Lubrizol

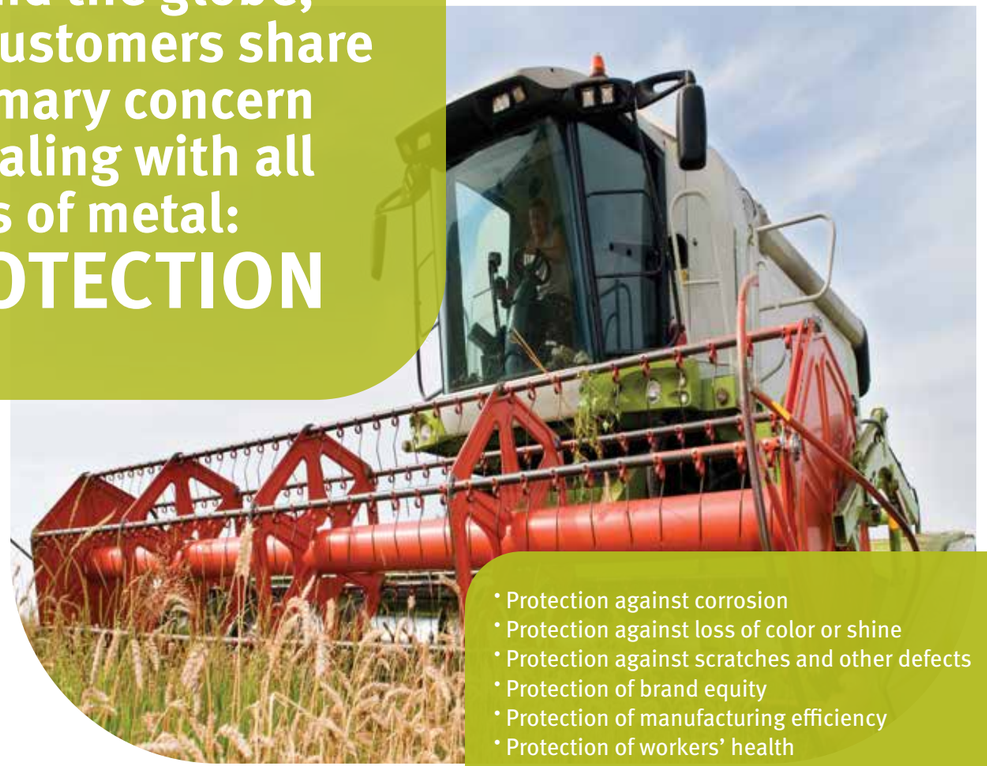
PAINTS & COATINGS

RESINS & ADDITIVES

INDUSTRIAL METAL COATINGS PRODUCT GUIDE

www.lubrizol.com/coatings

Around the globe, our customers share a primary concern in dealing with all types of metal: PROTECTION



- Protection against corrosion
- Protection against loss of color or shine
- Protection against scratches and other defects
- Protection of brand equity
- Protection of manufacturing efficiency
- Protection of workers' health
- Protection of the environment

As a global specialty chemical company, Lubrizol offers raw materials for each stage in the metal protection process. We have an in-depth understanding of customer needs throughout the value chain - from factory to field and back again. By working alongside formulators, chemists and engineers, plus sales, marketing and purchasing professionals, Lubrizol gains insight that adds value, and that value is returned to our customers in new technologies for metal coatings.

As a recognized industry leader in metal protection, Lubrizol offers a broad portfolio of high-performance coating products that provide protection and aesthetic value for the world's industrial, transportation and machinery markets. Leveraging decades of technical and market expertise as well as comprehensive product and applications testing, Lubrizol delivers innovative technologies for corrosion resistance and efficient pigment dispersion that make a positive difference to your business.

CORROSION RESISTANCE

No need is greater among our customers than the need for protection against degradation due to rust and corrosion. That is why we offer a wide selection of corrosion-fighting solutions dedicated to meet the demanding requirements of OEM industrial metal applications - and why we continually invest in the development of new and unique solutions. Our expertise stems from relationships with universities and corrosion experts, innovative and traditional testing methodologies, and vast in-house knowledge of applied sciences.

TEMPORARY COATINGS

With global distribution and the high stakes involved with product transport and delivery, temporary coatings have become an area of keen interest and need. Taking advantage of our advanced emulsion synthesis capabilities, Lubrizol offers a portfolio of acrylic polymers that provide effective protection for finished goods or parts/components, whether it is to endure harsh conditions during transport or long-time exposure to the elements during storage. Offerings range from alkali strippable clear coatings to peelable pigmented options.

