



DISPARLON®

For Solventborne and Solventless Systems

Thixotropes, Surface Control and Dispersants



DISPARLON® additives are manufactured by Kusumoto Chemicals Ltd. of Tokyo, Japan. Through a **technology partnership** spanning over three decades, **King Industries, Inc.** serves as exclusive sales, technical service and marketing arm in **North and South America.**

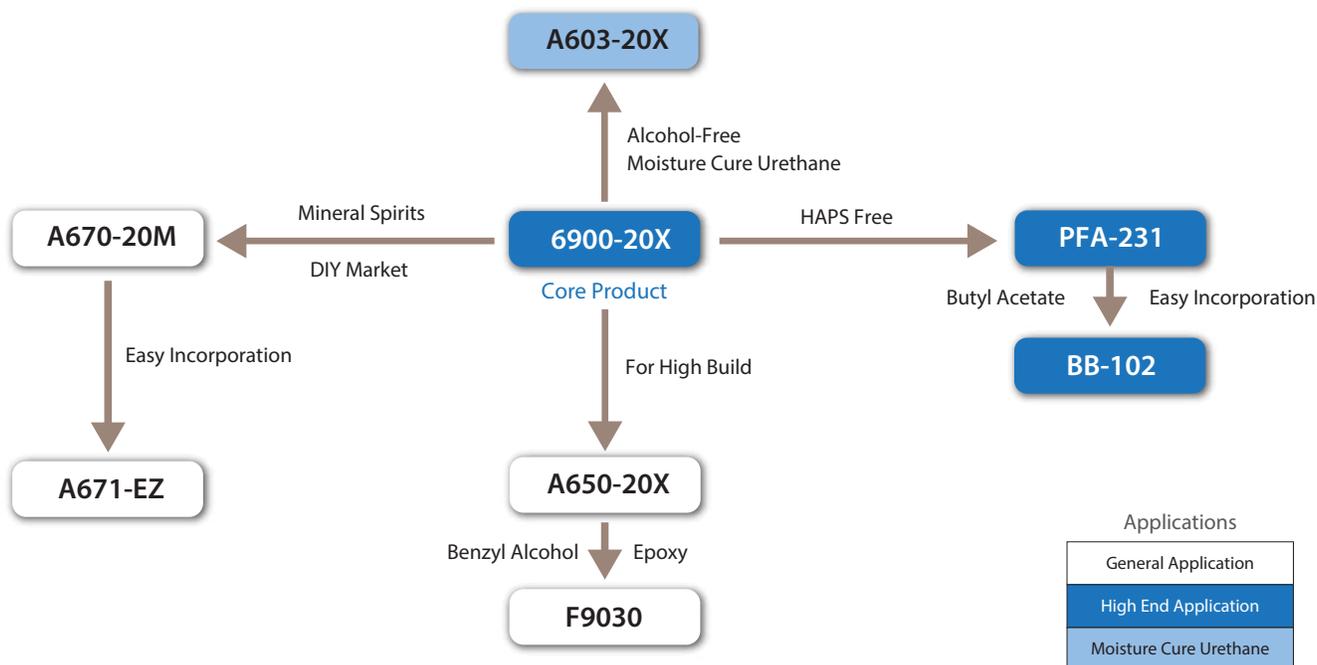
The **DISPARLON®** trade name is applied to a series of functional additives used in paint, ink, adhesive and sealant markets worldwide. Major product lines include thixotropes, dispersants and surface control agents. Proven over years of service, the **DISPARLON** line continues to expand and revolutionize the market.



