial applications. Chemical resistance.	NA | EMEAI
Aptalon™ W8030	•	•			•			•		Amide based, self-crosslinking, self-matting PUD, low gloss clear and pigmented finishes, high clarity, hardness and resistance properties. Low gloss, high performance wood finishes and metal topcoats.	NA | EMEAI
Aptalon™ W8060	•	•			•					35% Bio C14 amide based, self-crosslinking PUD, balanced properties on a high level, high chemical resistance and low wear. High demanding areas with wooden floors such as sports floors or restaurants.	NA | EMEAI
Permax™ 202									•	"Soft, contolled moisture vapor transmission rates, ionic compatibility. High performance textile coating applications, component of topcoat formulations".	NA | EMEAI
Permax™ 232									•	"Very soft, controlled moisture vapor transmission rates, ionic compatibility. High performance textile coating applications, component of topcoat formulations".	NA | EMEAI
Sancure™ 861			•	•					•	Cosolvent free, abrasion/chemical resistance, hydrolytic stability. Textiles, plastic coatings,roof and metal coatings.	NA | EMEAI
Sancure™ 970	•	•			•	•	•	•		Versatile composite PUD; high wear and chemical resistance. Residential and commercial wooden or mineral substrates, 1 and 2K application (isocyanate or aziridine).	NA | EMEAI
Sancure™ 2715									•	Cosolvent free, abrasion/chemical resistance, readily crosslinkable, light stable, film former, low VOC, fast property development, medium hard urethane. Textiles, plastic and metal coatings; firms hand, low VOC; tough film with fast property development, medium hard urethane.	NA | EMEAI
Sancure™ AU4050E	•	•			•					Non-yellowing, excellent chemical, abrasion & scuff resistance. Interior wood finishes, clear and pigmented concrete sealers.	NA | EMEAI
Sancure™ 20025F			•	•				•	•	Elastic, durable, crosslinkable, low VOC, cosolvent free, adhesion to multiple substrates. Blend resin to modify elasticity. Excellent weatherability.	NA | EMEAI
Sancure™ 20041			•		•				•	Low VOC, cosolvent free, hard urethane, good compatibility with acrylic polymers and crosslinkable. Developed for coating of rigid substrates, especially wood. Clear coatings.	NA
Sancure™ 20072									•	Cationic dispersion, non yellowing, crosslinkable.	NA | EMEAI
Sancure™ 20898									•	Forms very hard, but flexible coatings with good stain- and chemical resistance, fine particle size, abrasion resistance, high gloss. Anti-graffiti coating, vinyl coating, plastic topcoat.	NA | EMEAI
Sancure™ 20899		•						•	•	Clear, flexible and high gloss coatings. Good adhesion to vinyl, wood, paper and plastic substrates	NA | EMEAI
Sancure™ 942	•	•			•					A versatile polyurethane dispersion for 1K and 2K systems with good mechanical and chemical resistance properties.	NA | EMEAI
Turboset™ 5000HS	•	•			•					High solids, TEA free PUD enabler of low VOC formulations for 1K high traffic floor coatings. Good chemical and wear resistance.	NA | EMEAI
Turboset™ Ultra Eco	•	•			•					Ultra low VOC, excellent wear resistance, good chemical resistance, adhesion to multiple substrates incl. solvent borne stains. w VOC floor coatings, 1K, sports floors, high traffic areas.	NA
Turboset™ 2027	•	•			•					Excellent chemical and wear resistance in 1K system. Replacement of 2K WB systems.	NA | EMEAI