EFFICIENT PIGMENT DISPERSION AND COLOR DEVELOPMENT

Color is a cornerstone of most brands, and product appearance is crucial to acceptance in today's market. Lubrizol hyperdispersants have long been proven to be invaluable resources for customers concerned with a variety of color issues. Our industry-leading Solsperse™ hyperdispersant technologies offer the versatility of processing pigments more efficiently to achieve color match at lower loading levels, with the added benefits of reduced milling time, lower VOC emissions and increased savings in energy costs. Solsperse™ hyperdispersants and companion products can improve such factors as color strength, gloss, haze, brightness and opacity/transparency—without undue impact on viscosity.

SCRATCH AND MAR RESISTANCE

From the first impression to lasting performance, Lubrizol surface modifiers make the difference. They can help create a matting effect, smooth feel, slip resistance, or to make products more resilient against the hazards of use: abrasion, scuffing, scratching and other marring effects.

FLOW CONTROL

To protect customers from the damaging effects of surface defects, Lubrizol offfers a number of flow control and leveling agents. These are agents specifically developed for solvent-based and high solids systems - effective in the reduction of pinholes, orange peel, craters, air bubbles and other common defects.

FOR CORROSION RESISTANCE

We offer a wide selection of corrosion-fighting solutions dedicated to meet the demanding requirements of industrial metal applications.

