

The Lubrizol logo is displayed in white italicized text on a black background.

PERFORMANCE COATINGS

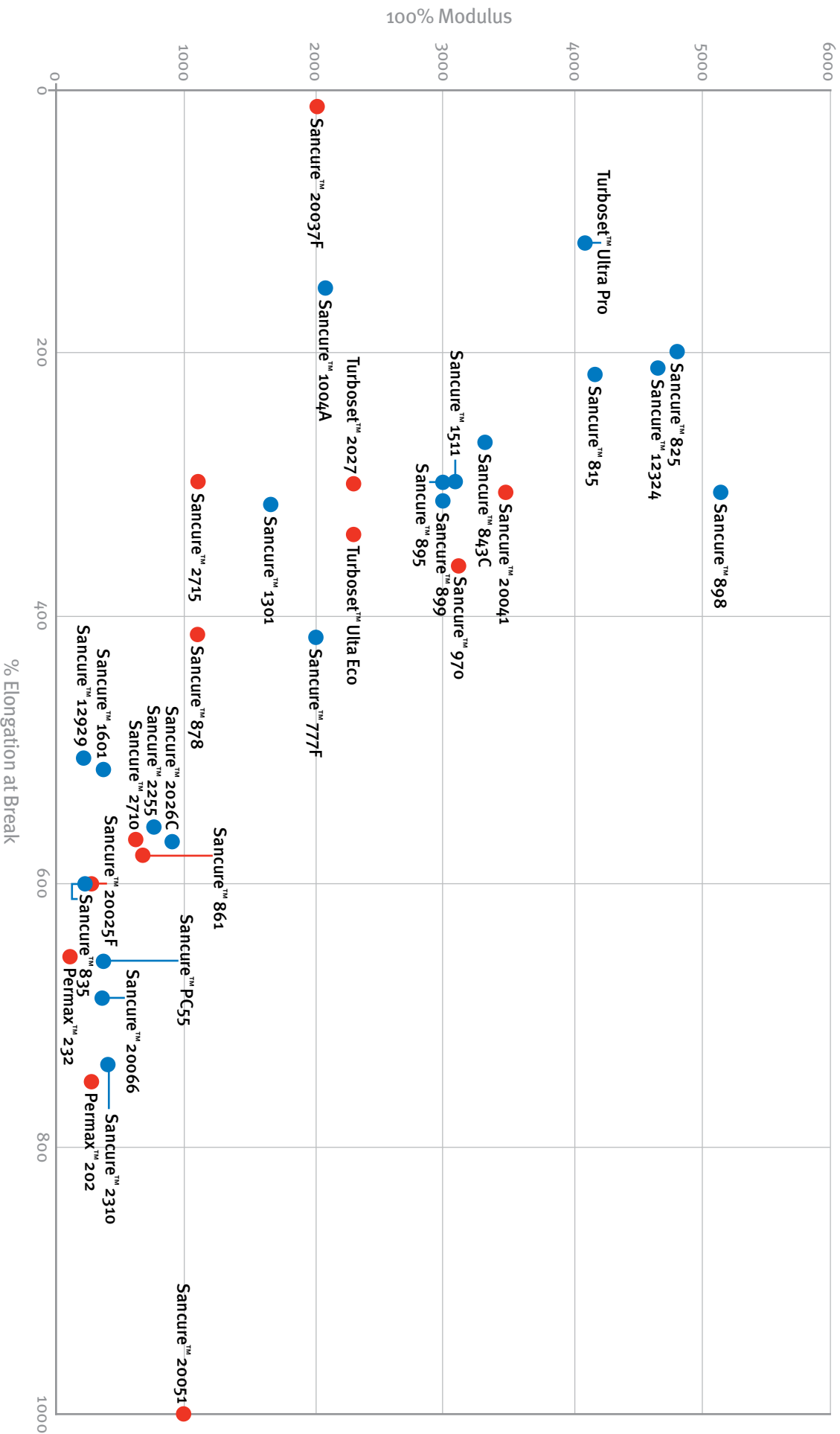


PAINTS, COATINGS,
TEXTILES AND
SPECIALTY
APPLICATIONS



POLYURETHANE DISPERSIONS PRODUCT GUIDE

Mechanical Properties



LUBRIZOL POLYURETHANE DISPERSIONS

PRODUCT NAME	PRODUCT TYPE	NMP FREE	% SOLIDS	% SOLVENT	SPECIFIC GRAVITY	pH	VISCOSITY IN cP
Aptalon™ W8060	Polyamide	•	36	0	*	8	500
Aptalon™ M8100	Polyamide	•	37	0.85	1.04	8	<500
Permax™ 202	Polyether	•	41	0	*	5.4	1000
Permax™ 232	Polyether	•	35	0	*	5.4	750
Sancure™ 1004 A	Polyester		40	13	1.08	9.5	500
Sancure™ 1073C	Polyester		30	9.9	1.09	9	50
Sancure™ 12324	Polyester		32	10.3	1.07	8.5	50
Sancure™ 12929	Polyester		40	11.2	1.06	8	1000
Sancure™ 1301	Polyester		41.5	9.8	1.07	9	150
Sancure™ 1511	Polyester		35	11.3	1.08	9	1000
Sancure™ 1601	Polyester		35	11.3	1.06	8.5	1500
Sancure™ 20025F	Polyester	•	47	0	1.05	8	500
Sancure™ 20037F	Polyester	•	38	0	1.07	7.6	80
Sancure™ 20041	Polyester	•	34	0	1.05	8	150
Sancure™ 20051	Cationic-Polyether	•	42	*	1.02	6	60
Sancure™ 20066	Polyether		40	*	1.02	7.5	200
