Lubrizol

CARBOSET®

TURBOSET™

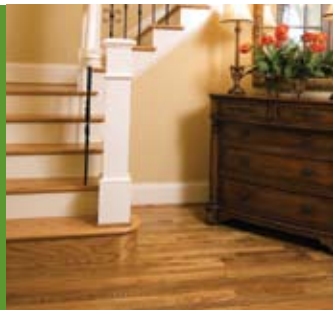
SANCURE®

PERMAX®

HYSTRETCH®

PRODUCT SELECTION GUIDE

High-Performance Polymers and Additives for Paints, Coatings and Adhesives



VYCAR®

LANCO™

AQUASLIP™

DORESCO®

SOLSPERSE®

SOLPLUS®

SOLTHIX®

IRCOGEL®

IRCOTHIX®

CARBOPOL®

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Lubrizol supplies a comprehensive portfolio of products designed to meet most any paint and coatings application challenge. From the resins and polymers that bind the system together to the specialty additives that enhance performance, we supply the technology to help you formulate the innovative products in today's demanding production environments.

And Lubrizol offers more than just high-performance products. With multiple production facilities worldwide, we are well-equipped to serve customers on a global basis. Lubrizol provides advanced research and development, comprehensive analytical lab services, material testing and toll manufacturing – all backed by a focus on customer service that's unparalleled in the industry.

Resins & Polymers

Lubrizol offers a diverse line of resins and polymers available for the paints and coatings industry, helping to enhance end-product performance. From acrylic emulsions to urethane dispersions, Lubrizol has over 40 years of experience in specialty solvent and waterborne polymers, offering added durability, enhanced aesthetic appeal and resistance to chemicals, water and abrasion. Whether you are involved in specialty architectural coatings, industrial finishes or maintenance coatings we have the products to meet your needs.

Surface Modifiers

Lubrizol surface modifiers are low molecular weight polymers that are designed to protect and enhance the appearance of a coating surface. Lanco™ surface modifiers are available in dry micronized powders, solvent or water based dispersions and emulsified forms. Lubrizol's focus is on polymer formulations tailored to meet the performance requirements of your coating and strict control of particle size distribution to guarantee batch to batch consistency. In addition, Lanco Flow acrylic polymers are available for solvent-based liquid coating and powder coating applications. Lanco Flow products are used to protect against common problems such as craters, pinholes and fisheyes, as well as to improve surface wetting and eliminate orange peel effects.

The single-source supplier for all your coatings requirements.

Hyperdispersants

Lubrizol's hyperdispersant product platform includes high-performance dispersant and rheology control technologies based on a range of polymeric additives engineered for optimal particle interaction. Solsperse® and Solplus® dispersants and synergists enable the production of high pigment content, low viscosity dispersions with exceptional stability. Carbopol®, Ircogel®, Ircothix®, and Solthix® rheology control agents are efficient and easy-to-use, providing sag control and preventing settling in a wide range of coatings applications.

Specialty Additives

Lubrizol's other additive technologies include Lubrizol® products designed to improve adhesion and prevent corrosion of solvent-based and water-based direct-to-metal coatings. The polymeric phosphate ester based adhesion promoters can also passivate and stabilize metallic pigments in certain water-based applications.

Lubrizol is here to provide a ready-to-use solution. What can we make for you?

Carboset® Acrylic Emulsions

Carboset Emulsion	Appearance	% Solids	pH	Viscosity (cP)	MFFT* (°C)	Specific Gravity	Freeze Thaw	Description/Suggested Uses
2790	Milky White	46	8.5	<500	10	1.02	Protect	Acrylic copolymer designed for low VOC stain-blocking primer applications. Excellent adhesion and compatibility.
7722	Milky White	50	8.9	<500	<5	1.06	Protect	Higher solids emulsion with wide versatility for low-VOC high-gloss, semi-gloss, satin and flat enamels. Provides high-performance, scrub-resistance, block-resistance, and wet alkyd adhesion. Excellent adhesion when formulated as a multi-surface primer.
7733	Milky White	50	8.0	<500	21	1.06	Protect	Acrylic copolymer designed for high gloss interior and exterior architectural applications. Easy to formulate with excellent compatibility and versatility.
CA-600	Milky White	42	8.3	40	25	1.06	Pass	Self-crosslinking acrylic emulsion specifically developed for a wide range of horizontal masonry coatings. Non-blushing, exterior durability, chemical-resistant and early-water resistant.
CR-715	White Translucent	41	8.4	60	38	1.03	Protect	Acrylic copolymer with excellent chemical-resistance and early hardness development with exceptional appearance, especially on wood surfaces.
CR-716	White Translucent	42	7.6	40	75	1.04	Protect	Water-white, very hard emulsion with outstanding print- and block-resistance, even at 140°F. Passes KCMA specs. Low-microfoam, excellent clarity for use over dark and pastel (bleached) stains. Can be blended with Sancure® polyurethane dispersions.
CR-728	Opaque	42	8.0	25	45	1.05	Protect	Self-crosslinking acrylic emulsion developed for use in a variety of wood finish applications. It has exceptional water- and chemical-resistance.
CR-760	Milky White	42	8.0	100	23	1.03	Protect	Superior water-humidity-and salt-spray resistance. Suggested for a wide variety of maintenance -finishes, high-gloss/semi-gloss enamels, industrial enamels, and interior stain-blocking primers. Produces excellent waterproofing masonry coatings.
CR-761	Milky White	42	8.0	50	37	1.03	Protect	Suggested for metal, wood and plastic coatings. Excellent for DTM and trade sales high-gloss enamels. Low MVTR makes it excellent for concrete curing membranes and sealers. Suitable for railcar and industrial primers and topcoats.
CR-765	Milky White	41.5	8.2	75	34	1.03	Protect	Specifically designed for DTM applications but also excellent for primers and topcoats. High gloss, stain resistant DTM coatings with excellent adhesion to metal, plastic, wood and masonry substrates. Excellent block-resistance.
CR-781	Milky White	41.5	9.0	25	70	1.06	Protect	Self-crosslinking emulsion designed specifically for interior automotive rigid plastic applications. Outstanding resistance to stains and cleaning chemicals. Excellent adhesion to automotive-grade plastics. Stability with aluminum pigments. Passes typical OEM specs.
CR-785	Milky White	42.5	8.0	40	44	1.03	Protect	Designed for industrial gloss enamels that require excellent hydrocarbon-resistance combined with excellent water-resistance, such as automotive or machinery coatings that require gasoline-resistance. Excellent concrete coating, sealer, curing membranes.
CR-795	Milky White	45	8.3	75	24	1.03	Protect	Acrylic emulsion designed for excellent adhesion combined with superior resistance properties and corrosion-resistance.
PC-23	Opaque	42	8.4	125	77	1.05	Protect	Self-crosslinking acrylic copolymer emulsion designed for high-performance air- or force-dry, factory-applied OEM plastic coatings for interior automotive and consumer electronic equipment. Stability with aluminum pigments.