PRODUCT NAME	PRODUCT TYPE	KEY BENEFITS	PRODUCT USES: PRIMER	PRODUCT USES: TOPCOAT	PRODUCT USES: DTM	GOOD ADHESION TO	COMPATIBLE WITH	PHYSICAL PROPERTIES: APEO-FREE*	PHYSICAL PROPERTIES: NMP-FREE*	PHYSICAL PROPERTIES: FORMALDEHYDE FREE*	PHYSICAL PROPERTIES: MFFT (°C)	PHYSICAL PROPERTIES: % WEIGHT SOLIDS	PHYSICAL PROPERTIES: % VOLUME SOLIDS	PHYSICAL PROPERTIES: pH	PHYSICAL PROPERTIES: SPECIFIC GRAVITY	PHYSICAL PROPERTIES: VISCOSITY (cP)	PHYSICAL PROPERTIES: SOLVENT
EMULSIONS																	
Carboset® CR-3090	Styrene Acrylic	Good corrosion and weathering resistance	●	●	●	Cold rolled steel; phosphate; galvanized	DPnB; glycol ethers	●		●	33	45		8.5	1.05	<500	
Carboset® CR-3100	Styrene Acrylic	Capable of low VOC formulations, corrosion and chemical resistance, adhesion	●	●	●	Cold rolled steel, hot rolled steel, galvanized	DPnB, PnB, Glycol Ethers	●		●	<5	43.5		8.0	1.05	<500	(N/A)
Carboset® CR-795	Acrylic Emulsion	Good overall balance of properties	●	●	●	Cold rolled steel; Bonderite 1000; galvanized steel; aluminum; stainless steel	Glycol ethers; water reducible alkyds	●	●	●	24	45.0	43.3	8.3	1.03	75	(N/A)
Carboset® CR-765/CR-765E	Styrene Acrylic	Water and humidity resistance, high gloss, reactive pigment stability, good overall balance of properties	●	●	●	Cold rolled steel; Bonderite 1000; aluminum; copper; stainless steel	Glycol ethers; alkyds; dibutyl phthalate; butyl benzyl phthalate	●	●	●	34	42.0	40.7	8.2	1.03	75	(N/A)
Carboset® CR-785	Acrylic Emulsion	Gas and solvent resistance, fast dry, impact resistance, water and humidity resistance	●	●	●	Bonderite 1000; stainless steel	Glycol ethers; butyl benzyl phthalate; dibutyl phthalate; water-based urethanes		●	●	44	42.5	41.0	8.0	1.03	40	(N/A)
Carboset® CR-760/CR-760RC**	Styrene Acrylic	Wide formulation flexibility, humidity resistance, high gloss, chemical/ stain resistance, fast dry, reactive pigment stability	●	●	●	Bonderite 1000; copper; stainless steel	Glycol ethers; dibutyl phthalate; butyl benzyl phthalate; PVDCs		●	●	23	42.0	40.2	8.0	1.03	100	(N/A)
Permax™ 805	Polyvinylidene Chloride Emulsion	Increased shelf life, in-can stability, humidity resistance	●		●	Aluminum; cold rolled steel; Bonderite 1000; ground steel; galvanized steel	Acrylic emulsions	●	●	●	13.5	60	50.4	1.0 - 2.2	1.28	85	(N/A)
POLYURETHANE DISPERSIONS																	
Aptalon® M8100	Self-crosslinking Polyamide Polyurethane Dispersion	High chemical and hydrolytic resistance; Demanding metal top coat applications; High hardness		●		Epoxy; acrylic; PU primers	DPnB; DPM; glycol ethers	●	●			33	34.2	8.5	1.04	<500	(N/A)
Aptalon® W8030	Self-crosslinking Polyamide Polyurethane Dispersion	Naturally matte finish for low gloss applications, excellent hardnesss and durability, outstanding chemical and weathering resistance		●		Epoxy, Acrylic and PU Primers	DPnB, PM, TPnB, PnB, DMM, TPMT, Butyl Cell, N-Propanol, PG, Oxsol® 100, Texanol™, Optifilm™ 400	●	●			35	34.2	7.0		<500	(N/A)
Sancure® 970	Polyurethane Dispersion	Alkali resistant, abrasion resistant, good chemical resistance in 1K and 2K	●	●	●	Ferrous and non-ferrous substrates	Isocyanates; aziridines and carbodimides; glycol ethers	●	●			37	41	8.0	1.06	<500	(N/A)
Sancure® 825	Polyurethane Dispersion	Alkali resistant, abrasion resistant, UV stable, high gloss, water and alcohol resistance	●	●	●	Ferrous and non-ferrous metals	Aziridine; ethylene; glycol ethers; tributoxyethyl phosphate; dibutyl phthalate; acrylic lattices; acrylic emulsions	●			(N/A)	34	31	8.5 max	1.04	425 Max	(N/A)
