



**Lubrizol**

PERFORMANCE COATINGS

# SOLSPERSE™ W100

## **Polymeric Dispersant for Aqueous Paints, Inks and Concentrates**

Solsperse™ W100 is a polymeric dispersant that stabilizes and disperses particles in water-based paints, inks and concentrates. It is low VOC capable and effective on a wide range of pigments and fillers. These include carbon black, organic pigments, titanium dioxide, inorganic pigments and fillers.

## **Efficiency and Performance**

Solsperse W100 is a general purpose dispersant designed to be used at dosage levels 15-20% lower than competitive dispersants. Reduced dispersant dosages minimize the impact on important properties such as corrosion resistance, water sensitivity and blocking, allowing for enhanced performance benefits in certain applications.

This product promotes fast pigment grinds, high loadings, low viscosity and high color strength in pigment dispersions. It is suitable for long-term durability requirements in the final product, provides good pigment transparency/opacity, and it is compatible with many commercially available industrial resins.

## **WHAT WE ADD MAKES THE DIFFERENCE.™**

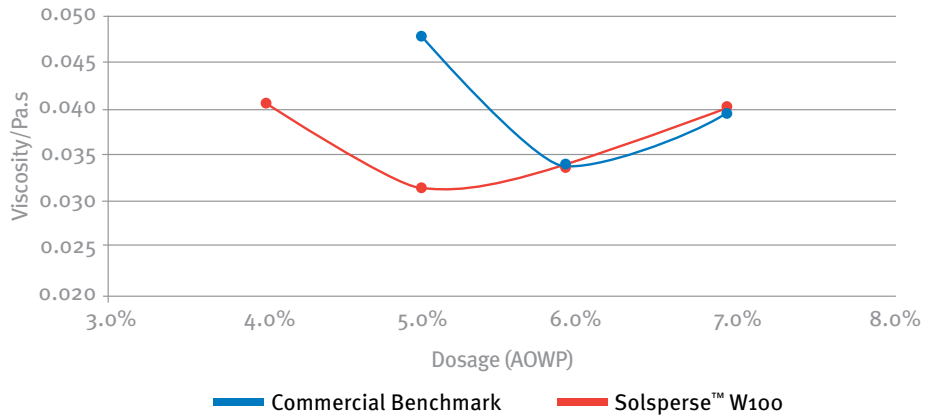
- 15-20% MORE EFFICIENT
- EXCELLENT CORROSION CONTROL
- HYDROPHOBIC AND STABILIZES REACTIVE PIGMENTS
- MULTI-ANCHORED FOR BROAD PIGMENT COMPATIBILITY
- HIGHLY EFFECTIVE ON WHITE PIGMENTS
- PIGMENT CONCENTRATE AVAILABLE FOR SAMPLING



[www.lubrizol.com/coatings](http://www.lubrizol.com/coatings)