*MFFT = Minimum Film Forming Temperature

Carboset® Acrylic Emulsions *(continued)*

Carboset Emulsion	Appearance	% Solids	pH	Viscosity (cP)	MFFT* (°C)	Specific Gravity	Freeze Thaw	Description/Suggested Uses
PL-958	Milky White	47	8.0	65	<10	1.07	Protect	Clear or pigmented peelable coatings. Excellent release from a variety of substrates. Good tensile and elongation. Very low VOC coatings. For spray booth coatings, temporary product protectants and paint maskants. Suitable for some FDA applications.
AE-960	Opaque	55	8.5	<2000	<0	1.02	Pass	High solids, 100% acrylic emulsion specifically developed for elastomeric vertical masonry coatings.
SA-820	Opaque	49	8.3	<10,000	0	1.03	Protect	Styrene acrylic emulsion specifically developed for elastomeric vertical masonry coatings. These include a variety of construction materials, such as concrete block, brick, stucco and EIFS, and fiber-cement surfaces.
SA-860	Opaque	50	8.3	<9000	21	1.03	Pass	Styrene acrylic emulsion specifically developed for elastomeric vertical masonry coatings. These include a variety of construction materials, such as concrete block, brick, stucco and EIFS, and fiber-cement surfaces.

Carboset® Acrylic Colloidal Dispersions, Resins & Solutions

Carboset Dispersion	Appearance	% Solids	pH	Viscosity (cP)	Tg (°C)	MFFT* (°C)	Specific Gravity	Freeze Thaw	Acid Number	Description/Suggested Uses
510	Translucent	40	7.0	<1,000	38	3	1.07	Pass	75	Zero VOC, excellent flow, penetration and resolubility. Designed for waterborne wood stains in low VOC formulations.
511	Translucent	30	6.7	40	55	12	1.05	Pass	75	Firm, high acid polymer. Tough binder when crosslinked.
514H	Translucent	40	7.0	350	28	<10	1.05	Pass	65	Soft, higher acid dispersion. Excellent rewet uncrosslinked.
515	Viscous Liquid	99	NA	2,000,000	-14	<0	1.1	Pass	63	Polymeric plasticizer. Adhesion promoter.
525	Dry Solid	100	NA	NA	37	NA	1.2	Pass	80	Solid all acrylic resin with excellent adhesion to a variety of substrates. Can produce a permanent water-resistant coating or temporary alkaline-removable coating.
527	Dry Solid	100	NA	NA	54	NA	NA	Pass	80	100% dry granular version of Carboset 511.
531	Translucent	25	7.8	7,000	60	17	1.03	Pass	32	Thermoset acrylic recommended for bake finishes. Produces extremely hard, tough, stain-resistant finishes. Coatings possess excellent water-, humidity- and corrosion-resistance. Excellent pigment-wetting characteristics.
560	Translucent	27	7.6	30	47	17	1.03	Pass	116	An acrylic colloidal dispersion with excellent water- and UV-resistance. Easily removable with alkali cleaners. Recommended for temporary (alkali-strippable) coatings requiring excellent water-resistance. Suitable for use in dry film lubricants.

*MFFT = Minimum Film Forming Temperature

Turboset™ 2025 Self-Crosslinking Polyurethane Dispersion

Turboset Polyurethane	Type	% Solids	pH	Viscosity (cP)	Cosolvent (% NMP)	VOC (g/l)	100% Modulus (psi)	Tensile Strength (psi)	Elongation at Break (%)	Description/Suggested Uses
2025	Aliphatic Self-Crosslinking	36	8.2	< 500	1.0	170	4,400	6,100	200	Urethane dispersion developed for one-componet, high-performance wood coatings. Delivers the performance of a two-component system without any additional crosslinker. Easy to apply with superior clarity and appearance while providing exceptional abrasion-resistance. Meets MFMA specifications.