THERMOPLASTIC ACRYLIC RESINS																	
Doresco® M6A	Thermoplastic Solution	DTM coatings with good hardness and chemical resistance; MMA/BMA	●	●	●	Ferrous and non-ferrous substrates	Chlorinated rubber; vinyls; chlorinated plasticizers				61*	50		(N/A)		800 - 2,500	Methoxypropyl Acetate/Xylene 1:1
Doresco® Cl7208	Thermoplastic Solution	Adhesion on galvanized steel substrates; Multi-purpose primers; Gloss enamels	●	●	●	Galvanized steel; most metal substrates	Alkyds				(N/A)	49		(N/A)		250 - 1,000	Xylene
HYDROXYLATED ACRYLIC RESINS																	
Doresco® OH38	Hydroxylated Acrylic (4% OH Solids)	Quick hardening; High solids content; weathering and yellowing resistance; long-lasting gloss; Hydroxyl content (over solids) = 4%	●	●	●	Brass; zinc; steel; ABS; noryl; PC; PA	Isocyanates; ketones; esters; glycol ether acetate; aromatics				(N/A)	42		8.5		300 - 700	(N/A)
Doresco® OH60	Hydroxylated Acrylic (3% OH Solids)	Adhesion, chemical resistance, high gloss, quick hardening, high resistance to chemicals, light and weathering	●	●	●	Galvanized iron; brass; steel	Aromatics; esters; glycol ether acetates				(N/A)	59 - 61	54 - 56	(N/A)	0.96	1,000 - 2,500	Xylene, Methoxy Propyl Acetate
Doresco® OH65	Hydroxylated Acrylic (2% OH Solids)	Adhesion, durability, chemical resistance, high gloss, quick hardness, UV and weathering resistance	●	●	●	Brass; steel	Isocyanates; ketones; esters; glycol ether acetates; aromatics				(N/A)	59 - 61	54 - 56	(N/A)	0.98	1,000 - 3,000	Xylene
Doresco® OH66	Hydroxylated Acrylic (2% OH Solids)	Adhesion, chemical resistance, high gloss, quick hardening, high resistance to chemicals, light and weathering	●	●	●	Brass; steel	Isocyanates; ketones; esters; glycol ether acetates; aromatics				(N/A)	59 - 61	54 - 56	(N/A)	0.98	3,500 - 5,000	Xylene
ADHESION PROMOTERS AND FLASH RUSH INHIBITORS																	
Lubrizol® 2061	Adhesion Promoter	Used in solvent-based systems, effective thermoset direct-to-metal pre-treatment	●		●	Cold rolled steel; other ferrous metals; aluminum	Thermoset alkyd; acrylic; polyester coatings; epoxy primers	●	●	●	(N/A)	66	(N/A)	(N/A)	1.08	< 17,000	Butyl Cellosolve
Lubrizol® 2062H	Adhesion Promoter	Direct to metal adhesion promotion with broad resin capability for ferrous metals and aluminum, excellent metallic pigment passivation	●		●	Aluminum; cold rolled steel; other ferrous metals	Thermosetting alkyd; acrylic and polyester coatings	●	●	●	(N/A)	61	(N/A)	(N/A)	1.00	<25,000	Isobutyl Alcohol
Lubrizol® 2063	Adhesion Promoter	Direct to metal adhesion promotion with broad resin capability for ferrous metals and aluminum, especially in water-based systems; excellent metallic pigment passivation	●		●	Cold rolled steel; aluminum; galvanized steel	Alkyd; acrylic; epoxy and polyester DTM coatings	●	●	●	(N/A)	56	(N/A)	(N/A)	1.09	< 3,700	Butyl Cellosolve
Lubrizol® 2064	Calcium Sulfonate Corrosion Inhibitor	Excellent in water-based coatings, excellent corrosion inhibition for metal coatings, functions synergistically with environmentally friendly corrosion inhibitive pigments, does not adversely affect coating storage stability	●		●	Ferrous and non-ferrous metals	Zinc phosphate; styrenated acrylic latexes	●	●	●	(N/A)	60	(N/A)	(N/A)	1.14	60,000	Mineral Oil
Solplus™ AC100	Nitrite-Free Flash Rust Inhibitor	For water-based coatings designed for the protection of ferrous metals. In addition to inhibiting flash rust, it imparts long-term rust prevention	●	●	●	Ferrous metals	Acrylic and PVDC dispersions	●	●	●	(N/A)	78	(N/A)	8.5	1.13		Water

