



Dow Leather Solutions

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## Leading the way in leather coatings

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Leather's best friend since 1907

# Leading the way in leather coatings

From the first man-made bate to high-performance acrylic binders, Dow has been leading the way in leather solutions for more than 100 years. Our innovations enhance process efficiency and deliver a signature combination of softness, toughness and durability.



## ACRYLIC SYNTANS

	pH	% Solids	Key Features	Auto	Furniture	Shoe	Garment	Split
LEUKOTAN™ 1084 Tanning Agent	6.0	28	Universal. Very full. Tightness. Roundness.	++	++	+++	++	++
LEUKOTAN ER-N	7.0	32	Universal. Tightness. Filling. Economical.	++	+++	+++	++	+++
LEUKOTAN 970 Tanning Agent	4.4	35	Very good elasticity. Fullness. Fine grain. Tightness. Strength. Used as vegetable tanning replacement.	++	++	+++	+++	+++
LEUKOTAN 1028	4.5	30	Tightness. Flat grain. Improves dye uniformity.	++	++	+++	++	++
LEUKOTAN 1093 Tanning Agent	8.0	40	Tightness. Firmness. Low stretch. Improved dye value. Useful for water resistance.	++	+	+++	+	+
LEUKOTAN 8090 Polymer	8.5	45	Dispersing. Selective fill. Smooth grain.	+++	+++	+++	+++	+
LEUKOTAN MB-A	10.3	25	Dispersing.	++	++	++	++	++
LEUKOTAN FW-2E Polymer	8.3	30	Whitening. Bright and clean color. Imparts smooth and full grain.	++	++	+++	++	+++

Application Properties	Break	Softness	Belly Filling	Fullness	Waterproof	Dispersing	Dyeing
LEUKOTAN 1084 Tanning Agent	++	+++	+++	+++	–	++	++
LEUKOTAN ER-N	+++	++	+++	++	–	++	+++
LEUKOTAN 970 Tanning Agent	+++	++	+++	+++	–	++	+
LEUKOTAN 1028	++	+++	++	+	–	++	+
LEUKOTAN 1093 Tanning Agent	+++	+	+++	+++	⊕	++	+++
LEUKOTAN 8090 Polymer	+++	+++	+++	+	⊕	+++	+++
LEUKOTAN MB-A	+	+	+	+	–	+++	+++
LEUKOTAN FW-2E Polymer	++	++	+++	++	–	+	+

### Key

+++ High level    ++ Moderate level    + Minimum level    ⊕ Trace level    – Not applicable

## LUBRICATING ACRYLIC POLYMERS

	pH	% Solids	Key Features	Auto	Furniture	Shoe	Garment	Split
LUBRITAN™ GXL	5.4	35	Tightening. Softening. Excellent tear strength. Good buffability. Low fogging.	+++	++	+++	++	+++
LUBRITAN SPE	4.9	35	Water resistant. Tightening. Softening. Good tear strength. Low density. Good breathability. Low fogging.	+++	+++	+++	+++	+++
LUBRITAN AS	5.5	30	Water resistant. Softening. Filling. Good breathability. Low fogging. Good tear strength.	+++	+++	++	+++	+++
LUBRITAN SOFT 8 Acrylic Retan	5.2	33	Water resistant. Good tear strength with softness. Tightening. Low density. Low fogging. Excellent light fastness.	+++	+++	++	+++	+++
LEUKOTAN™ NS3 Tanning Agent	7.5	35	Waterproof. Very softening. Spongy. Dry cleanable and washable. Good milling properties.	–	Use when water resistance is required or as a fluffy fatliquor for special articles.			
RESIN QRXP-1665	–	66	Waterproof. Very softening. Spongy. Dry cleanable and washable. Good milling properties.	–	Use when water resistance is required or as a fluffy fatliquor for special articles.			
LEUKOTAN XE3 Tanning Agent	7.2	60	Waterproof. Pleasing surface touch.	–	Use when water resistance is required. Small amount may be used to modify surface touch.			