Sancure® Polyurethane Dispersions

	Sancure Polyurethane	Type	% Solids	pH	Viscosity (cP)	Cosolvent (% NMP)	VOC (g/l)	100% Modulus (psi)	Tensile Strength (psi)	Elongation at Break (%)	Description/Suggested Uses
ALIPHATIC	777	Polyester	35	10.0	75	8.1	253	2,000	5,100	410	Polymer with outstanding shear stability and excellent abrasion-resistance. Good adhesion to nylon and polyester.
	815	Polyester	35	8.0	125	8.5	261	4,100	5,450	220	Excellent heat sealability and -adhesion to vinyl.
	825	Polyester	34	8.0	425	8.1	321	4,800	6,600	200	Coating for rigid surfaces such as wood, concrete and plastics. Blends well with Carboset® acrylics.
	835	Polyester	40	8.0	<75	13.2	297	345	4,900	600	Soft, tough polymer with excellent adhesion to a wide range of -substrates.
	843	Polyester	32	9.3	400	9.3	334	3,300	4,800	270	Hard aliphatic urethane. Self-crosslinking, gives excellent chemical resistance. For use in wood and plastic coatings.
	898	Polyester	32	7.8	200	7.8	258	5,125	6,100	300	Forms very hard but flexible coatings with good stain-and chemical-resistance. Fine particle size.
	899	Polyester	35	8.0	700	8.0	243	3,000	4,100	300	Good adhesion to plasticized vinyl. Excellent UV-resistance.
	1301	Polyester	40	9.0	150	9.8	250	1,700	4,000	320	Good adhesion to a variety of substrates.
	1828	Polyester	35	8.0	500	8	243	4,900	5,200	150	Designed for use with high-speed buffing machines. Excellent black heel mark and powdering resistance.
	2026	Polyester	40	8.0	500	6.8	187	950	4,200	560	Weather-resistant coatings, good heat-seal properties. Forms soft, flexible, clear film. Has excellent elongation and toughness.
	2255	Polyester	49	8.0	1,500	8.5	177	700	3,300	550	High solids, rapid drying, soft aliphatic urethane. For use in high-build coatings.
	2710	Polyether	40	8.0	550	0	30	500	2600	675	Medium hand, low VOC. A tough film with fast property development. Medium hard aliphatic polyester urethane. Blendable with Sancure 2715 to increase hardness.
	2715	Polyether	38	8.0	500	0	31	1,100	3,300	425	Firm hand, low VOC. A tough film with fast property development. Medium hard aliphatic polyester urethane. Blendable with Sancure 2710.

Sancure® Polyurethane Dispersions *(continued)*

	Sancure Polyurethane	Type	% Solids	pH	Viscosity (cP)	Cosolvent (% NMP)	VOC (g/l)	100% Modulus (psi)	Tensile Strength (psi)	Elongation at Break (%)	Description/Suggested Uses
ALIPHATIC	12929	Polyester	40	8.0	1,000	11.2	263	220	2,300	550	Soft textured coatings. Heat sealable at low temperatures. Soft, tough plastic coating.
	20041	Polyester	34	8.0	< 200	0	41	3,400	5,200	330	Hard, aliphatic NMP-free urethane developed for coating rigid substrates, especially wood. Excellent compatibility with acrylic polymers and crosslinkable.
	20025F	Polyester	48	8.0	500	0	<1.5	300	4,100	1,000	Low VOC, elastic polymer. Good heat-sealability.
WATERBORNE OIL & MODIFIED	OM-933	Aliphatic Oil Modified	33	8.0	100	2.5	90	NA	NA	NA	Self-crosslinking, oil-modified urethane dispersion for residential and commercial wood floor finishes with excellent durability, appearance and application ease. Exhibits exceptional outdoor durability.
	OM-945	Aliphatic Oil Modified	45	8.0	1,000	3.5	91	NA	NA	NA	High-solids, self-crosslinking, oil-modified urethane dispersion for residential and commercial wood floor finishes with excellent durability, appearance and application ease. Exhibits exceptional outdoor durability.
AROMATIC	1511	Polyester	35	9.0	1,000	11.3	307	3,150	5,500	250	Urethane with a good balance of hardness and flexibility. Use where UV exposure is not a concern.
	1601	Polyester	35	8.5	1,500	11.3	306	400	4,525	550	Heat reactivatible coating with excellent adhesion to many substrates.
FLAME RETARDANT	1004A	Polyester	40	9.5	500	13.0	321	2,100	3,100	335	Inherently flame retarding, stiff hand. Excellent UV and heat stability.
	1073C	Polyester	30	9.0	450	9.9	378	NA	7,000	18	Very stiff, flame-retarding, and stain-resistant.
	20037	Polyester	38	7.5	500	0	150	2,000	2,700	120	Flame-retarding, stiff binder for polyester and nylon coatings. Good light fastness.
URETHANE/ACRYLIC COPOLYMERS	AU-4010	Urethane/ Acrylic	37	8.0	200	5.4	194	NA	NA	NA	A one-component, self-crosslinking aliphatic polyurethane-acrylic hybrid for high-performance clear wood floor finishes.

Sancure polyurethanes are surfactant-free dispersions of carboxylated urethane polymers, based on a wide range of chemical raw materials. The above chart displays products with the range of properties that is considered most useful to the formulator of specialty finishes.

Most Sancure polyurethanes may be used alone or blended with other polymers to increase toughness, adhesion, low-temperature flexibility, etc. When blending Sancure polyurethanes with other emulsion polymers, special care must be taken, including bench scale testing for compatibility. Please consult your Lubrizol sales or technical representative for helpful advice.

Lubrizol Permax® Emulsions

Permax Emulsion	Charge	% Solids	pH	Viscosity (cP)	100% Modulus (psi)	Tensile Strength (psi)	Elongation at Break (%)	Description/Suggested Uses
201	N	41	5.5	1500	400	3000	600	Aliphatic polyether waterborne urethane polymers that provide high MVTR. Recommended in waterproof breathable fabric construction for sports wear, protective apparel, military gear, tents and footwear applications.
230	N	33	5.6	600	500	1,200	400	Aliphatic polyether waterborne urethane polymers that provide high MVTR. Recommended in waterproof breathable fabric construction for sportswear, protective apparel, military gear, tents and footwear applications.
300	N	42	7.0	500	130	900	670	Self-crosslinking aromatic polyether waterborne urethane polymer that -provides high MVTR. Recommended in high-performance applications requiring soft, breathable high MVTR properties.

