Lubrizol

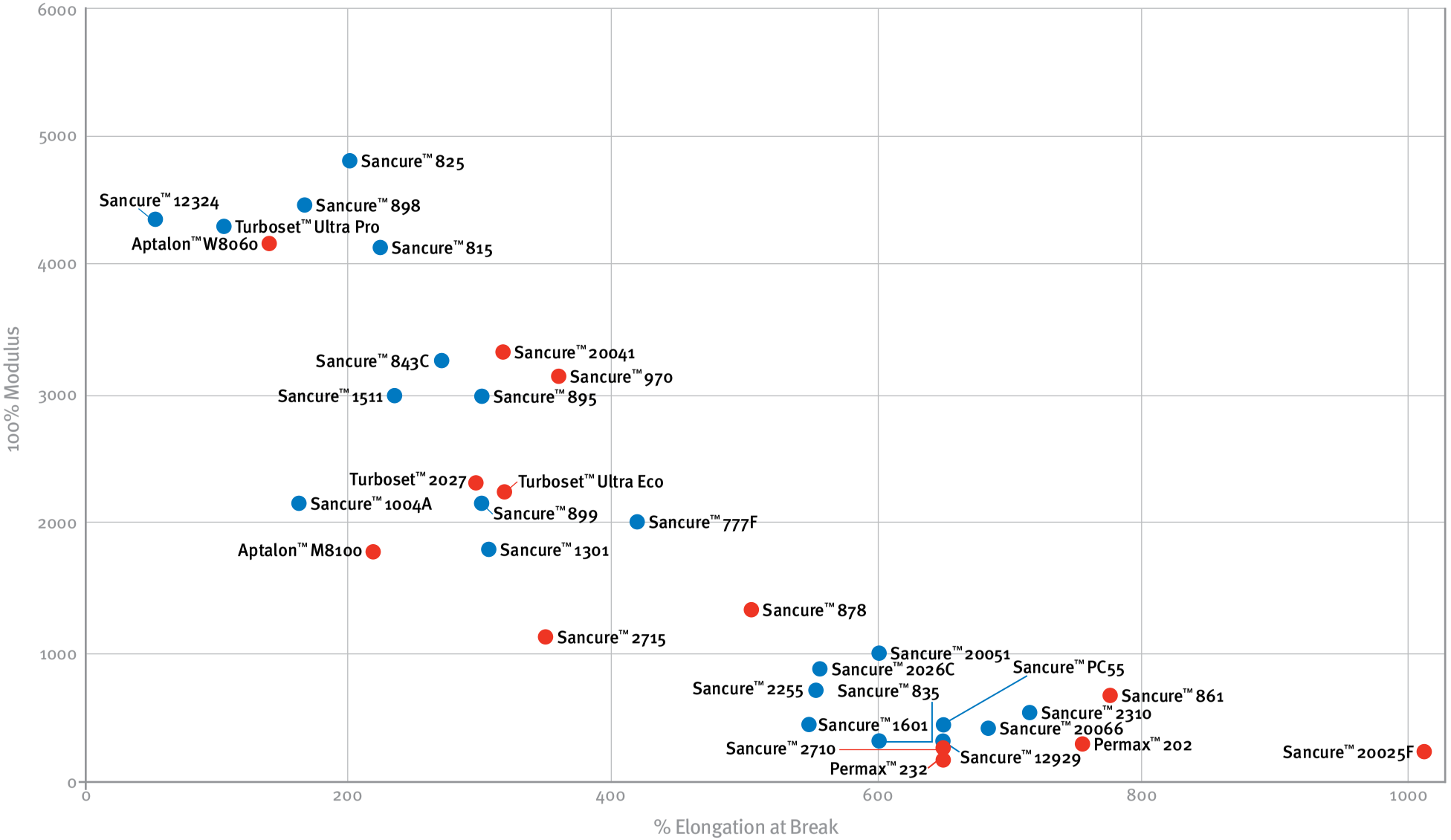
PERFORMANCE COATINGS

PAINTS, COATINGS, TEXTILES AND SPECIALTY APPLICATIONS

POLYURETHANE DISPERSIONS PRODUCT GUIDE

www.lubrizol.com/coatings

Mechanical Properties



LUBRIZOL POLYURETHANE DISPERSIONS

PRODUCT NAME	PRODUCT TYPE	NMP FREE	% SOLVENT	% SOLIDS	SPECIFIC GRAVITY	pH	VISCOSITY IN cP	% AMIN
Aptalon™ M8100	Polyamide	•	0	37	1.04	8	<500	0.9
Aptalon™ W8060	Polyamide	•	0.032	36	*	8	500	1
Permax™ 202	Polyether	•	0	41	*	5.4	1000	0
Permax™ 232	Polyether	•	0	35	*	5.4	750	0
Sancure™ 1004 A	Polyester		13.5	40	1.08	9.5	500	2.2
Sancure™ 1073C	Polyester		9.8	30	1.09	9	50	1.5
Sancure™ 12324	Polyester		10.2	32	1.07	8.3	<100	1.6
Sancure™ 12929	Polyester		9.9	40	1.06	7.6	110	1.5
Sancure™ 1301	Polyester		10.2	41.5	1.07	9	150	1.9
Sancure™ 1511	Polyester		11.3	35	1.08	8.6	1250	2
Sancure™ 1601	Polyester		11.8	35	1.06	8.5	1500	1.4
Sancure™ 20025F	Polyester	•	0.02	47	1.05	9.7	500	1.2
Sancure™ 20041	Polyester	•	0	34	1.05	8	150	1.9
Sancure™ 20051	Cationic Polyester		0	42	1.02	6	60	4
Sancure™ 20066	Polyether		8	40	1.02	7.5	200	1.1
Sancure™ 20072	Cationic Polyester	•	0	30	1.025	6	20	0.8