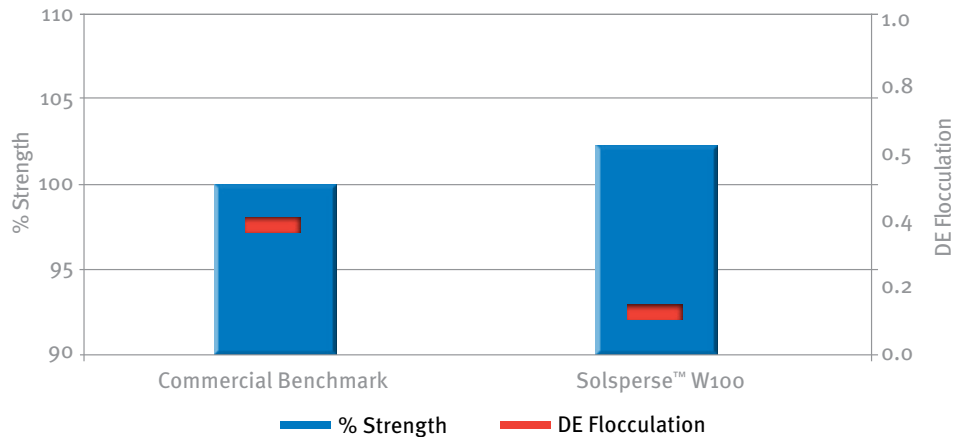
15-20% MORE EFFICIENT

### Optimization of Dosage in Cinilex® DPP Red SR2P



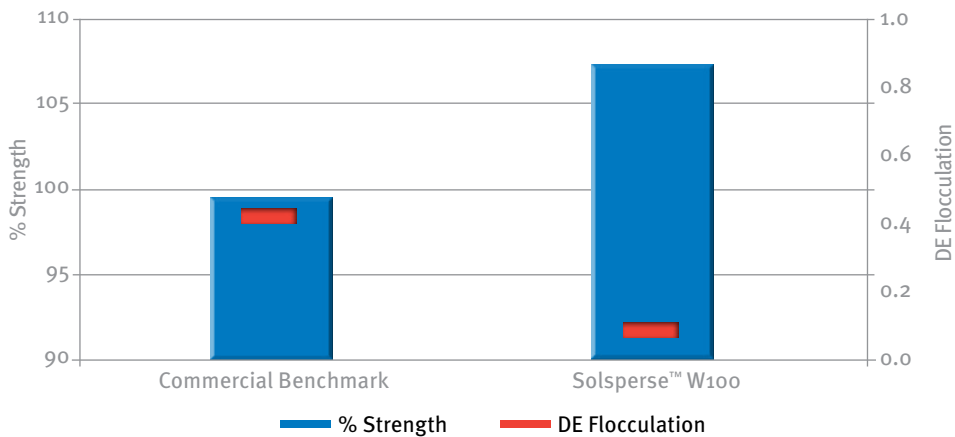
At the optimal dispersant loading, millbase viscosity will be at a minimum. This graph shows that when dispersing 47.5% loading of Cinilex® DPP Red SR2P, Solsperse™ W100 is optimized at a lower dose than the control.

### Color Strength in Decorative Satin



Despite the lower dosage, Solsperse™ W100 produced similar color strength and better resistance to flocculation.

### Color Strength in Industrial Base



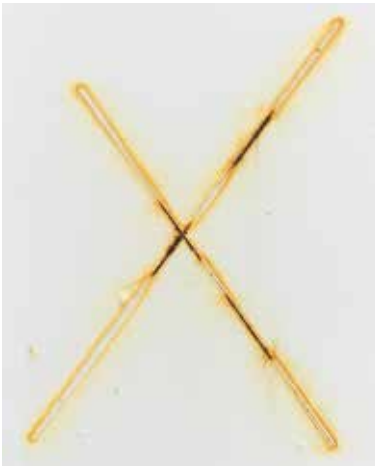
Despite the lower dosage, Solsperse™ W100 produced higher color strength and better resistance to flocculation.

# EXCELLENT CORROSION CONTROL

Corrosion resistance performance (240 hour salt immersion)