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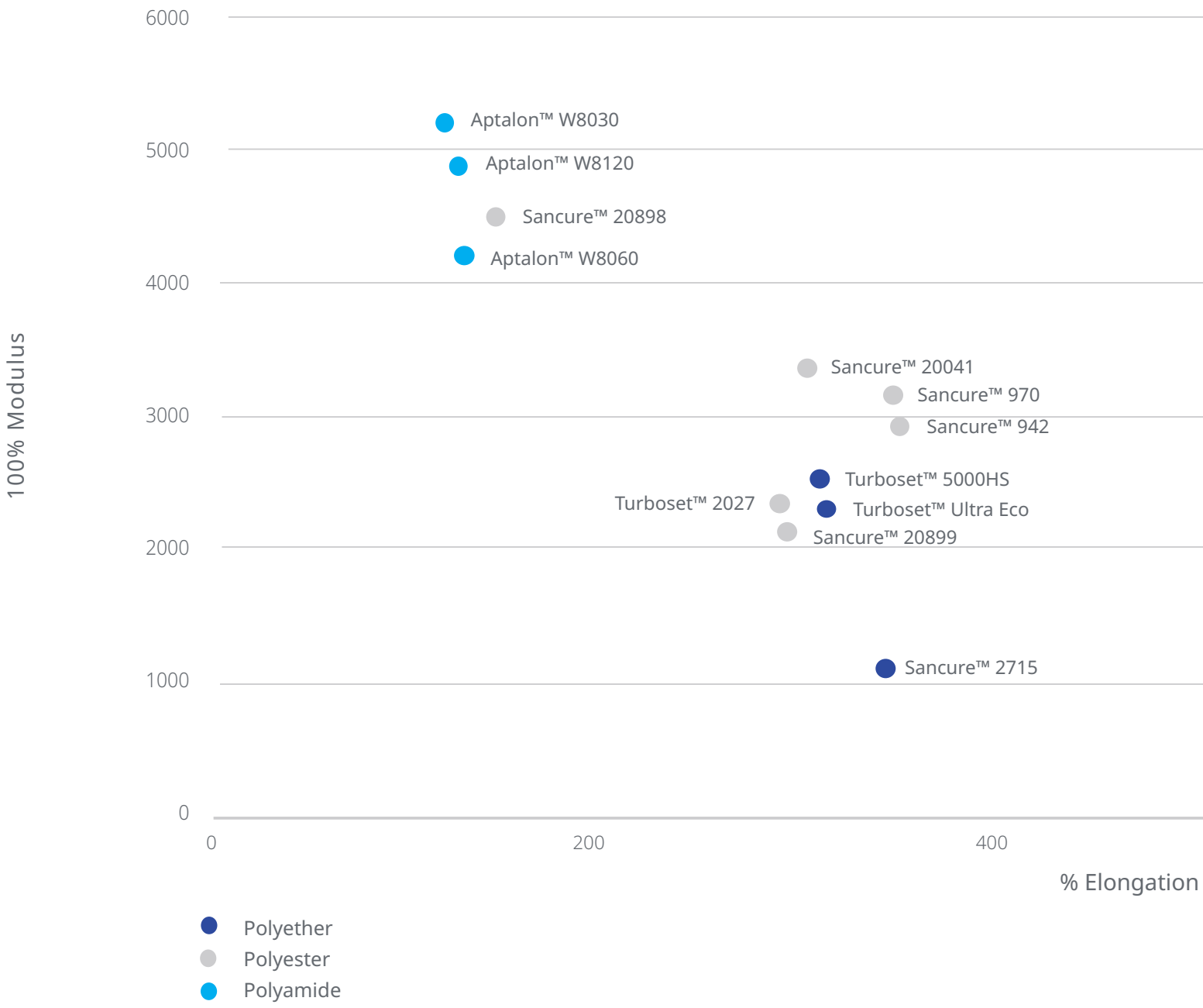
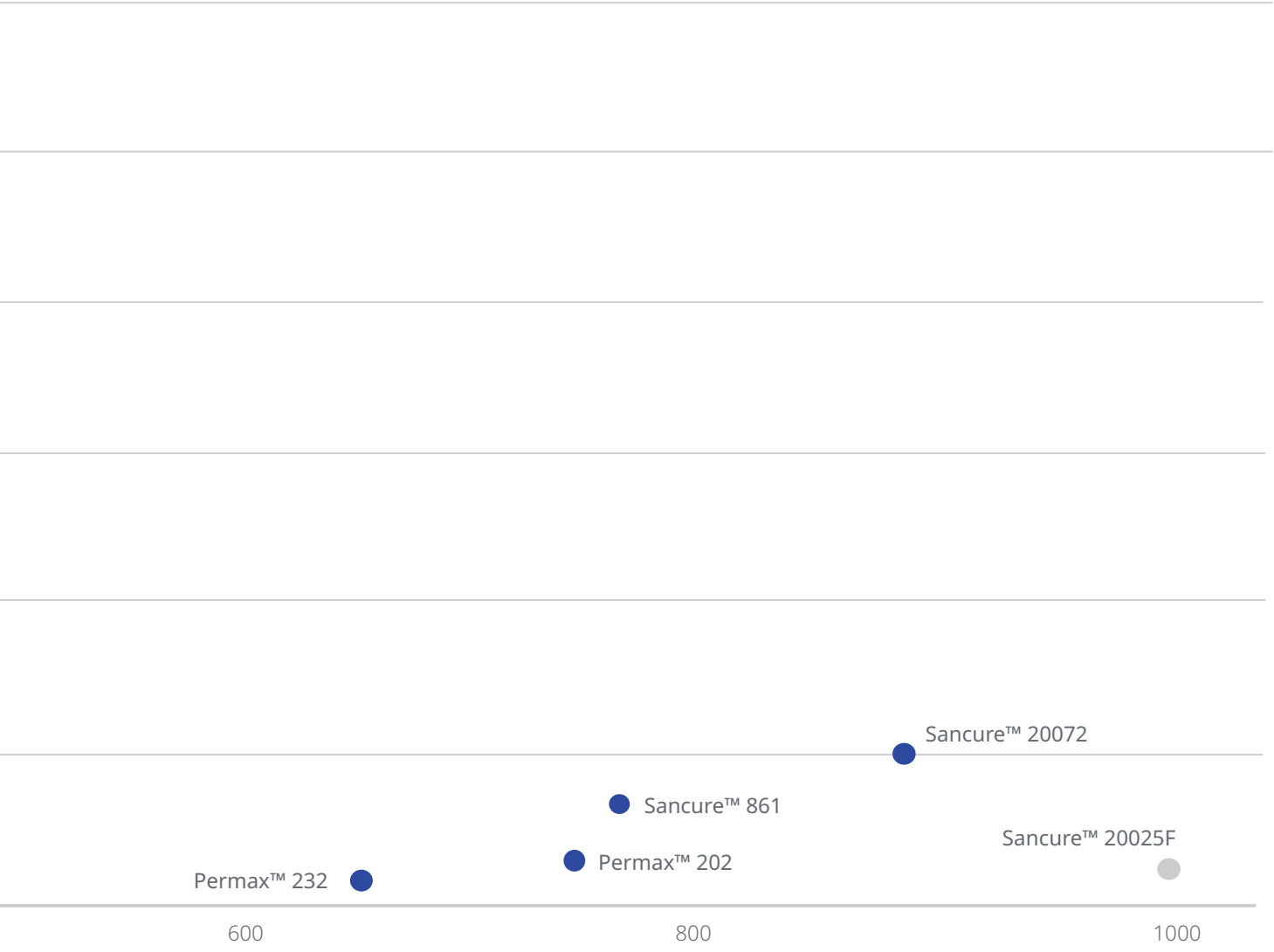
Mechanical Properties

