

Lubrizol

PERFORMANCE COATINGS



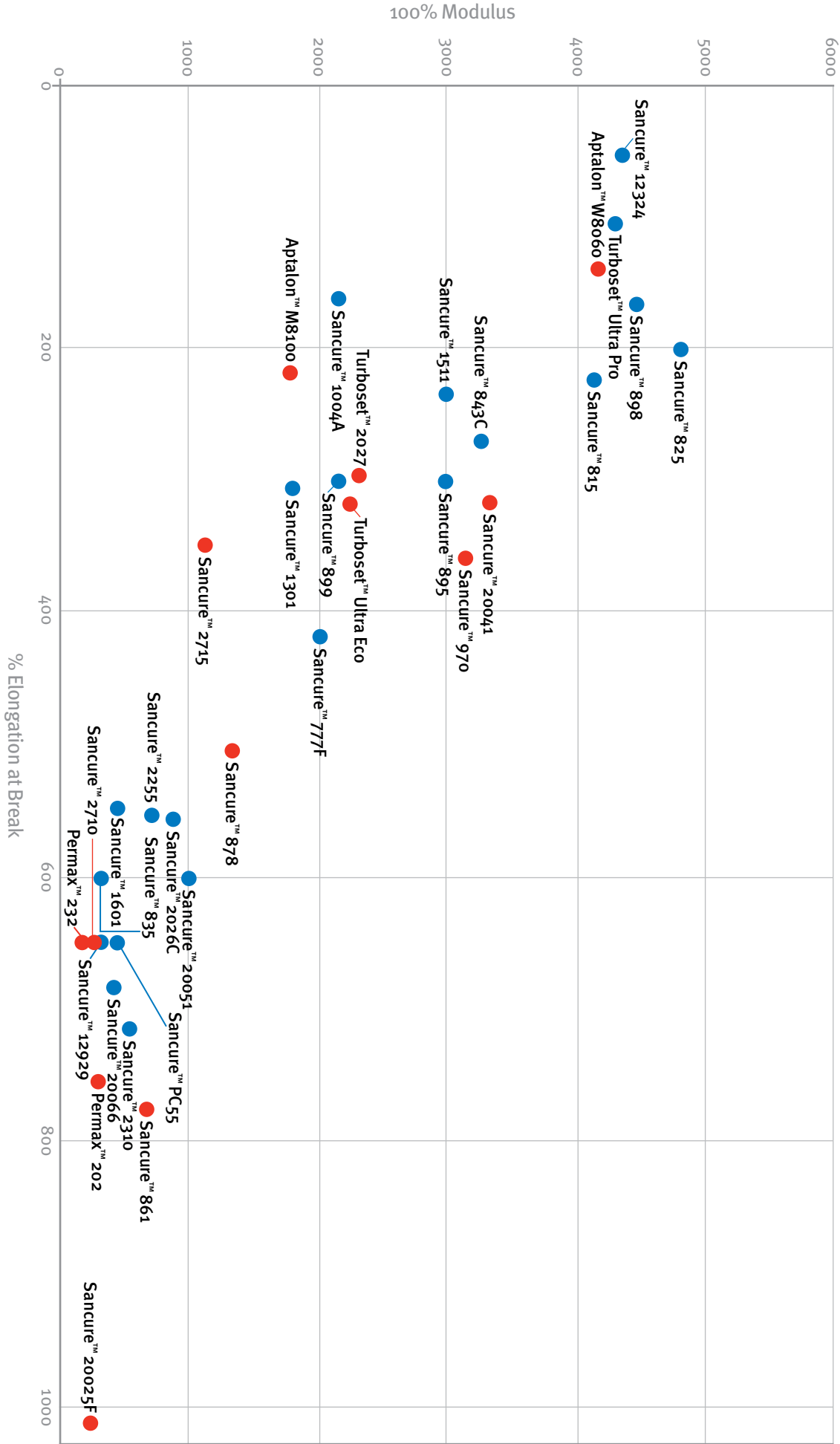
PAINTS, COATINGS,
TEXTILES AND
SPECIALTY
APPLICATIONS