- Carboset® CR-3090 based system

**Solsperse™ W100**  
1.6% in total formulation



Solsperse™ W100 shows minimal corrosion

**Commercial Benchmark 1**  
2% in total formulation



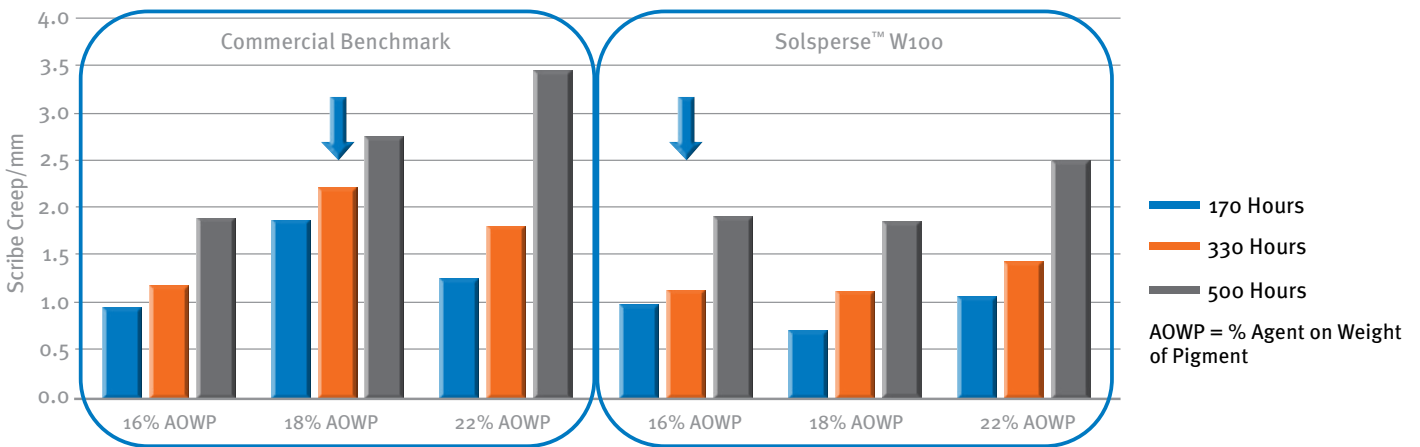
Commercial Benchmark 1 shows more corrosion and blistering around the scribe

**Commercial Benchmark 2**  
2% in total formulation



Commercial Benchmark 2 shows corrosion and blistering across the whole panel

## Lower Dosage and More Hydrophobic Dispersant Maximizes Corrosion Resistance

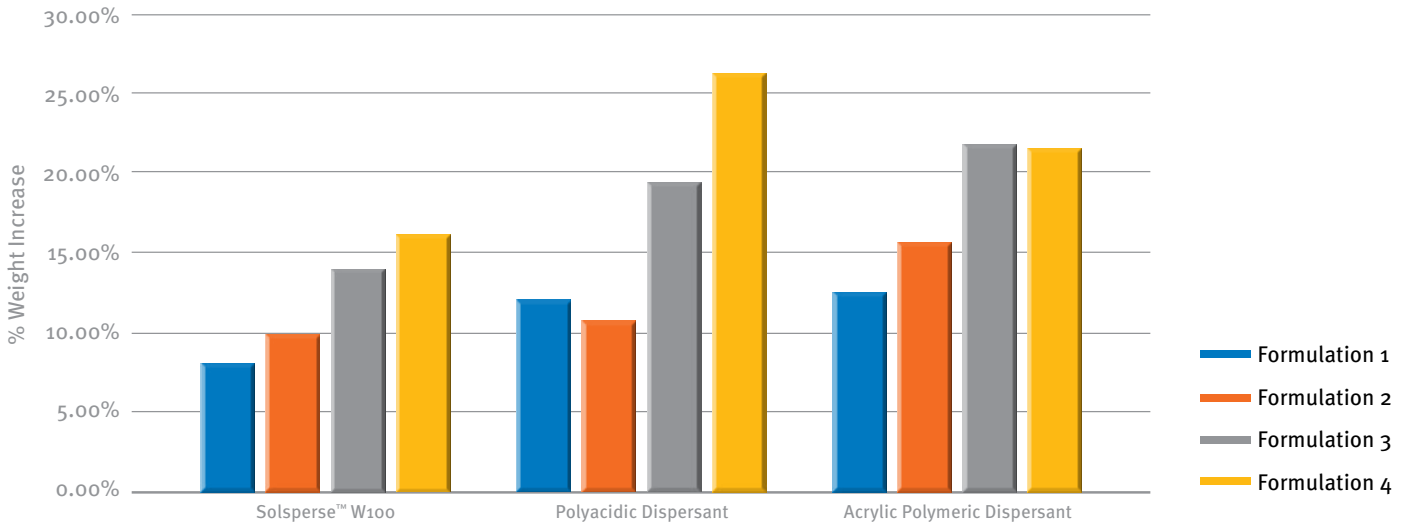


Salt spray exposure testing demonstrates two benefits of Solsperse™ W100 in a water-borne acrylic.