DISPARLON Selection

Additive Type	Typical Attributes / Properties
<p>Thixotropes Anti-Sagging Anti-Settling</p>	<p>DISPARLON thixotropes offer formulators a wide choice of unique products with performance benefits including: superior shear thinning, non-seeding, maximum anti-sag/anti-settling, excellent stability on aging and superior performance in high gloss systems.</p>
	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Pre-activated type 6900-20X</p> </div> <div style="text-align: center;">  <p>Polyolefin type 4200-10</p> </div> <div style="text-align: center;">  <p>Hybrid type NS-5500</p> </div> </div>
<p>Leveling Anti-Cratering Wetting</p>	<p>Surface control agents are based on a specially prepared acrylic, silicone and acrylic silicone copolymers. These additives are ideal for industrial coatings and offer excellent recoatability.</p>
<p>Defoaming Anti-Popping</p>	<p>These additives are designed to eliminate entrapped air and improve gloss and clarity, while preventing pinholes and craters. Available for air dry and baked systems.</p>
<p>Dispersants</p>	<p>A series of additives designed to improve color strength and gloss, prevent flocculation, reduce grinding time and reduce or eliminate flood and float problems.</p>

Pre-Activated Thixotropes



Product	Volatile	Active	Additive Level (Total Formula Weight)	Application
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Pre-activated Polyamide

6900-20X	Xylene, alcohol	20% Paste	0.5-5.0%	General purpose. Best gloss in thin films & clears or with metallic and pearlescent pigments.
A603-20X	Xylene	20% Paste	0.5-5.0%	Moisture cure urethane systems.
A650-20X	Xylene, alcohol	20% Paste	0.5-5.0%	Primers and industrial maintenance coatings. Best efficiency in thick films.
A670-20M	Mineral spirits, alcohol	20% Paste	0.5-5.0%	DIY and industrial stains for good anti-settling of pigments. DIY varnishes for suspension/spacing of flattening silica.
A671-EZ	Mineral spirits, alcohol	10% Soft Paste	0.5-5.0%	Easier to use version of A670-20M.
BB-102	Butyl acetate, alcohol	10% Soft Paste	1.0-6.0%	Pourable paste. Post addable. HAPS free. For best overall appearance and easiest incorporation.
F-9030	Benzyl alcohol	30% Paste	0.4-4.0%	100% solids epoxy systems and epoxy floor paints.
PFA-231	Hydrocarbon, alcohol	20% Paste	0.5-5.0%	HAPS-free version of 6900-20X.

For help with incorporation, visit www.kingindustries.com for videos

DISPARLON® 6900-20X
Paste incorporation



DISPARLON 6900-20X
Incorporation into filled or pigmented systems

Product	Composition	Volatile	Active	Additive Level (Total Formula Weight)	Application
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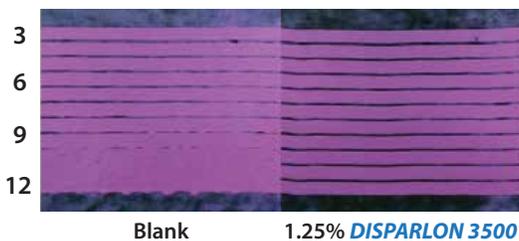
Pigment Dependent

3500	Polyether phosphate	-	100% Liquid	0.5-2.0%	Zero VOC liquid thixotrope. 2K PU. Highly filled systems. NEW Pourable
4200-10	Oxidized polyolefin	Xylene	10% Flowable Paste	1.0-5.0%	Metallic orientations and anti-settling for industrial systems.
4200-20	Oxidized polyolefin	Xylene	20% Paste	0.3-1.0%	Anti-settling for all non-aqueous pigmented systems.
NS-30	Hybrid oxidized polyolefin with polyamide	Xylene	15% Paste	1.0-5.0%	For polyamide side of 2K epoxy maintenance coatings. Anti-sag/anti-settle.
NS-5500	Hybrid oxidized polyolefin with polyamide	Solvent naphtha, Alcohol	7% Flowable Paste	3.0-8.0%	Post addable. Improved flip/flop with metallics and orientation and anti-settling of flattening silica and inorganic pigments. NEW Pourable
F-9050	Hybrid oxidized polyolefin with polyamide	Low volatility Diluent	20% Paste	1.0-5.0%	Solvent-free anti-sag and anti-settling agent for 100% solids systems