HyStretch® Non-Skid Coatings

HyStretch Emulsion	Tg (°C)	Charge	% Solids	pH	Specific Gravity	Viscosity (cP)	Heat Reactive	Carboxylated	Description/Suggested Uses
V-60	-60	A	50	8.0	1.01	40	•	•	Ultra-soft, hydrophobic, slightly tacky. Anti-skid coatings. Tack is non-migratory, will not transfer.
V-43	-43	A	50	8.5	1.03	200	•	•	Very soft and elastic. Backcoatings, anti-pill, nonwoven and paper saturant.
V-43 FDA	-43	A	50	8.5	1.03	200	•	•	Version of HyStretch V-43 with FDA-compliance for food contact.
V-29	-29	A	49	8.0	1.04	70	•	•	Soft and elastic. Solvent-resistant. Outdoor fabric coatings with -excellent UV stability, dirt-resistance, and low-temperature flexibility.

Key: A = Anionic
N = Nonionic

HyStretch elastomer emulsions are a Lubrizol breakthrough: patented technology that yields a unique combination of polymer properties. They are as elastic as natural rubber, yet as heat and light stable as synthetic acrylics. Creative formulators have discovered new, innovative applications based on HyStretch emulsions.

Vycar® PVC Emulsions

	Vycar Emulsion	Tg (°C)	Charge	% Solids	pH	Specific Gravity	Viscosity (cP)	Heat Reactive	Carboxylated	Description/Suggested Uses
PVC-ACRYLIC COPOLYMER	590X20	-17	A	49	10.0	1.13	100	•	•	Flame-retarding backcoatings with superior cost/performance vs. compounded acrylic. Vycar 590X20 is phosphate plasticized.
	FT-9	-13	A	50	8.8	1.09	150	•	•	Flame-retarding backcoatings with superior cost/performance vs. compounded acrylic. Vycar 590X20 is phosphate plasticized.
	460X46	+7	A	49	5.0	1.09	40	•	•	Flame-retarding backcoatings with superior cost/performance vs. compounded acrylic. Vycar 590X20 is phosphate plasticized.
	460X119	+37	A	48	7.0	1.12	40	•	•	Develops excellent cure, even at lower temperatures, with or without catalyst. Offers excellent water-and chemical-resistance, a range of firmness and contributes to flame-retardance. It can be used for lamination, heat-sealing and general saturation or spray bond.
	460X49	+40	N	50	5.0	1.13	20	•	•	Exceptional mechanical stability. For spraying, padding, printing, coating, etc. Excellent water-and chemical-resistance. Heat-sealable.
	TN-810	+55	A	52	8.5	1.16	20	•	•	Incorporates latent reactivity, which enables an impregnated fabric to be dried, shaped and subsequently thermoset. Resulting structures exhibit excellent shape-retention at elevated temperatures and under load. Formaldehyde-free. Stiff thermoplastic binder. Excellent color.
SPECIAL COPOLYMER	460X63	+22	A	49.5	6.0	1.12	20	•	•	Flame-retarding coatings for carpeting and furnishing fabrics, including commercial installations. Polymer system provides unique combination of low-flame response/low-smoke.
	460X58	+40	A	49.5	6.0	1.13	20	•	•	
VINYLIDENE CHLORIDE COPOLYMER	660X14	+7	A	49	6.0	1.23	50	•	•	Special flame-retardant coatings. Low MVTR.
	Permax® 803	MFFT* is 9°C	A	59.5	1.7	1.21	50	•	•	VDC acrylic copolymer that provides exceptionally low MVTR. Excellent corrosion-and humidity-resistance. Recommended for maintenance primers, automotive under-hood/under-body coatings. MVT-barrier coatings and rust-conversion coatings. Can be blended with Carboset CR-760 for specific end-use properties.
	Permax® 805	MFFT* is 9°C	A	59.5	1.7	1.21	50	•	•	Finer particle size VDC acrylic copolymer that provides exceptionally low MVTR and improved stability. Excellent corrosion-and humidity-resistance. Recommended for maintenance primers, automotive under-hood/under-body coatings. MVT-barrier coatings and rust-conversion coatings. Can be blended with Carboset CR-760 for specific end-use properties.

Key: A = Anionic
N = Nonionic

Vycar® PVC Emulsions *(continued)*

	Vycar Emulsion	Tg (°C)	Charge	% Solids	pH	Specific Gravity	Viscosity (cP)	Heat Reactive	Carboxylated	Description/Suggested Uses
PVC COPOLYMER	351	+62	A	57	10.3	1.16	20	•	•	Product family offers excellent wash/wear-resistance, chemical-resistance, firmness, flame-retardance and formaldehyde-free. Polymers can be used as-is or with various plasticizer levels to control firmness. Useful as saturant spray or coating.
	352	+69	A	57	10.3	1.16	20	•	•	
	460X104	+70	A	55	8.0	1.17	15	•	•	Economical, stiff, flame-retarding, formaldehyde-free. Moldable binder for paper saturation and fiber treatment.
	460X95	+73	A	51	5.0	1.15	20	•	•	Excellent color and mechanical stability; salt stable. Can be used for lamination, heat sealing and general saturation or spray bond. Flame-retarding.
PLASTICIZED PVC	578	+11	A	56.5	10.0	1.12	40	•	•	Phthalate plasticized. Adhesives/coatings for vinyl. Dielectric or hot-bar heat-sealable. Yarn sizing. Exhibit low-smoke and very low-fogging tendencies (SAE test method). Formaldehyde-free.
	580X83	+17	A	56	10.0	1.14	30	•	•	
	577	+19	A	56	10.3	1.09	17	•	•	Flame-retarding finishes for saturation or coating of cellulosic and synthetic fibers Phosphate plasticized. Vycar 577 will act as dielectric and hot-bar sealable adhesive.