Application Properties	Break	Softness	Belly Filling	Fullness	Waterproof	Dispersing	Dyeing
LUBRITAN GXL	++	++	+	+	⊕	+	++
LUBRITAN SPE	++	++	++	++	++	++	++
LUBRITAN AS	++	+++	+++	++	++	++	+++
LUBRITAN SOFT 8 Acrylic Retan	++	++	++	++	++	++	++
LEUKOTAN NS3 Tanning Agent	+	+++	++	+	+++	+++	+++
RESIN QRXP-1665	+	+++	++	+	++	++	+++
LEUKOTAN XE3 Tanning Agent	–	++	+	+	+++	+	+++

## IMPREGNATION BINDERS/PENETRATORS

	pH	% Solids	Charge	Ammonia Reaction	Appearance	Key Features
PRIMAL™ FGR Emulsion	7.5 - 8.5	22.0 - 24.0	Anionic	No reaction to ammonia.	Water-soluble, translucent liquid.	Designed for full-grain. Improved break on soft leathers.
PRIMAL 863 Emulsion	5.0 - 6.0	34.0 - 36.0	Anionic	Thickens with ammonia.	Ultra-fine dispersion. Milky liquid.	Versatile use. Improves break with mellow temper.

### Key

+++ High level    ++ Moderate level    + Minimum level    ⊕ Trace level    – Not applicable

## ACRYLIC BASECOAT BINDERS

	Adhesion	Wet Physicals	Toluene Resistance	Plate Release	Molding	Key Features	Full Grain	Corrected Grain	Split	Market Segment
<b>Hard</b>										
PRIMAL™ ST-57 Emulsion	√	√	√	√	√	Wet rub. Plating. Printing.	√	√	√	■
PRIMAL ST-59 Emulsion	√	√	√			Handling. Toughness.	√			■
<b>Medium Hard</b>										
PRIMAL HPB-980 Emulsion	√	√				Wet rub. Coverage.	√	√	√	▲
PRIMAL SB-200 Emulsion		√	√	√	√	Fill and coverage.	√	√	√	■ ▲
<b>Soft</b>										
PRIMAL 863 Emulsion	√					Adhesion promoter.	√	√		▲
PRIMAL SB-150/155 Emulsion				√	√	Fill. Print retention. Flex.	√	√	√	▲
PRIMAL SB-160 Emulsion				√	√	Fill. Print retention. Flex.	√	√	√	▲
HYDRHOLAC™ CL-1 Emulsion					√	Extends PUD. Cold flex.	√	√	√	▲
HYDRHOLAC CL-20 Emulsion					√	Extends PUD. Cold flex.	√	√	√	▲
PRIMAL SB-300 Emulsion		√		√	√	Strong print support. Cold flex.		√	√	▲
PRIMAL SCL-400 Emulsion		√	√			Wet and dry flex. Non-yellowing. Print retention.	√	√	√	▲
<b>Very Soft</b>										
PRIMAL SB-100/110 Emulsion			√	√	√	Fill. Plate release. Flex retention. Softness.	√	√	√	▲
PRIMAL SCL-371 Emulsion	√	√	√			Adhesion. Wet properties.	√	√		■ ▲

### Key

■ Shoe    ▲ Universal    □ Garment    ▲ Upholstery



### PUD BASECOAT BINDERS

	pH	% Solids	Specific Gravity	Density lbs/gal (US)	Manufactured with NMP	Ionic Charge	Viscosity cPs	Key Features
PRIMAL™ BINDER U-51 MX	8.0 - 10.0	32 - 33	1.04	8.8	Yes	Anionic	< 200	Very fine particle size. Semi-translucent liquid. Promotes adhesion, supports plating and low temperature flexibility.
PRIMAL BINDER PR	7.5 - 8.5	34 - 36	1.04	8.8	No	Anionic	100 - 800	Very fine particle size. Semi-translucent liquid. Promotes adhesion, supports plating and low temperature flexibility.
PRIMAL BINDER PR MX	7.5 - 8.5	32 - 33	1.04	8.8	No	Anionic	100 - 800	Very fine particle size. Semi-translucent liquid. Promotes adhesion, supports plating and low temperature flexibility.