- Solsperse™ W100 is more hydrophobic (less hydrophilic), resulting in better salt spray and moisture resistance.
- Additionally, a lower dosage of Solsperse™ W100 can be used, which further maximizes that benefit, so the 16% Solsperse™ W100 level should be compared to the higher level for the control.

# HYDROPHOBIC AND STABILIZES REACTIVE PIGMENTS

## Water Absorption



**Formulation 1** is Carboset® AE-960 based Elastomeric Roof Coating (Application guide ref 960-101)

**Formulation 2** is Zinc Oxide Modified Carboset® AE-960 based Elastomeric Roof Coating (Application guide ref 960-102)

**Formulation 3** is Carboset® RPT 2000 based Universal Roof Coating (Application guide ref 2000-101)

**Formulation 4** is Zinc Oxide Modified Carboset® RPT 2000 based Universal Roof Coating (Application guide ref 2000-102)

Zinc Oxide Containing Carboset® AE-960 Formula	Solsperse™ W100	Polyacidic Dispersant	Acrylic Polymeric Dispersant
Initial KU Viscosity	110	116	111
KU Viscosity after 4 weeks	Pass	Fail	Fail

Zinc Oxide Containing Carboset® RPT 2000 Formula	Solsperse™ W100	Polyacidic Dispersant	Acrylic Polymeric Dispersant
Initial KU Viscosity	101	107	102
KU Viscosity after 4 weeks	Pass	Fail	Pass

A "Pass" is less than 10% KU change. A "Fail" is more than 10% KU change.



# MULTI-ANCHORED FOR BROAD PIGMENT COMPATIBILITY

## Carbon Black Pigments

	Raven® 1040	Raven® 1255	Raven® 5000 Ull	Black FW200	Black FW255	Special Black 4	Special Black 100
	Pigment Black 7	Pigment Black 7	Pigment Black 7	Pigment Black 7	Pigment Black 7	Pigment Black 7	Pigment Black 7
Pigment	39	35.00	25	25	25	35	42
Solsperse™ W100	14.63	16.36	31.25	31.25	34.38	36.31	8.71
Defoamer	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Biocide	0.1	0.10	0.1	0.1	0.1	0.1	0.1
Water	46.02	48.29	43.4	43.4	40.27	28.34	48.94
<b>Total</b>	100	100	100	100	100	100	100
% Agent on Weight of Pigment (AOWP)	15.0%	18.7%	50.0%	50.0%	55.0%	41.5%	8.3%

## Organic Pigments

	Heliogen® Blue L6950	Heliogen® Blue L6920	Palomar® Blue B4806	Heliogen® Blue L7085	Sudafast® Blue 2785
	Pigment Blue 15.1	Pigment Blue 15.1	Pigment Blue 15.1	Pigment Blue 15.3	Pigment Blue 15.3
Pigment	40.00	45.00	37.00	48.00	40.00
Solsperse™ W100	17.50	20.25	16.65	15.00	15.00
Defoamer	0.25	0.25	0.25	0.25	0.25
Biocide	0.10	0.10	0.10	0.10	0.10
Water	42.15	34.40	46.00	36.65	44.65
<b>Total</b>	100	100	100	100	100
% Agent on Weight of Pigment (AOWP)	17.5%	18.0%	18.0%	12.5%	15.0%

## Organic Pigments

	Hansa® Brilliant Yellow 2GX-70	Hostaperm® Pink E	Paliogen® Maroon L3920	Cinilex® DPP Red SR2P	Lansco® 1233 Violet
	Pigment Yellow 74	Pigment Red 122	Pigment Red 179	Pigment Red 254	Pigment Violet 23
Pigment	45.00	36.00	42.00	50.00	30.00
Solsperse™ W100	6.75	19.53	15.75	6.25	10.00
Defoamer	0.25	0.25	0.25	0.25	0.25
Biocide	0.10	0.10	0.10	0.10	0.10
Water	47.90	44.12	41.90	43.40	59.65
<b>Total</b>	100	100	100	100	100
% Agent on Weight of Pigment (AOWP)	6.0%	21.7%	15.0%	5.0%	13.3%