*Ingredients not intentionally contained in the composition, or used in manufacture. **RC refers to REACH compliant.

FOR EFFECTIVE PIGMENT DISPERSION AND COLOR DEVELOPMENT

Our Solsperse™ technologies offer the versatility of processing pigments more efficiently to achieve color match at lower loading levels, thus reducing milling time. Lubrizol hyperdispersants can improve such factors as color strength, gloss, haze, brightness and opacity/ transparency - without undue impact on viscosity.

PRODUCT NAME	PRODUCT TYPE	SUITABLE FOR SOLVENT-BASED	SUITABLE FOR WATER-BASED	SUITABLE FOR VOC FREE	ORGANIC	INORGANIC	CARBON BLACK	KEY BENEFITS AND FEATURES	PHYSICAL DESCRIPTION	% ACTIVE INGREDIENT	SOLVENT
Solsperse™ 5000S	Synergist	●		●	●		●	Enhanced performance when used with a hyperdispersant in solvent-based systems; compatible with difficult to disperse organic blue/green, carbon black pigments.	Blue Powder	100	(N/A)
Solsperse™ 12000S	Synergist	●	●	●	●		●	Enhanced performance when used with a hyperdispersant in water- or alcohol-based system; compatible with difficult to disperse organic blue/green, carbon black pigments.	Blue Powder	100	(N/A)
Solsperse™ 22000	Synergist	●		●	●			Enhanced performance when used with a hyperdispersant in a solvent-based system; compatible with difficult to disperse organic red, orange and yellow pigments.	Yellow Powder	100	(N/A)
Solsperse™ 13300	Polymeric Dispersant	●			●		●	Recommended for use on organic and carbon black pigments in aliphatic solvents. The active dispersant is also available in other solvents.	Amber Liquid	50	Shellsol D40
Solsperse™ 24000 SC	Polymeric Dispersant	●		●	●		●	Suitable for organic and carbon black pigments in aromatic solvents.	Cream to Yellow Granular Powder	100	(N/A)
Solsperse™ 27000	Polymeric Dispersant		●		●		●	Recommended for use in resin-containing systems; particularly effective on carbon black and organic pigments; Zero VOC[1].	Pale Yellow to Amber Viscous Liquid	100	(N/A)
Solsperse™ 28000	Polymeric Dispersant	●		●	●		●	For general purpose use with organic and carbon black and pigments.	Amber to Dark Viscous Liquid	100	(N/A)
Solsperse™ 32000	Polymeric Dispersant	●		●	●		●	For use with carbon black and organic pigments; high pigment loading; can be used to produce zero VOC[1] colorants; suitable for use in UV curable systems.	Pale Yellow to Brown Waxy Solid	100	(N/A)
Solsperse™ 32500	Polymeric Dispersant	●			●		●	Effective across a wide range of organic and carbon black pigments; high pigment loading.	Pale Yellow to Brown Liquid	40	Butyl Acetate
Solsperse™ 32600	Polymeric Dispersant	●			●		●	Effective across a wide range of organic and carbon black pigments; high pigment loading.	Pale Yellow to Brown Liquid	40	Aromatic 100
Solsperse™ 36600	Polymeric Dispersant	●				●		For use with TiO_2 and other inorganic pigments; high tint strength and opacity.	Colorless to Yellow Viscous Liquid	50	Aromatic 100
Solsperse™ 38500	Polymeric Dispersant	●			●	●	●	For use with carbon black, organic and inorganic pigments; established product with broad resin compatibility so suitable for colored concentrates/tinters.	Yellow to Brown Liquid	40	PM Acetate
Solsperse™ 39000	Polymeric Dispersant	●		●	●		●	For use with organic and carbon black pigments; high pigment loading; can be used to produce zero VOC[1] colorants; suitable for use in UV curable systems.	Pale Yellow to Brown Viscous Liquid	100	(N/A)
Solsperse™ 41000	Polymeric Dispersant	●	●	●		●		For use with TiO_2 and other inorganic pigments; high tint strength and opacity. Monomer soluble, suitable for use in UV curable coatings.	Pale Brown Liquid	100	(N/A)
Solsperse™ 43000	Polymeric Dispersant		●		●	●	●	Recommended for resin-free and resin-minimal dispersions of organic and inorganic pigments.	Pale Yellow Liquid	50	Water
Solsperse™ 46000	Polymeric Dispersant		●	●	●	●	●	For use in high performance resin-free and resin-minimal dispersions of organic and inorganic pigments.	Pale Yellow Viscous Liquid	50	Water
Solsperse™ 47000	Polymeric Dispersant		●		●	●	●	Recommended for resin-free and resin-minimal dispersions of organic and inorganic pigments.	Amber Liquid	40	Water
Solsperse™ 75500	Polymeric Dispersant	●		●	●		●	Effective across a wide range of organic and carbon black pigments; low viscosity with high pigment loading.	Amber Liquid	40	Butyl Acetate
Solsperse™ 82500	Polymeric Dispersant	●			●	●	●	Effective as general purpose dispersant for solvent-based systems, providing good resin compatibility for use over a broad range of pigments.	Colorless to Yellow Liquid	50	PMA/Butyl acetate (40/10)
Solsperse™ 83500	Polymeric Dispersant	●			●			Higher performance dispersant effective across a wide range of pigments and systems; particularly effective on organic oranges and yellows.	Colorless to Yellow Liquid	40	PMA/Butyl acetate (40/10)
Solsperse™ 84500	Polymeric Dispersant	●				●		For use with TiO_2 and other inorganic pigments; provides high tint strength and opacity.	Colorless to Yellow Liquid	50	PM Acetate
Solsperse™ 85000	Polymeric Dispersant	●				●		For use with TiO_2 and other inorganic pigments; provides high tint strength and opacity. 100% active, monomer soluble, suitable for use UV curable coatings.	Colorless to Yellow Viscous Liquid	100	–
Solsperse™ 88000	Polymeric Dispersant	●		●	●			Effective on a wide range of organic pigments but particularly yellows and oranges; can be used to produce zero VOC[1] colorants; suitable for use in UV curable system.	Pale Yellow to Brown Viscous Liquid	100	(N/A)
Solsperse™ M385	Polymeric Dispersant	●			●	●	●	Higher performance dispersant effective across a wide range of organic and inorganic pigments; excellent compatibility in multiple resins and solvents so highly recommended for use in multi-media colored concentrates. Also available as Solsperse™ M386 dissolved at 50% in Aromatic 100.	Yellow to Brown Viscous Liquid	50	PM Acetate
Solsperse™ M387	Polymeric Dispersant	●		●	●	●	●	Higher performance dispersant recommended for formulation of multi-media solvent-based dispersions; increased millbase pigment loadings; excellent compatibility in a wide range of resins and solvents; can be used to produce zero VOC[1] colorants.	Yellow to Brown Viscous Liquid	100	(N/A)
Solsperse™ M388	Polymeric Dispersant	●			●	●	●	Higher performance dispersant for formulation of multi-media solvent-based dispersions/concentrates; increased millbase pigment loadings; excellent compatibility in a wide range of resins and solvents; can be used to produce resin free colorants. Also available as Solsperse™ M389 dissolved at 50% in Butyl Acetate.	Yellow to Brown Viscous Liquid	50	PM Acetate
Solsperse™ W100	Polymeric Dispersant		●	●	●	●	●	High performance polymeric dispersant; suitable for low-VOC systems; effective on a wide range of organic and inorganic pigments and fillers; significant benefits in corrosion resistance and water sensitivity.	Pale Yellow to Amber Liquid	40	Water
Solsperse™ W320	Polymeric Dispersant		●	●				For use with difficult to disperse and stabilize inorganic pigments such as transparent iron oxide; significant benefits in corrosion resistance and reduced water sensitivity.	Pale Yellow to Amber Liquid	40	Water
Solsperse™ WV 400	Polymeric Dispersant		●	●	●	●	●	Higher performance dispersant for water based; suitable for resin-free and resin-minimal; maximizes pigment loading in the grind stage to improve production efficiency; high degree of viscosity and particle size stability.	Yellow-Brown Liquid	40	Water