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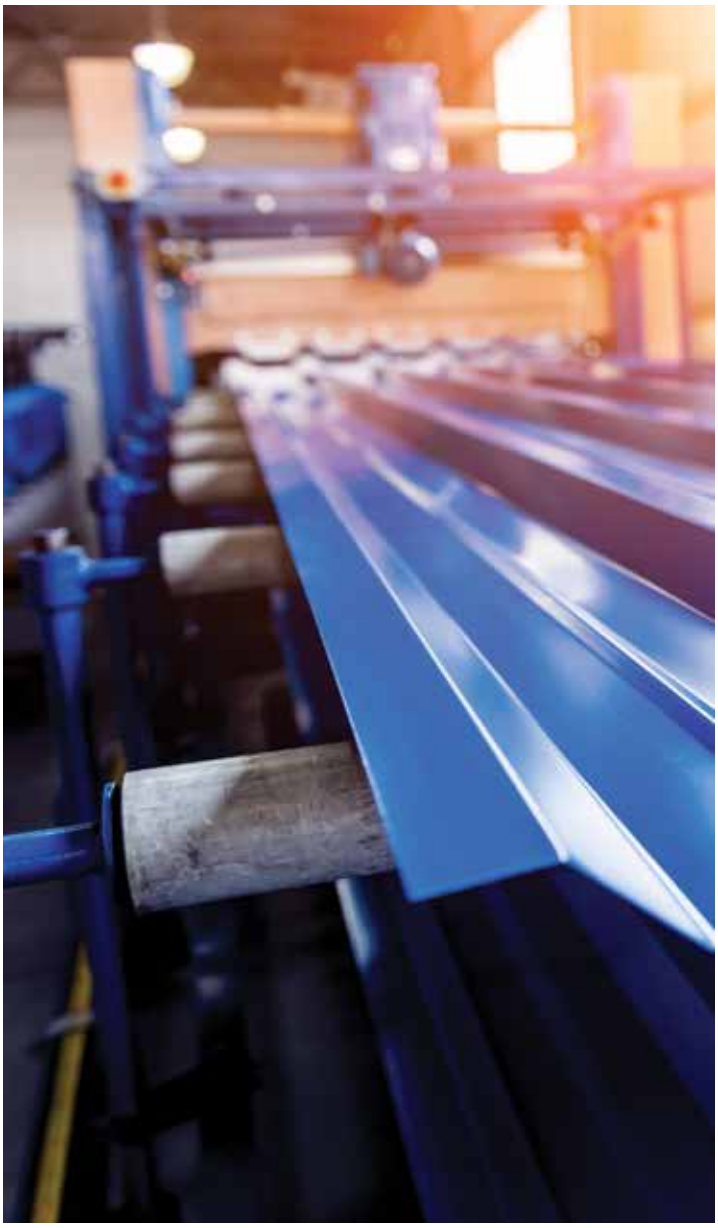
Sancure™ 861
Sancure™ 20025F
Permax™ 202
Permax™ 232
600
800
1000