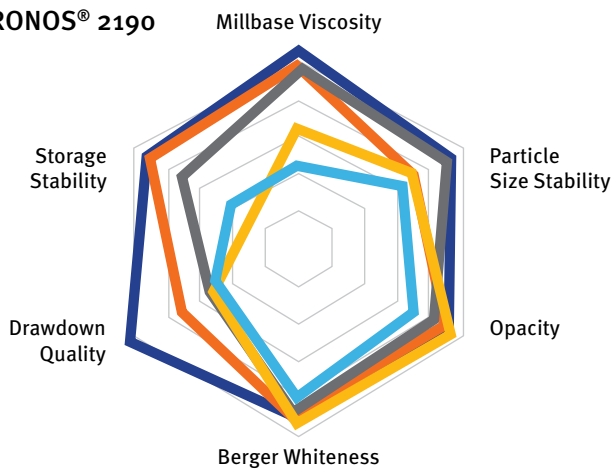
## Inorganic Pigments

	Bayferrox® 3920	Sicotrans® Yellow L1916	Lanox® Yellow 8916	Bayferrox® 130M
	Pigment Yellow 42	Pigment Yellow 42	Pigment Yellow 42	Pigment Red 101
Pigment	65.00	30	40	70
Solsperse™ W100	4.88	7.5	25	11.38
Defoamer	0.25	0.25	0.3	0.25
Biocide	0.10	0.10	0.1	0.10
Water	29.77	62.15	34.6	18.27
<b>Total</b>	100	100	100	100
% Agent on Weight of Pigment (AOWP)	3.0%	10.0%	25.0%	6.5%

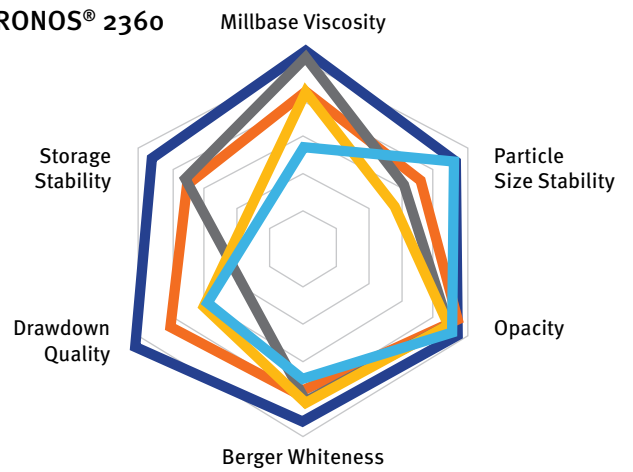
# HIGHLY EFFECTIVE ON WHITE PIGMENTS

	Ti-Pure™ R-706	Kronos® 2190	Kronos® 2310	TiOxide® TR-92
	Pigment White 6	Pigment White 6	Pigment White 6	Pigment White 6
Pigment	75.00	75	75	75
Solsperse™ W100	4.75	3.75	3.75	3.75
Defoamer	0.25	0.25	0.25	0.25
Humectant GRB4		3	4	3
Biocide	0.10	0.1	0.1	0.1
Water	19.90	179	17.9	17.9
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
% Agent on Weight of Pigment (AOWP)	2.50%	2	2	2