### ISOCYANATE-BASED BINDERS

	% Solids	Density lbs/gal (US)	VOC, lbs/gal (US)	Specific Gravity	Gloss Reduction	Key Features
BINDER LS-3492	49 - 51	9.0	4.33	1.07	Very good	Clear liquid. Recommended for all aqueous coats though primarily used in auto top. Can be used 'hot-pot' or in-line. Self-emulsifying in water.
BINDER LS-3486HS/LO	50 - 52	8.7	4.33	1.04	Best	Clear liquid. Recommended for all aqueous coats though primarily used in auto top. Can be used 'hot-pot' or in-line. Self-emulsifying in water.

### RHEOLOGY MODIFIERS

	pH	% Solids	Charge	Specific Gravity	Density lbs/gal (US)	Appearance	VOC, lbs/gal (US)	Typical Usage %	Application Details
ACRYSOL™ ASE-60 Thickener	2.1 - 3.5	27.5 - 28.5	Anionic	1.06	8.9	Milky liquid	0.02	1 - 2	Base activated.
ACRYSOL RM-825 Rheology Modifier	6.0 - 8.0	24.0 - 26.0	Nonionic	1.10	8.7	Milky liquid	4.00	1 - 2	Requires good agitation to activate.
ACRYSOL RM-819W Rheology Modifier	4.5 - 6.5	17.5 - 20.5	Nonionic	1.10	8.7	Hazy liquid	0.02	1 - 2	Requires good agitation to activate.
ACRYSOL RM-1020	6.5 - 7.5	19 - 21	Nonionic	1.04	8.7	Hazy liquid	3.23	1 - 2	Use cut 1:1 with water
ACRYSOL RM-2020E	5.0 - 8.0	19 - 21	Nonionic	1.04	8.7	Hazy liquid	0.02	1 - 2	Use cut 1:1 with water

## ACRYLIC TOPCOAT BINDERS

	pH	% Solids	Charge	Specific Gravity	Density lbs/gal (US)	Viscosity cPs	Appearance	Key Features
HYDRHOLAC™ AQS Topcoat	7.0 - 9.0	37.0 - 39.0	Anionic	1.02	8.5	< 50	Milky white low- viscosity liquid.	General purpose. Designed for furniture or auto.
HYDRHOLAC CR-15 Emulsion	7.0 - 7.8	41.5 - 42.5	Anionic	1.06	8.9	< 700	Milky white low- viscosity liquid.	Very hard. Added to the topcoat to promote abrasion resistance.
HYDRHOLAC CR-17B Emulsion	8.4 - 9.2	44.5 - 45.5	Anionic	1.06	8.8	< 500	Milky white low- viscosity liquid.	Hard. May replace nitrocellulose emulsions and CAB for intermediate topcoats.
HYDRHOLAC CL-1 Emulsion	6.8 - 8.0	36.0 - 37.0	Anionic	1.02	8.3	< 100	Milky white low- viscosity liquid.	General purpose. Designed for furniture or auto.
HYDRHOLAC CL-20 Emulsion	7.0 - 8.5	35.5 - 37.0	Anionic	1.02	8.3	< 100	Milky white low- viscosity liquid.	High Performance. Hydroxy functional. Designed for upholstery automotive and furniture.
HYDRHOLAC 2803 Topcoat	4.5 - 6.0	37.0 - 39.0	Anionic	1.10	8.9	< 50	Milky white low- viscosity liquid.	Primarily designed as a blending resin for intermediate and final topcoats.
HYDRHOLAC TS Topcoat	6.5 - 9.0	36.5 - 38.5	Anionic	1.10	8.9	< 150	Milky white low- viscosity liquid.	High performance PUD acrylic binder for automotive finishing.