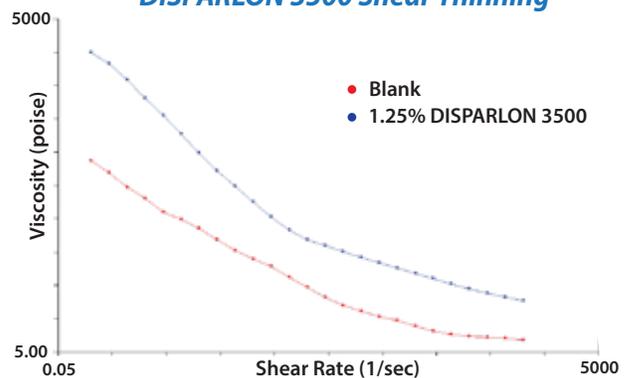
New Thixotropes

DISPARLON® 3500 is a zero VOC liquid thixotrope for pigmented systems. It associates with the pigment and fillers contained in a formulation at dosage levels in the range of 0.5 to 2.0% to improve sag control and rheological properties. DISPARLON 3500's key benefits include ease of use, excellent sag resistance, strong KU response in highly filled formulations, excellent shear thinning and high gloss.

DISPARLON 3500 Sag Resistance



DISPARLON 3500 Shear Thinning



DISPARLON NS-5500 is a hybrid thixotropic agent based on a combination of unique technologies and is supplied as a free flowing paste. Since it is pre-activated, this product can be easily post-added for immediate effects without having to make a master-batch. DISPARLON NS-5500 enables uniform pigment orientation with good gloss, particularly on vertical surfaces because of the uniform extension of its thixotropic structure throughout the coating film. This product is especially effective for anti-settling and orientation of aluminum and mica pigments.

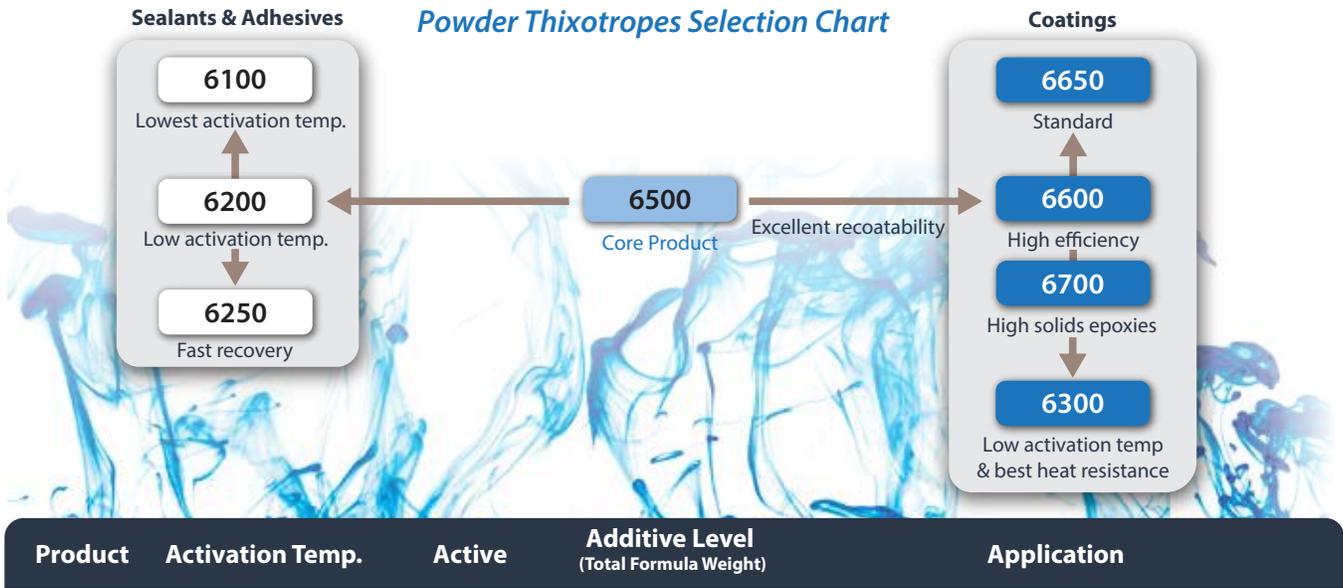
Aluminum Metallic (Alpaste 7620NS [TOYO])