Key: A = Anionic

Doresco® Solution Acrylics

Doresco Emulsions	% NV	Viscosity (cP)	Tg (°C)	Solvent/ Diluent	Function	Description/Suggested Uses
AC183-5	34	30,000	71	Alcohol Bend	None	Medium-hard acrylic resin designed for high-pigment loading without cohesion loss.
AC25-119	70	10,000	54	Solvesso 100	Polar	Pigment dispersing resin. Alkyd modifier.
AC209-23	33	2500	20	Oxsol 100		Doresco AC-209-23 is a soft acrylic resin solution. It has the ability to plasticize hard acrylic resins and nitrocellulose to improve flexibility and adhesion. Supplied in exempt solvent Oxsol.
AC32-18	50	3,000	72	Toluene/Xylene	Polar	Medium-hard acrylic resin designed for aerosol paints, grinding vehicle, hot stamp foils and as a general purpose thermoplastic acrylic resin. Alkyd modifier.
AC32-65	50	3,500	86	Toluene/Xylene	Polar	Medium-hard acrylic resin designed for pigment wetting and modification of other resin system. Alkyd modifier.
AC4-127	45	20,000	65	Toluene	Carboxyl	Adhesion-promoted resin designed for metal, glass and other polar substrates.
AC453-1	62	2,900	N/A	Toluene/Xylene	Proprietary	Adhesion-promoted resin modifier designed for both low-surface tension substrates, like plastic, and polar substrates, like metals and glass.
AC453-8	63	2,850	N/A	Xylene	Proprietary	Adhesion-promoted resin modifier designed for both low-surface tension substrates, like plastic, and polar substrates, like metals and glass.
AC4-74	45	8,000	50	Toluene	Carboxyl	Adhesion-promoted resin designed for metal, glass and other polar substrates.
EPY1-5	65	1,700	34	MAK	Epoxide	Glycidal functional acrylic resin for two-component, NCO-free coatings.
HS4	70	11,000	30	Butly Acetate	Hydroxyl	Acrylic polyol for auto refinish and general industrial applications.
L91-17	40	3,500	105	MEK	None	Hard acrylic resin for automotive refinish, inks and hot stamping foils.
L91-182	50	7,000	58	Solvesso 100	Silane	Gloss coat for stamp concrete.
L91-208	50	6,000	57	TBAc	None	General purpose medium hard acrylic. Zero VOC in exempt solvent. Good for concrete coatings.
L91-1X	50	6,000	57	Xylene	None	General purpose medium hard acrylic. Good for concrete coatings.
SA4-3	50	4,500	64	Solvesso 100	None	Styrene acrylic copolymer for general use.
TA22-8	30	675	N/A	Ethanol, Acetone	Self Crosslink	Self-crosslinking baking acrylic.
TA70-2	83	12,000	-6	EEP/n-BuAc	Hydroxyl	Low-VOC acrylic polyol for ultra lightfast acrylic urethanes.
TA96-6	65	7,200	54	n-BuAc	Hydroxyl	High-quality acrylic polyol for automotive refinish applications.
UVC75-1	100	1,500	N/A	None	Acrylate	Low viscosity melamine acrylate oligomer for energy-cured systems.

LANCO™ Micronized Surface Modifiers

Product	Surface Modifier Type	Maximum Particle Size via Laser Diffraction Medium (µm-Dv50)	(µm-Dv90)	Melting Point (°C)	Melting Point (°F)	Maximum Acid Value (mg KOH/g wax)	Density (g/cc) @20°C	Description
PP 1340 F	PP-	9	22	140	284	1	0.94	General Use—Polypropylene-modified polyethylene wax that provides good matting and scratch-resistance.
PP 1350 F	PP-	10	22	150	302	1	0.94	General Use—High melting point polypropylene-modified polyethylene wax that provides excellent abrasion-resistance.
PP 1362 D	Modified PP	9	22	140	284	3	0.94	General Use—Modified polypropylene wax that provides excellent antiblocking, matting and sandability.
PP 1362 SF	Modified PP	6	14	140	284	3	0.94	General Use—Modified polypropylene wax that provides excellent antiblocking, matting and sandability. SF is a finer version of 1362 D for thin film applications.
1394 LF	PP	9	18	140	284	–	0.90	Wood Coatings—Pure polypropylene wax especially recommended for PU and UV coatings, gives excellent matting and surface protection.
1394 F	PP	13	25	140	284	–	0.90	Powder Coatings—Pure polypropylene wax that provides excellent matting and improved surface properties.
1400 SF	Modified PE	6	14	140	284	4	0.97	Wood Coatings—Fine compound wax that provides soft surface feel and good surface protection.
PE 1500 F	PE	9	22	102	216	1	0.96	General Use—Polyethylene wax, providing good scratch resistance.
PE 1525 MF	Synthetic	15	30	105	221	1	0.96	Powder Coatings—Polyolefin wax of medium fineness that provides good slip, abrasion-resistance and matting.
1530 SF	PE	6	14	118	244	–	0.97	Coil Coatings—Polyethylene wax that produces a fine, smooth surface finish with improved scratch-resistance.
PE 1544 F	Modified PE	9	22	140	284	3	0.99	General Use—Modified polyethylene wax, providing smooth surface feel, scratch-resistance and sandability.
1550	Polyolefin Compound	100% < 1000 µm	–	117	243	–	0.95	Powder Coatings—Polymer blend that provides matting and mar-resistance in various resin systems.
PEW 1555	Hydrophilic PE	9	22	102	216	3	0.96	General Use—Hydrophilic polyethylene was for use in waterborne systems, giving good scratch resistance.
1588 LF	Polyolefin Compound	9	18	105	221	1	0.96	Wood Coatings—All purpose cost effective polyolefin wax.
A 1601	Amide	7	18	140	284	10	0.99	General Use—Amide wax providing good matting and sandability.
A 1602	Amide	9	22	142	288	8	0.98	Wood Coatings—Amide wax providing good matting, sandability and color stability.