POLYURETHANE DISPERSIONS PRODUCT GUIDE



Mechanical Properties



LUBRIZOL POLYURETHANE DISPERSIONS



PRODUCT NAME	PRODUCT TYPE	NMP FREE	% SOLVENT	% SOLIDS	SPECIFIC GRAVITY	pH	VISCOSITY IN cP	% AMIN		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)		PRODUCT NAME	DESCRIPTION	SUGGESTED USES
Aptalon™ M8100	Polyamide	•	0	37	1.04	8	<500	0.9		Aptalon™ M8100	1724 (13.57)	2303 (18.13)	227	*	16	*	*	*		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	Polyamide	•	0.032	36	*	8	500	1		Aptalon™ W8060	4150 (32.68)	5493 (43.25)	140	*	12	No	*	*		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	Polyether	•	0	41	*	5.4	1000	0		Permax™ 202	310 (2.44)	5000 (39.37)	750	*	*	yes	*	159		Permax™ 202	Soft, contolled moisture vapor transmission rates, ionic compatibility	High performance textile coating applications, component of topcoat formulations
Permax™ 232	Polyether	•	0	35	*	5.4	750	0		Permax™ 232	160 (1.26)	1300 (10.24)	650	*	*	yes	*	159		Permax™ 232	Very soft, controlled moisture vapor transmission rates, ionic compatibility	High performance textile coating applications, component of topcoat formulations
Sancure™ 1004 A	Polyester		13.5	40	1.08	9.5	500	2.2		Sancure™ 1004 A	2100 (16.54)	2500 (19.69)	180	36	18.6	yes	no	183		Sancure™ 1004 A	Flame retardent/Inherently flame retardting, stiff hand, excellent UV and heat stability	Home furnishings, technical textiles
Sancure™ 1073C	Polyester		9.8	30	1.09	9	50	1.5		Sancure™ 1073C	*	7000 (55.12)	18	34	20.3	yes	yes	207		Sancure™ 1073C	Chemical resistant, flame retardant, readily crosslinkable	Top coat, flame retardant finish
Sancure™ 12324	Polyester		10.2	32	1.07	8.3	<100	1.6		Sancure™ 12324	4300 (33.86)	5200 (40.94)	150	46	27.5	yes	yes	184		Sancure™ 12324	Hard, high gloss, abrasion resistant	OPV, rewettable ink formulations
Sancure™ 12929	Polyester		9.9	40	1.06	7.6	110	1.5		Sancure™ 12929	270 (2.13)	2674 (21.06)	650	2	14.4	yes	yes	124		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	Polyester		10.2	41.5	1.07	9	150	1.9		Sancure™ 1301	1700 (13.39)	4000 (31.50)	320	12	28.6	yes	yes	160		Sancure™ 1301	Abrasion resistant, flexible, readily crosslinkable, adhesion to a variety of substrates	Printing inks, OPV
Sancure™ 1511	Polyester		11.3	35	1.08	8.6	1250	2		Sancure™ 1511	3000 (23.62)	4600 (36.22)	240	26	31.5	yes	yes	141		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	Polyester		11.8	35	1.06	8.5	1500	1.4		Sancure™ 1601	400 (3.15)	4525 (35.63)	550	32	21.7	yes	yes	153		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	Polyester	•	0.02	47	1.05	9.7	500	1.2		Sancure™ 20025F	300 (2.36)	544 (4.28)	1100	5	12	yes	yes	166		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	Polyester	•	0	34	1.05	8	150	1.9		Sancure™ 20041	3400 (26.77)	5200 (40.95)	330	*	20.3	*	*	184		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 Polyester		0	42	1.02	6	60	4		Sancure™ 20051	1000 (7.87)	4000 (31.50)	600	*	*	*	*	*		Sancure™ 20051	Cationic dispersion, can be crosslinked, chemical and abrasion resistance	Textile, paper, leather and nonwoven
Sancure™ 20066	Polyether		8	40	1.02	7.5	200	1.1		Sancure™ 20066	440 (3.46)	5000 (39.37)	680	*	*	No	*	*		Sancure™ 20066	Tough, flexible hydrolysis resistant	Textile and nonwoven coating formulation
Sancure™ 20072	Cationic Polyester	•	0	30	1.025	6	20	0.8		Sancure™ 20072	1000 (7.87)	3900 (30.71)	*	*	*	*	*	*		Sancure™ 20072	Cationic dispersion, non yellowing, crosslinkable, improves jet printing performance	Ink jet printing
Sancure™ 2026C	Polyester		6.9	40	1.06	8	500	1.3		Sancure™ 2026C	950 (7.48)	4200 (33.07)	560	14	14.8	yes	yes	185		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	Polyester		8.5	49	*	8	1500	1		Sancure™ 2255	700 (5.51)	3300 (25.98)	550	10	11.7	Yes	yes	*		Sancure™ 2255	Low VOC, fast drying, high solids	Soft urethane. Used in high build coatings, rope coatings
Sancure™ 2310	Polyether		7.1	40	*	9	500	1		Sancure™ 2310	460 (3.62)	2700 (21.26)	720	*	*	yes	*	*		Sancure™ 2310	Soft flexible PUD, clear, tough abrasion resistant films, hydrolytic stability	Excellent adhesion to fabrics, textile coatings