Sancure™ 2026C	Polyester		6.9	40	1.06	8	500	1.3
Sancure™ 2255	Polyester		8.5	49	*	8	1500	1
Sancure™ 2310	Polyether		7.1	40	*	9	500	1
Sancure™ 2710	Polyether	•	0	40	1.02	8	1000	1.3
Sancure™ 2715	Polyether	•	0	38	1.03	8	500	1.4
Sancure™ 777F	Polyester		8.5	35	*	10	500	2.1
Sancure™ 815	Polyester		8.4	35	1.06	8	125	2.3
Sancure™ 825	Polyester		8.1	34	1.04	8.5	425	1.8
Sancure™ 835	Polyester		13.1	40	1.06	8.5	75	1.1
Sancure™ 843C	Polyester		8.9	32	1.05	8	400	3.3
Sancure™ 861	Polyether	•	0	40	1.02	7.5	<90	1.3
Sancure™ 878	Polyether	•	0	38	1.03	7.5	<100	1.4
Sancure™ 895	Polyester		8	35	1.06	8	700	1.9
Sancure™ 898	Polyester		7.6	32	1.06	8	<250	1.9
Sancure™ 899	Polyester		8.2	35	1.06	8	700	1.9
Sancure™ 970	Polyester	•	0	42	1.06	8.4	500	1.4
Sancure™ AU4010	Acrylic/Polyester		5.5	36	1.05	8	75	1.9
Sancure™ OM-945	Oil Modified Polyester		2.9	45	1.06	8	800	1.3
Sancure™ PC55	Polycarbonate/Polyester		5.6	42	1.06	8	350	1.2
Turboset™ 2027	Polyether	•	0	40	1.06	8.7	90	1.6
Turboset™ Ultra Eco	Polyether	•	0.04	36	1.04	8.3	250	0.8
Turboset™ Ultra Pro	Polyester		4.5	36.5	1.06	8.3	175	0.6