LANCO™ Micronized Surface Modifiers *(continued)*

Product	Surface Modifier Type	Maximum Particle Size via Laser Diffraction Medium (µm-Dv50)	(µm-Dv90)	Melting Point (°C)	Melting Point (°F)	Maximum Acid Value (mg KOH/g wax)	Density (g/cc) @20°C	Description
D2S	Amide	9	22	140	284	8	1.00	Can Coatings—Amide wax providing release properties.
HM 1666	Amide	9	22	186	367	10	0.99	General Use—High melting point amide wax with excellent antiblocking properties, for stoving and powder coatings.
TF 1725	PTFE-Modified PE	6	14	126	259	1	0.98	PTFE-modified polyethylene waxes available in the particle size distributions that increase abrasion-resistance and slip, especially in wood coatings.
TFW 1765	PTFE-Modified PE	6	14	102	216	1	0.98	General Use—Hydrophilic PTFE-modified polyethylene wax for excellent slip,-scratch-and abrasion-resistance.
TF 1778	PTFE-Modified PE	6	14	102	216	1	0.98	General Use—PTFE-modified polyethylene wax, providing excellent slip,-scratch-and abrasion-resistance.
TF 1780	PTFE-Modified PE	6	14	102	216	1	0.98	Can Coatings—PTFE-modified polyethylene wax for slip-and abrasion-resistance in interior and exterior applications.
TF 1780 EF	PTFE-Modified PE	5	10	102	216	1	0.98	Can Coatings—PTFE-modified polyethylene wax for slip-and abrasion-resistance in interior and exterior applications.
1796	PTFE	<6	–	315-325	599-617	–	2.2-2.3	General Use—PTFE with fine particle-size distribution, providing extremely high and consistent slip- and abrasion-resistance.
1799	PTFE	4	–	315-325	599-617	–	2.2-2.3	Micronized PTFE for use in a wide range of aqueous and nonaqueous resin systems.
TF 1830	PTFE-Modified PE	9	22	102	216	1	0.99	Powder Coatings—PTFE-modified polyethlene wax for surface texturing and slip in powder coatings.
1890	PTFE	35	–	315-325	599-617	–	2.2-2.3	Powder Coatings—PTFE-modified additive to produce highly abrasion-resisant, uniform surface textures at low addition rates.
1900 MF	Polymer Compound	15	–	60	140	12	1.06	Powder Coatings—Increases slip in powder coatings with minimal matting and hazing; FDA-compliant.
1910 MF	Polymer Compound	70	–	63	145	10	0.93	Powder Coatings—Increases slip in powder coatings with minimal matting and hazing.
SM 2001	Polymer Compound	9	22	105	221	1	0.99	FDA-compliant PTFE-modified synthetic wax for use in a wide variety of coatings to provide basic slip- and scratch-resistance.
SM 2003	Polymer Compound	9	22	140	284	4	0.97	Amide-modified synthetic wax used to improve surface slip and hardness in coating films.
SM 2005	Synthetic	9	22	105	221	1	0.96	FDA-compliant synthetic wax used to improve the surface properties of solvent borne and 100% solids coatings.

AQUASLIP™ Emulsions

Product	Surface Modifier Type	Solids (%)	pH	Ionic Character	Melting Point (°C)	(°F)	Density (g/cc) @ 20°C	Description
678	Paraffin	30	9.5	Anionic	–	–	0.99	Paraffin-modified wax emulsion that provides water beading, slip-and water-resistance.
680	Modified Polypropylene	40	7.5–9.0	Non-Ionic	155-160	311-320	1.0	Polyolefin emulsion used primarily in paper coatings to provide slip, resilience and hardness.
912	Carnauba	25	6.0–6.5	Anionic	81–86	178–187	1.0	Can Coatings—Carnauba wax emulsion, providing excellent slip in can and coil coatings.
942	Carnauba	25	8.0–8.8	Non-Ionic	81–86	178–187	1.0	Can Coatings—Carnauba wax emulsion, providing excellent slip in can and coil coatings.
952	Carnauba	25	9–10	Non-Ionic	81–86	178–187	1.0	Can Coatings—Carnauba wax emulsion, providing excellent in slip can and coil coatings.

LANCO™ GLIDD Dispersions

Product	Surface Modifier Type	Solids (%)	Solvent	Melting Point (°C)	Melting Point (°F)	Density (g/cc) @ 20°C	Description
3540	Oxidized PE/PTFE	37	Water	–	–	1.11	Polyethlene/PTFE dispersion for used in waterborne coatings to provide slip, toughness and rub-resisstance.
3993	PTFE	42	Water	–	–	1.48	High-solids PTFE dispersion for use in waterborne coatings to provide high slip-and abrasion-resistance.
4120	Polyethylene	23	Xylene	–	–	0.90	General Use—Polyethylene wax dispersion in xylene that provides ease of use with less influence on haze, gloss and transparency.
4830	PTFE Based	30	Aromatic 150/ Butyl Cellusolve	100	212	0.90	Coil Coatings—Easy to use dispersion of PTFE modified wax compound that can be used to replace micronized PE/PTFE powders.
4832	PTFE Based	32	Aromatic Hydrocardbon Glycol Ether	100	212	0.90	General Use—Easy to use dispersion of PTFE modified wax compound that can be used to replace PE/PTFE micronized powders.
4918	Synthetic	18	Xylene	–	–	0.88	General Use—Polyolefin wax dispersion in xylene that provides ease of use with less influence on haze, gloss and transparency.
5060	Carnauba	18	Dipropylene Glycol Monomethyl Ether	82	180	0.93	Easy-to-handle carnauba wax dispersion for can and coil coatings.
5118	Polyolefin Compound	18	Ethylene Glycol, Monobutyl Ether	102	216	0.91	Easy-to-handle polyolefin wax dispersion for can and coil coatings.
5518	Carnauba Based	18	Ethylene Glycol, Monobutyl Ether	82	180	0.93	Easy-to-handle polyolefin wax dispersion for can and coil coatings.
5575	Polyolefin Compound	45	Ester	105	221	0.97	Wood Coatings—Aromatic-free, high solid polyethylene wax dispersion that provides good matting and surface protection.
5618	Polyolefin Compound	18	Isopropanol	102	216	0.82	Easy-to-handle polyolefin wax dispersion for can and coil coatings.
5792	PTFE	16	Isopropanol	–	–	0.88	PTFE dispersion for use in solvent borne coatings to provide high slip-and abrasion-resistance.
6445	Synthetic	42	Water	105	221	0.97	Wood Coatings—42% solid, APE-free dispersion for aqueous applications, providing excellent matting and surface protection.