## PUD TOPCOAT BINDERS

	pH	% Solids	Specific Gravity	Density lbs/gal (US)	Manufactured with NMP	Ionic Charge	Viscosity cPs	Key Features
PRIMAL™ BINDER U-91	7.5 - 8.5	39 - 41	1.04	8.8	No	Anionic	0 - 700	Very fine particle size. Semi-translucent liquid. Offers high abrasion performance and low temperature flexibility.



### TOPCOAT FLOW AND DULLER AGENTS

	pH	% Solids	Charge	Specific Gravity	Density lbs/gal (US)	Viscosity cPs	Appearance	Key Features
PRIMAL™ MA-65E Leveler	10.0 - 11.6	19.0 - 21.0	Anionic	0.95	7.9	N/A	Translucent liquid.	Flow agent for all coatings. Typical usage 2 - 5%.
OPTI-MATT™ AB Duller	7.2 - 9.0	30.0 - 33.0	Anionic	1.0	8.5	200 - 400	Off-white liquid.	Non-silica based dulling agent.
PRIMAL Dull #1A/E	9.0 - 9.8	15.5 - 17.5	Anionic	1.09	9.0	100 - 750	Off-white liquid.	Silica based dulling agent.

### FORMULATED TOPCOAT DULLERS

	pH	% Solids	Charge	Specific Gravity	Density lbs/gal (US)	Viscosity cPs	Key Features
HYDRHOLAC™ UD-2	8.4 - 9.4	23.0 - 25.0	Anionic	1.06	8.8	500 - 1500	Milky translucent liquid. Silica filled. PUD bound.
OPTI-MATT UD-4	8.0 - 9.5	24.5 - 26.5	Anionic	1.06	8.8	300 - 800	Milky translucent liquid. Silica and organic dulling agent filled. PUD bound.
HYDRHOLAC AD-1	8.4 - 9.4	23.0 - 25.0	Anionic	1.06	8.8	250 - 1500	Milky white liquid. Silica filled for gloss reduction. Acrylic bound.
OPTI-MATT AD-20 Duller	8.0 - 9.5	24.0 - 25.0	Anionic	1.06	8.8	200 - 1500	Milky translucent liquid. Silica filled. PUD bound.
OPTI-MATT A-2000LV	6.5 - 8.5	24.5 - 26.5	Anionic	1.03	8.4	200 - 1000	Milky white liquid. Acrylic. Formulated as a ready-to-use dull topcoat.

### HAND MODIFIERS

	pH	% Solids	Specific Gravity	Density lbs/gal (US)	Viscosity cPs	Appearance	Key Features	Typical Usage %
ROSILK™ 2000 Feel Modifier	8.5 - 10.0	44.0 - 46.0	1.00	8.4	100 - 1500	Milky white liquid	Good slip. Absent strong silicone feel. Good for gas rubs.	1 - 10
ROSILK 2229 Feel Modifier	3.0 - 7.0	57.0 - 60.0	1.05	8.8	200 - 1000	Milky white liquid	Good slip. Silicone feel. Good for high abrasion.	1 - 10
ROSILK 3339 Feel Modifier	N/A	57.0 - 60.0	1.05	8.8	300 - 1200	Milky white liquid	Similar to 2229 but slightly better film coalescence.	1 - 10
ROSILK 2230 Feel Modifier	8.0 - 10.0	55.0 - 58.0	1.05	8.8	200 - 1000	Milky white liquid	Similar to 2229 but manufactured without BTEX* containing materials.	1 - 10
PRIMAL 191 Emulsion	8.8 - 9.4	22.5 - 23.5	1.00	8.3	1 - 20	Milky white liquid	Confers a buttery feel.	1 - 3

\* BTEX stands for Benzene, Toluene, Ethyl Benzene, and Xylene.





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