Sancure™ 20072	Cationic-Polyether	•	30	0	1.025	6	20
Sancure™ 2026C	Polyester		40	6.8	1.06	8	500
Sancure™ 2255	Polyester		49	8.5	*	8	1500
Sancure™ 2310	Polyether		40	*	*	9	500
Sancure™ 2710	Polyether	•	40	0	1.02	8	1000
Sancure™ 2715	Polyether	•	38	0	1.03	8	500
Sancure™ 777F	Polyester		35	8.1	*	10	500
Sancure™ 815	Polyester		35	8.5	1.06	8	125
Sancure™ 825	Polyester		34	8.1	1.04	8.5	425
Sancure™ 835	Polyester		40	13.6	1.06	8.5	75
Sancure™ 843C	Polyester		32	9.3	1.05	8	400
Sancure™ 861	Polyether	•	39	0	1.02	8	1000
Sancure™ 878	Polyether	•	38	0	1.03	8	350
Sancure™ 895	Polyester		35	8	1.06	8	700
Sancure™ 898	Polyester		32	7.8	1.06	7.8	200
Sancure™ 899	Polyester		35	8	1.06	9	700
Sancure™ 970	Polyester Composite	•	42	0	1.06	8.4	500
Sancure™ AU4010	Acrylic/Polyester		36	5.4	1.05	8	75
Sancure™ OM-945	Oil Modified		45	3.5	1.06	8	800
Sancure™ PC55	Polycarbonate/Polyester		42	*	1.06	8	350
Turboset™ 3109	Polyester Composite	•	*	0	*	*	*
Turboset™ 2027	Polyester Composite	•	40	0	1.06	8.7	90
Turboset™ Ultra Eco	Polyether Composite	•	36	0	1.04	8.3	250
Turboset™ Ultra Pro	Polyester		36.5	*	1.06	8.3	175