LANCO™ GLIDD Dispersions *(continued)*

Product	Surface Modifier Type	Solids (%)	Solvent	Melting Point (°C)	Melting Point (°F)	Density (g/cc) @ 20°C	Description
6940	PTFE	41	Water	–	–	1.48	High-solids PTFE dispersion for use in waterborne coatings to provide high slip-and abrasion-resistance.
FW 40	PP-Modified PE	25	Water	150	302	0.96	General Use—High melting point polypropylene-modified polyethylene wax dispersion in water that provides excellent abrasion-resistance.
KX	Polyethylene	20	Xylene	106	223	0.88	General Use—Hard Polyethylene wax dispersion in xylene, providing very good scratch-and abrasion-resistance and antiblocking.
PEC	Carnauba-Modified, Polyethylene	15	60% Aromatic 150, 25% Methoxy Propanol	102	216	0.91	Can Coatings—High melting point polypropylene-modified polyethylene wax dispersion in high-boiling organic solvent, providing excellent abrasion-resistance.
SE	Microcrystalline	15	35% Aromatic 150, 50% Methoxy Propanol	79	174	0.91	Coil Coatings—Microcrystalline wax dispersion in organic solvent blend, providing excellent slip, gloss retention and recoatability.
TD	Polyethylene	25	Isopropanol	111	232	0.82	General Use—Polyethylene wax dispersion in isopropanol, providing good slip-and abrasion-resistance in thin-film applications.

Matting Agents

Product	Function	Product Form	Solids (%)	Solvent	Median Particle Size via Laser Diffraction (µm-Dv50)	Density (g/cc) @ 20°C	Description
MATT 2000	Matting Agent	Micronized Powder	100	–	6	2.0	Wood Coatings—Organic surface treated silica that provides very smooth surface feel and matting.
LIQUIMATT 5730	Matting Agent	Dispersion	24	Xylene, Butyl Acetate	–	0.96	Wood Coatings—Easy to use liquid matting agent for wood coatings, providing excellent surface feel and uniform matting.
LIQUIMATT 6000	Matting Agent	Dispersion	100	–	–	0.96	General Use—Easy to use liquid matting agent that provides excellent surface feel and uniform matting in waterborne coatings.
LIQUIMATT 6024	Matting Agent	Dispersion	15	Water	–	1.05	Wood Coatings—Liquid matting agent designed for moisture-cured urethanes.
LIQUIMATT 6035	Matting Agent	Dispersion	40	Water	–	1.00	Wood Coatings—Clear finishes based on polyurethane or acrylic resins.
LIQUIMATT 6375	Matting Agent	Dispersion	50	Water	–	1.00	General Use—Liquid matting agent for aqueous applications, especially effective or wood coatings giving excellent feel and mar-resistance.

Antimar Agents

Product	Function	Product Form	Solids (%)	Solvent	Density (g/cc) @ 20°C	Description
ANTIMAR 153	Surface Additive	Dispersion	25	Aromatic 100, Methoxy Propanol	0.80	Liquid additive to improve surface in solvent borne coatings, providing soft feel in glossy and matte coatings.
ANTIMAR 163	Surface Additive	Dispersion	51	Mineral Spirits	0.87	Liquid additive to improve surface properties in solvent borne coatings, providing soft feel in glossy and matte coatings.
ANTIMAR 431	Surface Additive	Dispersion	52	Ethylene Glycol Mono Butyl Ether	0.96	Liquid additive to improve surface properties in waterborne coatings, providing slip and flow.