The products in this table have been shown to have no negative effects on coating adhesion, gloss or cure. They are all APEO-free, NMP-free and formaldehyde-free, meaning these ingredients are not intentionally contained in the composition, or used in maufacture.

[1]Can be used in coating formulations where low to zero VOC content is desired.

FOR TEMPORARY COATINGS

These Lubrizol temporary coatings offer good adhesion to ferrous and non-ferrous metals.
All products may be cured via 1K, air and forced dry systems.

PRODUCT NAME	PRODUCT TYPE	KEY BENEFITS	TYPE OF TEMPORARY COATING SYSTEM	APEO-FREE*	NMP-FREE*	FORMALDEHYDE FREE*	PHYSICAL PROPERTIES						
							MFFT (°C)	% WEIGHT SOLIDS	% VOLUME SOLIDS	pH	SPECIFIC GRAVITY	ACID NUMBER	VISCOSITY (cP)
SUITABLE FOR WATER-BASED													
Carboset® PL 3127	Acrylic Emulsion	Corrosion resistance, low VOC capable, fast drying	Peelable	●	●	●	5	44	42.9	8	1.02		<40
Carboset® 514H	Acrylic Emulsion	Fast dry, hardness, high gloss, adhesion	Alkali strippable	●	●	●	<10	40	38	7.0	1.05	65	350
Carboset® 560	Acrylic Emulsion	Water resistance, UV resistance, adhesion, mechanical stability	Alkali strippable	●	●	●	17	27	24.5	7.6	1.03	116	200 max
Carboset® PL958 **Carboset® PL958B****	Acrylic Emulsion	Solvent resistant, high elasticity, breaking resistant	Peelable	●	●		<3	47	43	8.0	1.07	(N/A)	40 - 125
Carboset® 441	Acrylic Emulsion	Good toughness and durability, good balance of adhesion and cohesion for strippability	Peelable	●	●	●	18	45	42	8.0-9.0	1.04	100	100

*Ingredients not intentionally contained in the composition, or used in manufacture.

**Carboset® PL-958B is equivalent to Carboset® PL-958. Carboset® PL-958 is produced in North America with domestically-sources raw materials. Carboset® PL-95B is produced in Europe with domestically-sourced raw materials.