Sancure™ 2710	Polyether	•	0	40	1.02	8	1000	1.3		Sancure™ 2710	650 (5.12)	2600 (20.47)	580	6	14.4	1 cycle	No	178		Sancure™ 2710	Cosolvent free, abrasion/chemical resistance, readily crosslinkable, light stable, film former	Textiles, plastic coatings, metal coatings
Sancure™ 2715	Polyether	•	0	38	1.03	8	500	1.4		Sancure™ 2715	1100 (8.66)	3000 (23.62)	350	14	17.7	3 cycles	no	181		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	Polyester		8.5	35	*	10	500	2.1		Sancure™ 777F	2000 (15.75)	5100 (40.16)	410	32	21.4	yes	yes	*		Sancure™ 777F	Shear stability, abrasion resistance, adhesion, high gloss, good adhesin to nylon and polyester	Textile binder or topcoat, flexible PVC
Sancure™ 815	Polyester		8.4	35	1.06	8	125	2.3		Sancure™ 815	4100 (32.38)	5450 (42.91)	220	36	29.5	yes	yes	161		Sancure™ 815	Excellent heat sealability and -adhesion to vinyl, high gloss, abrasion resistance, alkali/detergent resistance	Vinyl topcoats, OPV, Ink vehicles, textiles
Sancure™ 825	Polyester		8.1	34	1.04	8.5	425	1.8		Sancure™ 825	4800 (37.80)	6600 (51.97)	200	34	19.8	yes	yes	177		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 Carboaset® Acrylics
Sancure™ 835	Polyester		13.1	40	1.06	8.5	75	1.1		Sancure™ 835	345 (2.72)	4900 (38.58)	600	4	13.8	yes	yes	152		Sancure™ 835	Adhesion to wide range of substrates, non-yellowing, soft but tough	Automotive, flexible plastic, textile
Sancure™ 843C	Polyester		8.9	32	1.05	8	400	3.3		Sancure™ 843C	3300 (25.98)	4800 (37.80)	279	38	26.7	yes	yes	227		Sancure™ 843C	Hard, self-crosslinking polymer, excellent chemical resistance, alcohol/ mar resistance, hard but flexible	Wood and plastic substrates, metal coatings
Sancure™ 861	Polyether	•	0	40	1.02	7.5	<90	1.3		Sancure™ 861	600 (4.72)	3900 (30.71)	770	21	14.6	1 cycle	no	178		Sancure™ 861	Cosolvent free, abrasion/chemical resistance, hydrolytic stability	Textiles, plastic coatings, metal coatings
Sancure™ 878	Polyether	•	0	38	1.03	7.5	<100	1.4		Sancure™ 878	1300 (10.24)	3600 (28.35)	500	14	17.7	3 cycles	no	181		Sancure™ 878	Cosolvent free, abrasion/chemical resistance, hydrolytic stability	Textiles, plastic coatings, metal coatings
Sancure™ 895	Polyester		8	35	1.06	8	700	1.9		Sancure™ 895	3000 (23.62)	4100 (32.28)	300	38	24.2	3 cycles	yes	193		Sancure™ 895	High gloss, chemical/UV resistance, easily crosslinkable, adhesion	Vinyl coatings, plastic coating, paper coating
Sancure™ 898	Polyester		7.6	32	1.06	8	<250	1.9		Sancure™ 898	4320 (34.02)	5600 (44.09)	180	48	35.3	yes	yes	186		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	Polyester		8.2	35	1.06	8	700	1.9		Sancure™ 899	2100 (16.54)	3600 (28.35)	300	38	24.2	yes	yes	193		Sancure™ 899	High gloss, chemical/UV resistance, easily crosslinkable, adhesion	Vinyl coatings, plastic coating, paper coating
Sancure™ 970	Polyester	•	0	42	1.06	8.4	500	1.4		Sancure™ 970	3100 (24.41)	5600 (44.09)	360	*	*	No	*	*		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	Acrylic/Polyester		5.5	36	1.05	8	75	1.9		Sancure™ AU4010	*	*	*	36	*	no	yes	*		Sancure™ AU4010	Self-crosslinking, low odor, chemical/stain/war/scuff resistance, non-yellowing	High performance clear wood floor and furniture finishes
Sancure™ OM-945	Oil Modified Polyester		2.9	45	1.06	8	800	1.3		Sancure™ OM-945	*	*	*	*	*	yes	yes	*		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	Polycarbonate/Polyester		5.6	42	1.06	8	350	1.2		Sancure™ PC55	400 (3.15)	3500 (27.56)	650	*	13.9	*	*	*		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	Polyester	•	0	40	1.06	8.7	90	1.6		Turboset™ 2027	2325 (18.31)	3350 (26.38)	300	*	*	no	*	*		Turboset™ 2027	Excellent wear resistance, good chemcial resistance	Wood floor finishes, medium VOC level
Turboset™ Ultra Eco	Polyether	•	0.04	36	1.04	8.3	250	0.8		Turboset™ Ultra Eco	2200 (17.32)	3800 (29.92)	330	*	*	no	*	*		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	Polyester		4.5	36.5	1.06	8.3	175	0.6		Turboset™ Ultra Pro	4020 (31.65)	4160 (32.76)	110	*	*	*	*	*		Turboset™ Ultra Pro	Fulfils MFMA requirements, 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, <75 g/l EU Method. *Not yet measured

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