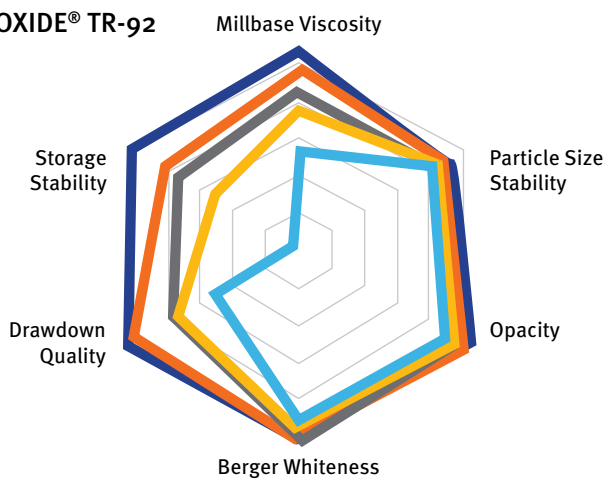
**KRONOS® 2190**



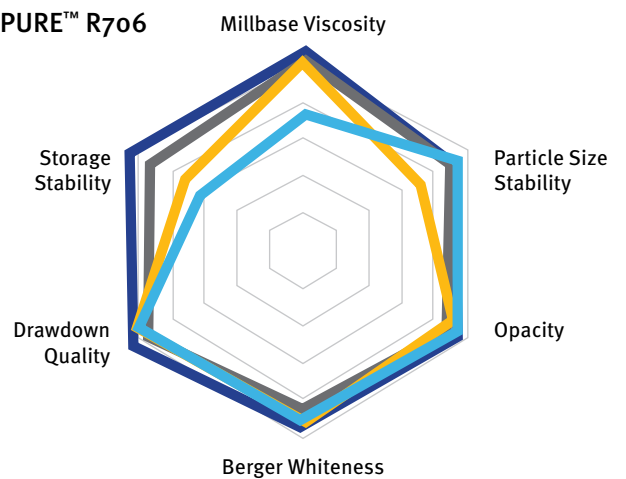
**KRONOS® 2360**



**TIOXIDE® TR-92**



**TIPURE™ R706**



## PIGMENT CONCENTRATES AVAILABLE FOR SAMPLING

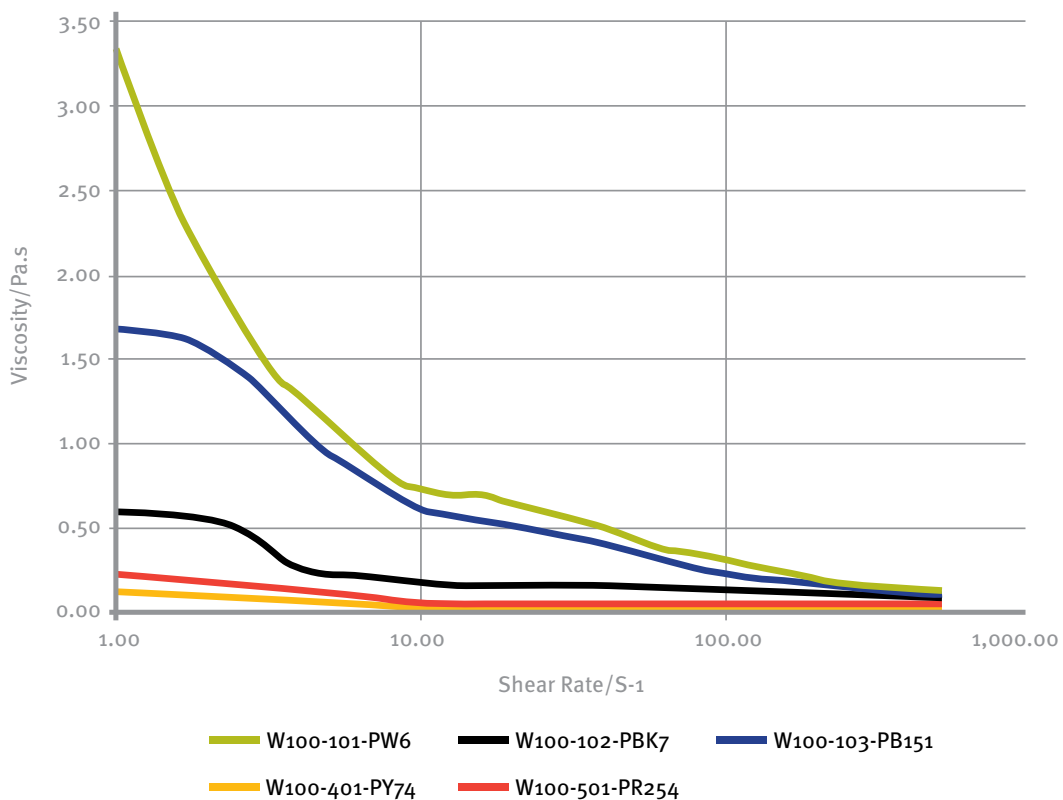
Contact your local Lubrizol representative or distributor to request a sample rack containing the Solsperse™ W100 dispersant and five starting point colorants to help jumpstart formulation evaluations.