FOR SCRATCH AND MAR RESISTANCE

PRODUCT NAME	PRODUCT TYPE	SUITABLE FOR WATER-BASED	SUITABLE FOR SOLVENT-BASED	KEY BENEFITS	ROLE IN COATING SYSTEM	EFFECT ON: ADHESION	EFFECT ON: CHEMICAL RESISTANCE	EFFECT ON: MATTING EFFICIENCY	PHYSICAL PROPERTIES: FORMALDEHYDE FREE*	PHYSICAL PROPERTIES: MEDIAN (DV50 µM)	PHYSICAL PROPERTIES: DV90 µM	PHYSICAL PROPERTIES: DENSITY (MM OR G/CM³) @ 20 °C (68 °F)	PHYSICAL PROPERTIES: MELTING POINT °C (°F)	PHYSICAL PROPERTIES: SOLVENT	PHYSICAL PROPERTIES: % SOLIDS
Lanco™ 1380 F	Modified Polypropylene Wax	●	●	High burnishing resistance, excellent abrasion resistance, matting and gloss control with less silica sedimentation	Micronized Surface Modifier	■	■	Medium	●	<9	<22	0.95	150 (302)	Micronized Powder	100
Lanco™ PP 1350	Modified Polypropylene Wax	●	●	Excellent scratch resistance, matting, metal mark resistance, anti-blocking properties	Micronized Surface Modifier	■	■	Medium	●	<9	<22	0.94	150 (302)	Micronized Powder	100
Lanco™ TF 1720C	PTFE-Modified PE Wax	●	●	Scratch resistance, abrasion resistance, slip; improved vs. PE and PP waxes	Micronized Surface Modifier	■	■	Low	●		<6	1.02	125 (257)	Solvent Micronized Powder	100
Lanco™ TF 1788C	PTFE-Modified PE Wax	●	●	Scratch resistance, abrasion resistance, slip; improved vs. PE and PP waxes	Micronized Surface Modifier	■	■	Low	●	<6	<14	1.04	102 (216)	Micronized Powder	100
Lanco™ TF 1778C	PTFE-Modified PE Wax	●	●	Scratch resistance, abrasion resistance, slip; improved vs. PE and PP waxes	Micronized Surface Modifier	■	■	Low	●	<6	<14	0.98	102 (216)	Micronized Powder	100
Lanco™ TF 1780C	PTFE-Modified PE Wax	●	●	Scratch resistance, abrasion resistance, slip; improved vs. PE and PP waxes	Micronized Surface Modifier	■	■	Low	●	<6	<14	1.07	102 (216)	Micronized Powder	100
Lanco™ Glidd 3520	PTFE-Modified PE Wax		●	Superior surface slip, excellent scratch and abrasion resistance; little influence on gloss, porosity and transparency	Surface Modifier	■	■	Low	●	3.5	7	0.92	102 (216)	Aromatic/ Butyl Glycol	20
Lanco™ Glidd 3540	Oxidized PE & PTFE Wax	●		Provides slip, toughness and abrasion resistance in a wide variety of water-based coatings; APE free and FDA compliant under specific use applications and post addable	Surface Modifier	■		Low	●	9.5	20	1.1	111 (232)	Water	35
Lanco™ Glidd 4832 LF	PTFE-Modified Wax Compound		●	Superior surface slip, excellent scratch resistance; easy to handle, provides very good stability in the final coating	Surface Modifier	■	■	Low		4.5	8	0.91	100 (212)	Aromatic Hydrocarbon Glycol Ether	32
Lanco™ Glidd 6148	PE Wax	●		Scratch resistance, matting, improved water resistance, soft and silky feel; easy to handle, provides good stability in the final coating	Matting Agent/ Anti-Scratch Additive	■	■	Medium	●	9	22	0.96	105 (221)	Water	53
Lanco™ Matt 2000	Wax Treated Silica	●	●	Highly efficient matting with excellent dispersability, scratch and mar resistance; in-can stability, will not hard-settle like many untreated silica matting agents	Matting Agent	■	■	High	●	6	(N/A)	2.0	(N/A)	Micronized Powder	100
Lanco™ LiquiMatt 5730	Polyolefin Silica Compound		●	Excellent surface feel and matting; easy to use, post-addable, flexible; eliminates need to use different powders to achieve a balanced mix of properties	Post-Addable Matting Agent	■	■	Medium		5.5	10	0.94	(N/A)	Xylene, Butyl Acetate	24
Lanco™ LiquiMatt 6375 AF	Polyolefin Silica Compound	●		Uniform matting, scratch resistance, soft feel, easy to use, post-addable	Post-Addable Matting Agent	■	■	Medium		7.5	16.5	1	(N/A)	Water	50

*Ingredients not intentionally contained in the composition, or used in manufacture.

No negative effect ■

FOR FLOW CONTROL

Lubrizol flow control and leveling agents are effective in the reduction of pinholes, orange peel, craters, air bubbles and other common defects. All products listed here are APEO-free, NMP-free and formaldehyde-free[1].