Dispersants

Product	Activity (%)	Product Form	Solvent	Organic Pigments	Carbon Black	Inorganic Pigments	Silica	Description
SOLSPERSE® 8000	100	Liquid	–	X	X	X		General purpose use in low polarity solvents.
SOLSPERSE 13300	50	Liquid	Mineral Spirits	X		X		Alkyd tint bases and colorants.
SOLSPERSE 13940	40	Liquid	Aliphatic Distillate	X	X			High-performance, for low-polarity solvents.
SOLSPERSE 19000	100	Liquid	–	X	X			General purpose use in non-polar solvents.
SOLSPERSE 20000	100	Liquid	–	X	X	X		General purpose use in aqueous and highly polar solvents.
SOLSPERSE 27000	100	Liquid	–	X	X	X		Emulsion paints and waterborne colorants.
SOLSPERSE 28000	100	Liquid	–	X	X			For industrial coatings. Soluble in t-butyl acetate and acetone.
SOLSPERSE 32500	40	Liquid	Butyl Acetate	X	X			High-performance, polar solvents.
SOLSPERSE 32600	40	Liquid	Aromatic 100	X	X			High-performance, aromatic solvents.
SOLSPERSE 36000	100	Paste	–			X		High-performance, polar solvents. Especially for dispersing TiO2 in UV cure.
SOLSPERSE 36600	50	Liquid	Aromatic 100			X		High-performance, TiO2 dispersion in liquid coatings..
SOLSPERSE 38500	40	Liquid	PM Acetate	X	X	X		Multi-compatible solvent-borne colorants.
SOLSPERSE 39000	100	Liquid	–	X	X	X		High-performance, UV cure.
SOLSPERSE 40000	84	Liquid	Water/DEA			X		Aqueous dispersion of oxide pigments.
SOLSPERSE 41000	100	Liquid	–			X	X	Dispersion of TiO2 and inorganic silica in UV cure.
SOLSPERSE 44000	50	Liquid	Water	X	X	X		High-performance resin-free waterborne.
SOLSPERSE 46000	50	Liquid	Water	X	X	X		New technology multi-compatible waterborne.
SOLSPERSE 47000	40	Liquid	Water	X		X		General purpose waterborne.
SOLSPERSE 53095	95	Liquid	Water			X		Color acceptance aid for alkyd and epoxy tint bases.
SOLSPERSE 71000	100	Liquid	–	X		X	X	Stabilizes silica matting agents.
SOLSPERSE 76500	50	Liquid	Butyl Acetate	X	X	X		New technology for polar solvents and CAB containing coatings.
SOLSPERSE X-300	100	Liquid	–	X	X			Disperses organic pigments in UV oligomeric systems.
SOLPLUS® D-510	100	Liquid	–	X	X	X	X	Dispersant and color acceptance for epoxy systems.
SOLPLUS D-540	100	Liquid	–			X		Stabilizes metallic and special effect pigments.
SOLPLUS L300	100	Powder	–	X	X			Color development in powder coatings.
SOLPLUS L400	100	Powder	–			X		Dispersant for TiO2 in powder coatings.

Pigment Synergists

Product	Activity (%)	Product Form	Solvent	Organic Pigments	Carbon Black	Inorganic Pigments	Silica	Description
SOLSPERSE 5000	100	Powder	–	X	X			Synergist for blue, green, violet and black pigments in solvent based systems.
SOLSPERSE 12000	100	Powder	–	X	X			Synergist for blue, green, violet and black pigments in aqueous & alcohol systems.
SOLSPERSE 22000	100	Powder	–	X				Synergist for yellow, orange, and red pigments in solvent based systems.

RHEOLOGY CONTROL & SPECIALTY ADDITIVES

Rheology Control

Product	Activity (%)	Product Form	Solvent	Description
IRCOGEL® 941	40	Liquid	Aromatic 100	Pourable version of IRCOGEL 955.
IRCOGEL 955	57	Gel	Aromatic 100	Sag control and suspension aid for 2K urethane and blocked acid cured coatings.
IRCOTHIX® 2000	25	Gel	Mineral Spirits	Sag control and suspension aid for air-dry decorative alkyds and oil stains.
SOLTHIX® 250	40	Liquid	PM Acetate	Sag control and suspension aid for acid-cured solvent-borne and alkyd coatings.
SOLTHIX A100	30	Liquid	Water	High-efficiency HASE rheology modifier for spray-applied water-borne coatings.
SOLTHIX A200	30	Liquid	Water	Alkali swellable emulsion thickener with good electrolyte stability.
SOLTHIX A300	18	Liquid	Water	Alkali swellable emulsion thickener.
CARBOPOL EZ-2	100	Powder	–	Self-wetting powdered thickener for high pH, oxidizing systems.
CARBOPOL EZ-3	100	Powder	–	Self-wetting powdered thickener for high pH, hydroalcoholic systems with exceptional electrolyte tolerance.
CARBOPOL EZ-4	100	Powder	–	Most efficient, self-wetting thickener for high pH, oxidizing systems.

Flow Control Additives

Product	Description/Suggested Uses
LANCO™ FLOW BX-60	Acrylic polymer flow and leveling agent for solventborne coatings that eliminates surface defects such as pinholes, orange peel and craters.
LANCO FLOW L	Acrylic flow and leveling agent for solventborne coatings that eliminates surface defects such as pinholes, orange peel and craters.
LANCO FLOW P 30	Powdered flow promoter based on modified castor oil wax providing improved surface appearance in powder coatings.
LANCO FLOW U	Solvent-free acrylic flow and leveling agent for solvetborne and solvent-free coatings.
LANCO FLOW UA50	Acrylic flow and leveling agent to control surface defects in a wide range of solvent coatings; supplied at 50% in Aromatic 100.

Specialty Additives

Product	Activity (%)	Product Form	Solvent	Description
Humectant™ GRB2	80	Liquid	Water	Increases open time of water-borne paints, stains and colorants.
Humectant GRB3	90	Liquid	Water	Zero-VOC version of GRB2.
Lubrizol® 2061	65	Liquid	Glycol Ether EB	Epoxy functional polymeric phosphate ester adhesion promoter for DTM coatings.
Lubrizol 2062	60	Liquid	Isobutanol	Hydroxy functional polymeric phosphate ester adhesion promoter for DTM coatings and metallic pigment stabilization.
Lubrizol 2063	55	Liquid	Glycol Ether EB	Carboxy functional polymeric phosphate ester adhesion promoter for DTM coatings and metallic pigment stabilization..
Lubrizol 219	75	Liquid	Aromatic 100	Epoxy functional phosphate ester zinc complex for corrosion inhibition.
Lubrizol 2064	40	Paste	Mineral Oil	Overbased calcium sulfonate corrosion inhibitor.
Pemulen 1621	100	Powder	–	High MW emulsifier designed for O/W emulsions with exceptional emulsion stability - up to 30% oil phase over wide pH range.
Pemulen 1622	100	Powder	–	High MW emulsifier designed for O/W emulsions. Improves stability of silicone emulsions. Up to 70% oil phase.
Pemulen TR-2	100	Powder	–	High MW emulsifier designed to emulsify up to 80% oil at low pH.

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