### Sample Rack References

Dispersion Reference	Pigment Used
W100-101-PW6	Ti-Pure™ R-706
W100-201-PBK7	Raven® 1255
W100-301-PB151	Heliogen® blue L6920
W100-401-PY74	Hansa® Brilliant Yellow 2GX-70
W100-501-PR254	Cinilex® DPP Red SR2P

### Viscosity Profiles of Dispersions





#### **NORTH AMERICA**

Lubrizol Advanced Materials, Inc.  
9911 Brecksville Road  
Brecksville, OH 44141 USA  
+1.800.380.5397  
CoatingsNA@lubrizol.com

#### **EUROPE**

Lubrizol Limited  
PO Box 42, Hexagon Tower  
Blackley, Manchester  
M9 8ZS United Kingdom  
+44.161.721.6800

#### **ASIA-PACIFIC**

Lubrizol Specialty Chemicals  
(Shanghai) Co., Ltd  
10/F, Park Center International  
No. 1088 Fang Dian Road  
Shanghai 201204, PR China  
+8621.3866.0366  
CoatingsAP@lubrizol.com

#### **SOUTH AMERICA**

Lubrizol do Brasil Aditivos Ltda  
Avenida Nove de Julho, 3653  
Jardim Paulista  
Sao Paulo – SP  
01407-000  
+55.11.4097.0250  
CoatingsLA@lubrizol.com

Visit us at:  
[www.lubrizol.com/coatings](http://www.lubrizol.com/coatings)

Solsperse™ is a trademark of The Lubrizol Corporation

Carboset® is a trademark of The Lubrizol Corporation

Raven® is a trademark of Columbian Chemicals Co

Heliogen® is a trademark of BASF Group

Cinilex® is a trademark of Cinic Chemicals (Shanghai) Co. Ltd

Hansa® is a trademark of Clariant International Ltd

Bayferrox® is a trademark of Bayer AG

Ti-Pure™ is a trademark of The Chemours Company

Kronos® is a trademark of Kronos International

Tioxide® is a trademark of Huntsman Corporation

Palomar® is a trademark of Sun Chemical

Sudafast® is a trademark of Sun Chemical

Hostaperm® is a trademark of Clariant International Ltd

Paliogen® is a trademark of BASF Group

Lansco® is a trademark of Lansco Colors LLC

Sicotrans® is a trademark of BASF Group

Lanox® is a trademark of Lansco Colors LLC

#### **Lubrizol Advanced Materials, Inc.**

9911 Brecksville Road, Cleveland, OH 44141  
800.380.5397

The information contained herein is believed to be reliable, but no representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or the results to be obtained. The information is based on laboratory work with small-scale equipment and does not necessarily indicate end product performance. Because of the variations in methods, conditions and equipment used commercially in processing these materials, no warranties or guarantees are made as to the suitability of the products for the applications disclosed. Full-scale testing and end product performance are the responsibility of the user. Lubrizol Advanced Materials, Inc. shall not be liable for and the customer assumes all risk and liability of any use or handling of any material beyond Lubrizol Advanced Materials, Inc.'s direct control. **THE SELLER MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.** Nothing contained herein is to be considered as permission, recommendation, nor as an inducement to practice any patented invention without permission of the patent owner.

Trademarks owned by The Lubrizol Corporation or its affiliates. ©The Lubrizol Corporation 2020, All Rights Reserved.

20-220061

The Lubrizol logo consists of the word "Lubrizol" in a bold, sans-serif font. A blue swoosh underline is positioned beneath the letters "i", "z", "i", and "o".