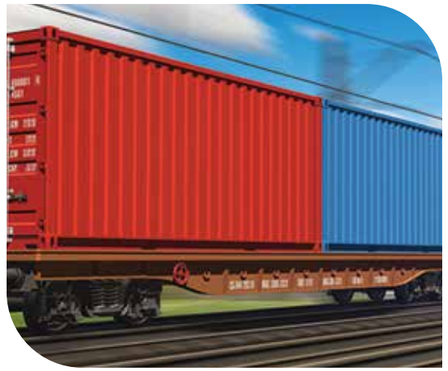
			EFFECT ON			PHYSICAL PROPERTIES			
PRODUCT NAME	PRODUCT TYPE	KEY BENEFITS	CORROSION RESISTANCE	ADHESION	GLOSS	DENSITY (G/CM³ OR MM) @ 25 °C (77 °F)	ACID VALUE	SOLVENT	% SOLIDS
SUITABLE FOR SOLVENT-BASED									
Lanco™ Flow AC196-1	Acrylic Surface Modifier	Eliminates surface defects such as pinholes, orange peel, craters and air bubbles.	■	■	May slightly increase	0.96	(N/A)	Xylene	60
Lanco™ Flow L	Acrylic Surface Modifier	Eliminates surface defects such as pinholes, orange peel and air bubbles. High solids, high resistance to sweating out.	■	■	May slightly increase	1.03	≤2	Xylene	95
Lanco™ Flow S	Acrylic Surface Modifier	Eliminates surface defects such as pinholes, orange peel and air bubbles. High resistance to sweat out, easy to incorporate.	■	■	May slightly increase	0.95	<2	Xylene	50
Lanco™ Flow U	Acrylic Surface Modifier	Eliminates surface defects such as craters, pinholes, orange peel and fish-eyes; solvent-free, maintains recoat adhesion, post-addable, improves substrate wetting.	■	■	May slightly increase	1.02	(N/A)	Solvent-Free	100
Lanco™ Flow UA50	Acrylic Surface Modifier	Eliminates surface defects such as craters, pinholes, orange peel and fish-eyes; high compatibility, maintains recoat adhesion, post-addable, improves substrate wetting.	■	■	May slightly increase	0.93	(N/A)	Aromatic 100	50
Lanco™ Flow UMPA 60	Acrylic Surface Modifier	Eliminates surface defects such as craters, pinholes, orange peel and fish-eyes. Easy to incorporate, maintains recoat adhesion, post-addable, improves substrate wetting.	■	■	May slightly increase	0.98	(N/A)	Methoxypropylacetate	60
Lanco™ Flow UX80	Acrylic Surface Modifier	Eliminates surface defects such as craters, pinholes, orange peel and fish-eyes. Easy to incorporate, maintains recoat adhesion, post-addable, improves substrate wetting.	■	■	May slightly increase	0.98	(N/A)	Xylene	60

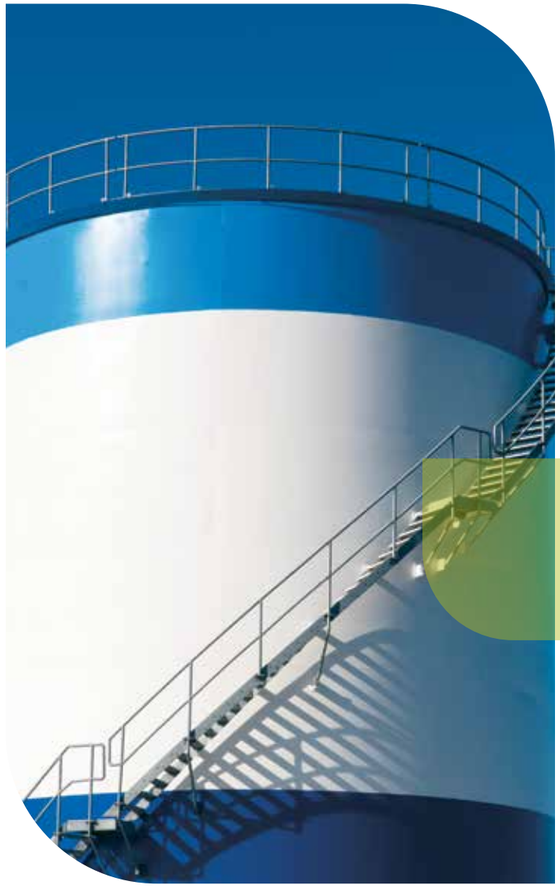
*Ingredients not intentionally contained in the composition, or used in manufacture.

No negative effect ■

FOR RHEOLOGY CONTROL

PRODUCT NAME	PRODUCT TYPE	KEY BENEFITS	PRODUCT FORM	WATER-BASED	SOLVENT-BASED	ROLE IN COATING SYSTEM	PHYSICAL PROPERTIES		
							DENSITY (G/CM^3 OR MM) @ 25 °C (77 °F)	SOLVENT	% ACTIVITY
Solthix™ 250	Rheology Modifier in Methoxy Propyl Acetate	Sag control and suspension aid, can be used in high gloss applications, effective for post addition to the final paint, excellent performance in high solids systems, prevents hard pigment setting. Excellent package stability. Recommended for spray applications.	Liquid		●	Rheology Modifier	1.01	PM Acetate	40
Solthix™ A100	Hydrophobically Modified Alkali Swellable Acrylic Emulsion Thickener	Lower dosage levels compared to competitive thickeners, improved gloss of the finished coating, improved flop index when used in metallic basecoats. Effective and stable suspension aid for effect pigments, rapid viscosity response when using direct addition method.	Liquid	●		Rheology Modifier	1.06	Water	30





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