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

SANCURE™									
PRODUCT NAME	100% MODULUS PSI/MPa	TENSILE STRENGTH PSI/MPa	ELONGATION AT BREAK (%)	SWARD ROCKER HARDNESS	ACID NUMBER	FREEZE THAW STABILITY (ASTM 2243)	THERMAL STABILITY 120°F/30 DAYS	SOFTENING POINT (°C)	
Aptalon™ W8060	4150/29	5493/38	140	*	*	No	*	*	
Aptalon™ M8100	*/*	*/*	*	*	*	No	*	*	
Permax™ 202	310/*	5000/*	750	*	*	Yes	*	159	
Permax™ 232	160/*	1300/*	650	*	*	Yes	*	159	
Sancure™ 1004 A	2100/14	2500/21	180	36	19	Yes	No	183	
Sancure™ 1073C	NA	7000/48	18	34	20	Yes	Yes	207	
Sancure™ 12324	4700/32	6100/42	220	46	28	Yes	Yes	184	
Sancure™ 12929	220/2	2674/16	550	2	14	Yes	Yes	124	
Sancure™ 1301	1700/12	4000/28	320	12	29	Yes	Yes	160	
Sancure™ 1511	3150/22	5500/38	250	26	32	Yes	Yes	141	
Sancure™ 1601	400/3	4525/31	550	32	22	Yes	Yes	153	
Sancure™ 20025F	300/2	4100/28	1000	5	12	Yes	Yes	166	
Sancure™ 20037F	2000/*	2700/19	75	30	19	Yes	Yes	177	
Sancure™ 20041	3400/23	5200/36	330	*	20	*	*	184	
Sancure™ 20051	1000/7	4000/28	1000	*	*	*	*	*	
Sancure™ 20066	440/3	5000/34	680	*	*	No	*	*	
Sancure™ 20072	1000/*	3900/*	*	*	*	*	*	*	
Sancure™ 2026C	950/7	4200/29	560	14	15	Yes	Yes	185	
Sancure™ 2255	700/5	3300/23	550	10	12	Yes	Yes	*	
Sancure™ 2310	460/*	2700/*	720	*	*	Yes	*	*	
Sancure™ 2710	650/5	2600/18	580	6	14	No	No	178	
Sancure™ 2715	1100/8	3000/23	350	14	18	Yes	No	181	
Sancure™ 777F	2000/14	5100/35	410	32	21	Yes	Yes	*	
Sancure™ 815	4100/28	5450/38	220	36	30	Yes	Yes	161	
Sancure™ 825	4800/33	6600/46	200	34	20	Yes	Yes	177	
Sancure™ 835	345/2	4900/34	600	4	14	Yes	Yes	152	
Sancure™ 843C	3300/23	4800/33	279	38	27	Yes	Yes	227	
Sancure™ 861	600/5	2600/18	580	21	15	No	No	178	
Sancure™ 878	1100/8	3300/23	425	14	18	Yes	No	181	
Sancure™ 895	3000/21	4100/28	300	38	24	Yes	Yes	193	
Sancure™ 898	5125/35	6100/42	300	48	35	Yes	Yes	186	
Sancure™ 899	3000/21	4100/28	300	38	24	Yes	Yes	193	
Sancure™ 970	3100/21	5600/39	360	*	*	No	*	*	
Sancure™ AU4010	*	*	*	36	*	No	Yes	*	
Sancure™ OM-945	*	*	*	*	*	Yes	Yes	*	
Sancure™ PC55	400/3	3500/24	650	*	14	*	*	*	
Turboset™ 3109	*	*	*	*	*	*	*	*	
Turboset™ 2027	2325/16	3350/23	300	*	*	No	*	*	
Turboset™ Ultra Eco	2200/*	3800/*	330	*	*	No	*	*	
Turboset™ Ultra Pro	4020/28	4160/29	110	*	*	*	*	*	



PRODUCT NAME	DESCRIPTION	SUGGESTED USES
Aptalon™ W8060	Amide-based, self-crosslinking PUD, balanced properties on a high level, high chemical resistance and low wear	Highly demanding areas with wooden floors such as sports floors or restaurants
Aptalon™ M8100	Amide-based, self-crosslinking PUD, high hydrolysis resistance, chemical resistance and hardness	Exterior metal topcoats, thermal-cured DTM, applications with high corrosion resistance requirements
Permax™ 202	Soft, controlled moisture vapor transmission rates, ionic compatibility	High performance textile coatings applications; component of topcoat formulations
Permax™ 232	Very soft, controlled moisture vapor transmission rates, ionic compatibility	High performance textile coatings applications; component of topcoat formulations
Sancure™ 1004 A	Flame retardant/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 resistance, 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 coatings, 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 heat reactive	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™ 20037F	Flame retardant/low VOC, adhesion, crosslinkable, good light fastness	Stiff binder for polyester and nylon coatings, vertical blinds, window shades, nonwovens
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 formulations where wash durability is required
Sancure™ 20072	Cationic dispersion, non yellowing, crosslinkable, improves jet printing performance	Inkjet 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; firm hand, low VOC; tough film with fast property development, medium hard urethane
Sancure™ 777F	Shear stability, abrasion resistance, adhesion, high gloss, good adhesion to nylon and polyester	Textile binder or topcoat for 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	Coatings 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 applications (isocyanate or aziridin)
Sancure™ AU4010	Self-crosslinking, low odor, chemical/stain/mar/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 & 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™ 3109	PUD blend; balances the price/performance ratio, good chemical and wear resistance	Residential wood floors in 1K applications
Turboset™ 2027	Excellent wear resistance, good chemical resistance	Wood floor finishes, medium VOC level
Turboset™ Ultra Eco	Ultra low VOC, excellent wear resistance, good chemical resistance, adhesion to multiple substrates include solvent-borne stains	Low VOC floor coatings, 1 K, sports floors, high traffic areas
Turboset™ Ultra Pro	Fulfills MFMA requirements, high gloss for sports floors	Floor coatings where NMP is not an issue

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The Lubrizol logo features the word "Lubrizol" in a bold, italicized, sans-serif font. A blue swoosh underline is positioned beneath the letters "u", "b", and "r".

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