PRODUCT NAME	100% MODULUS PSI (MPA)	TENSILE STRENGTH PSI (MPA)	ELONGATION AT BREAK(%)	SWARD ROCKER HARDNESS	ACID NUMBER	FREEZE THAW STABILITY	THERMAL STABILITY 120° F/30 DAYS	SOFTENING POINT (°C)
Aptalon™ M8100	1724 (13.57)	2303 (18.13)	227	*	16	*	*	*
Aptalon™ W8060	4150 (32.68)	5493 (43.25)	140	*	12	No	*	*
Permax™ 202	310 (2.44)	5000 (39.37)	750	*	*	yes	*	159
Permax™ 232	160 (1.26)	1300 (10.24)	650	*	*	yes	*	159
Sancure™ 1004 A	2100 (16.54)	2500 (19.69)	180	36	18.6	yes	no	183
Sancure™ 1073C	*	7000 (55.12)	18	34	20.3	yes	yes	207
Sancure™ 12324	4300 (33.86)	5200 (40.94)	150	46	27.5	yes	yes	184
Sancure™ 12929	270 (2.13)	2674 (21.06)	650	2	14.4	yes	yes	124
Sancure™ 1301	1700 (13.39)	4000 (31.50)	320	12	28.6	yes	yes	160
Sancure™ 1511	3000 (23.62)	4600 (36.22)	240	26	31.5	yes	yes	141
Sancure™ 1601	400 (3.15)	4525 (35.63)	550	32	21.7	yes	yes	153
Sancure™ 20025F	300 (2.36)	544 (4.28)	1100	5	12	yes	yes	166
Sancure™ 20041	3400 (26.77)	5200 (40.95)	330	*	20.3	*	*	184
Sancure™ 20051	1000 (7.87)	4000 (31.50)	600	*	*	*	*	*
Sancure™ 20066	440 (3.46)	5000 (39.37)	680	*	*	No	*	*
Sancure™ 20072	1000 (7.87)	3900 (30.71)	*	*	*	*	*	*
Sancure™ 2026C	950 (7.48)	4200 (33.07)	560	14	14.8	yes	yes	185
Sancure™ 2255	700 (5.51)	3300 (25.98)	550	10	11.7	Yes	yes	*
Sancure™ 2310	460 (3.62)	2700 (21.26)	720	*	*	yes	*	*
Sancure™ 2710	650 (5.12)	2600 (20.47)	580	6	14.4	1 cycle	No	178
Sancure™ 2715	1100 (8.66)	3000 (23.62)	350	14	17.7	3 cycles	no	181
Sancure™ 777F	2000 (15.75)	5100 (40.16)	410	32	21.4	yes	yes	*
Sancure™ 815	4100 (32.38)	5450 (42.91)	220	36	29.5	yes	yes	161
Sancure™ 825	4800 (37.80)	6600 (51.97)	200	34	19.8	yes	yes	177
Sancure™ 835	345 (2.72)	4900 (38.58)	600	4	13.8	yes	yes	152
Sancure™ 843C	3300 (25.98)	4800 (37.80)	279	38	26.7	yes	yes	227
Sancure™ 861	600 (4.72)	3900 (30.71)	770	21	14.6	1 cycle	no	178
Sancure™ 878	1300 (10.24)	3600 (28.35)	500	14	17.7	3 cycles	no	181
Sancure™ 895	3000 (23.62)	4100 (32.28)	300	38	24.2	3 cycles	yes	193
Sancure™ 898	4320 (34.02)	5600 (44.09)	180	48	35.3	yes	yes	186
Sancure™ 899	2100 (16.54)	3600 (28.35)	300	38	24.2	yes	yes	193
Sancure™ 970	3100 (24.41)	5600 (44.09)	360	*	*	No	*	*
Sancure™ AU4010	*	*	*	36	*	no	yes	*
Sancure™ OM-945	*	*	*	*	*	yes	yes	*
Sancure™ PC55	400 (3.15)	3500 (27.56)	650	*	13.9	*	*	*
Turboset™ 2027	2325 (18.31)	3350 (26.38)	300	*	*	no	*	*
Turboset™ Ultra Eco	2200 (17.32)	3800 (29.92)	330	*	*	no	*	*
Turboset™ Ultra Pro	4020 (31.65)	4160 (32.76)	110	*	*	*	*	*