at Break



Solution Acrylic Technologies

Product	Polymer Type	Solvent
Doresco® AC4-74	Solvent-Borne Thermoplastic Acrylic	Toluene
Doresco® CI7208	Solvent-Borne Thermoplastic Acrylic	Xylene
Doresco® M6A	Solvent-Borne Thermoplastic Acrylic	Xylene
Doresco® OH65	Hydroxylated Acrylic (2% OH Solids)	Xylene
Doresco® T5T60	Solvent-Borne Thermoplastic Acrylic	Toluene

					Building & Construction			Industrial & Transportation				
Tg (°C)	% Weight Solids	Acid Number	Viscosity (CPS)	Specific Gravity	Liquid Roof	Vertical Masonry	Horizontal Masonry	DTM	Primer	Topcoat	Key Benefits	Availability
50	45	19.6						•	•		Adhesion promoted resin for metal, glass, steel and other metal substrates. Interior and exterior.	NA | EMEAI
39	49	<10	250-1000					•	•		Multisubstrate adhesion; excellent for primers applications.	EMEAI
61	50	<10	5700	1	•	•	•	•	•	•	Exterior durability and adhesion to multiple substrates. Clear and pigmented formulations.	EMEAI
14	60	2% OH Solids	2000					•	•	•	High adhesion, balanced mechanical properties, hardness and impact resistance.	NA | EMEAI
43	60	<10	7000	1			•				Quick drying road-marking for medium traffic areas; internally plasticized version of Doresco® T6T.	EMEAI

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Lubrizol is an innovative, collaborative and trusted partner to the Coatings industry, bringing high-performing dispersant, resin, wax additive, color dispersions, and specialty additive technologies for a wide range of coatings, inks, paper, textiles/ nonwovens, composites and other formulated products. We apply world-class materials science to real-world challenges and collaborate with our customers to enhance the performance, productivity and sustainability capabilities of their products.

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