PRODUCT NAME	DESCRIPTION	SUGGESTED USES
Aptalon™ M8100	Amide based, self-crosslinking PUD, high hydrolysis resistance, chemical resistance	Exterior (metal) top coats, thermal cured DTM, applications with high corrosion resistance requirements
Aptalon™ W8060	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
Permax™ 202	Soft, contolled moisture vapor transmission rates, ionic compatibility	High performance textile coating applications, component of topcoat formulations
Permax™ 232	Very soft, controlled moisture vapor transmission rates, ionic compatibility	High performance textile coating applications, component of topcoat formulations
Sancure™ 1004 A	Flame retardent/Inherently flame retarding, stiff hand, excellent UV and heat stability	Home furnishings, technical textiles
Sancure™ 1073C	Chemical resistant, flame retardant, readily crosslinkable	Top coat, flame retardant finish
Sancure™ 12324	Hard, high gloss, abrasion resistant	OPV, rewettable ink formulations
Sancure™ 12929	Soft texture, flexibility, chemical/solvent/water restance, heat sealable at low temperatures	Soft textured coatings. Soft, tough plastic coating, automotive interior plastic, electronic coatings, general adhesives
Sancure™ 1301	Abrasion resistant, flexible, readily crosslinkable, adhesion to a variety of substrates	Printing inks, OPV
Sancure™ 1511	Fast drying, low VOC, cost effective, easily crosslinkable and pigmentable,high gloss, urethane with a good balance of hardness and flexibility. Relatively hard compared to SCR 1601	Hard plastic coatings, paper coatings, concrete coatingss, flexible substrate coatings. Use where UV exposure is not a concern
Sancure™ 1601	Heat reactive, tough but flexible, adhesion, cost effective, relatively hard compared to SCR 1501	Heat reactive coatings with excellent adhesion to many substrates/heat sealable adhesives, apparel
Sancure™ 20025F	Elastic, durable, crosslinkable, low VOC, cosolvent free, adhesion to nylon and polyester/heat sealable	Textile/nonwoven coatings, tie coats, blend resin to modify elasticity
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
Sancure™ 20051	Cationic dispersion, can be crosslinked, chemical and abrasion resistance	Textile, paper, leather and nonwoven
Sancure™ 20066	Tough, flexible hydrolysis resistant	Textile and nonwoven coating formulation
Sancure™ 20072	Cationic dispersion, non yellowing, crosslinkable, improves jet printing performance	Ink jet printing
Sancure™ 2026C	Soft, flexible, tough, abrasion resistant, easily crosslinkable, adhesion, heat-sealable, excellent elongation and toughness	Weather resistant coatings, textile coatings, coating for flexible substrates
Sancure™ 2255	Low VOC, fast drying, high solids	Soft urethane. Used in high build coatings, rope coatings
Sancure™ 2310	Soft flexible PUD, clear, tough abrasion resistant films, hydrolytic stability	Excellent adhesion to fabrics, textile coatings
Sancure™ 2710	Cosolvent free, abrasion/chemical resistance, readily crosslinkable, light stable, film former	Textiles, plastic coatings, metal coatings
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 propoerty development, medium hard urethane
Sancure™ 777F	Shear stability, abrasion resistance, adhesion, high gloss, good adhesin to nylon and polyester	Textile binder or topcoat, flexible PVC
Sancure™ 815	Excellent heat sealability and -adhesion to vinyl, high gloss, abrasion resistance, alkali/detergent resistance	Vinyl topcoats, OPV, Ink vehicles, textiles
Sancure™ 825	Water/alcohol/alkali/abrasion resistance, high gloss, light stable, easily blendable with acrylics, crosslinkable	Coating for rigid surfaces such as wood, concrete and plastics. Blends well with Carboset® Acrylics
Sancure™ 835	Adhesion to wide range of substrates, non-yellowing, soft but tough	Automotive, flexible plastic, textile
Sancure™ 843C	Hard, self-crosslinking polymer, excellent chemical resistance, alcohol/ mar resistance, hard but flexible	Wood and plastic substrates, metal coatings
Sancure™ 861	Cosolvent free, abrasion/chemical resistance, hydrolytic stability	Textiles, plastic coatings, metal coatings
Sancure™ 878	Cosolvent free, abrasion/chemical resistance, hydrolytic stability	Textiles, plastic coatings, metal coatings
Sancure™ 895	High gloss, chemical/UV resistance, easily crosslinkable, adhesion	Vinyl coatings, plastic coating, paper coating
Sancure™ 898	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
Sancure™ 899	High gloss, chemical/UV resistance, easily crosslinkable, adhesion	Vinyl coatings, plastic coating, paper coating
Sancure™ 970	Versatile composite PUD; high wear and chemical resistance	Residential and commercial wooden or mineral substrates, 1 and 2K application (isocyanate or aziridine)
Sancure™ AU4010	Self-crosslinking, low odor, chemical/stain/war/scuff resistance, non-yellowing	High performance clear wood floor and furniture finishes
Sancure™ OM-945	Low odor, low VOC, pigment compatibility, quick dry, outdoor durability, non yellowing, wear/water/alcohol resistance	Commercial/sports/residential floor, clear and pigmented stains
Sancure™ PC55	Soft tactile feel, needs to be crosslinked for resistance against OEM specification	Interior automotive and consumer electronic equipment, plastics in general
Turboset™ 2027	Excellent wear resistance, good chemcial resistance	Wood floor finishes, medium VOC level
Turboset™ Ultra Eco	Ultra low VOC, excellent wear resistance, good chemical resistance, adhesion to multiple substrates incl. solvent borne stains	Low VOC floor coatings, 1 K, sports floors, high traffic areas
Turboset™ Ultra Pro	Fulfils MFMA requierements, high gloss for sports floors	Floor coatings where NMP is not an issue

Products listed in **red font** are considered 'NMP-free' meaning they have no N-methyl pyrrolidone 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%. Low VOC systems are defined as systems with <140 g/l via US EPA Method 24, 475 g/l EU Method.
*Not yet measured

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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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