Anti-settling Test: 7 Days
(Viscosity: 17 sec #4 Ford)

Pigment Orientation



Powder Thixotropes



Powder Polyamide

Product	Activation Temp.	Active	Additive Level (Total Formula Weight)	Application
6100	30°C-60°C	100% Powder	0.5-3.0%	Sag/slump control. Lowest activation temperature. Designed specifically for MMA, adhesives and sealants.
6200	40°C-80°C	100% Powder	0.5-3.0%	Sag/slump control. Low activation temperature. Designed specifically for adhesives and sealants.
6250	60°C-80°C	100% Powder	0.5-3.0%	Low activation temperature for silicone, urethane and MS sealants. NEW
6300	50°C-80°C	100% Powder	0.5-2.0%	Low activation temperature. Best sag control when applied to hot surfaces. 100% solids epoxy coatings and adhesives. NEW
6500	60°C-90°C	100% Powder	0.5-2.0%	Sag control. Most versatile. General purpose coatings and sealants.
6600	60°C-70°C	100% Powder	0.5-2.0%	Sag control with improved recoatability for coatings, such as epoxy primers.
6650	60°C-70°C	100% Powder	0.5-2.0%	Cost effective sag control with improved recoatability for coatings, such as epoxy primers.
6700	60°C-70°C	100% Powder	0.5-2.0%	Sag control in heavy-duty paints. Particularly effective in 100% solids epoxies and epoxies containing polar solvents.

New Thixotropes

DISPARLON® 6300 is a powdered thixotropic agent based on amide wax for heavy duty paints. Being 100% active, this product is favorable not only in cost/performance, but because it offers excellent recoatability. This product activates so easily that it finds applications in a wide variety of formulations. DISPARLON 6300 typically activates at 10°C less than conventional polyamide thixotropes.

High Solids Epoxy Primer - High Temperature Substrate

Paint Temp: 32°C/Substrate: 50°C



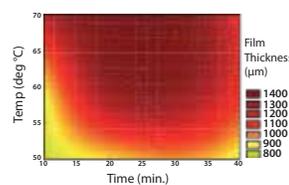
1% DISPARLON 6300



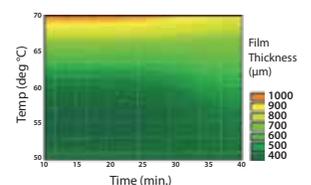
1% Conventional Polyamide

Time vs. Temperature vs. Sagging

(Thicker Films Equate to Better Anti-sagging)



DISPARLON 6300

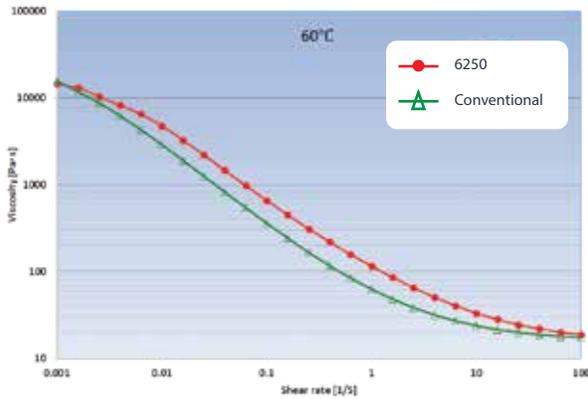


Conventional Polyamide

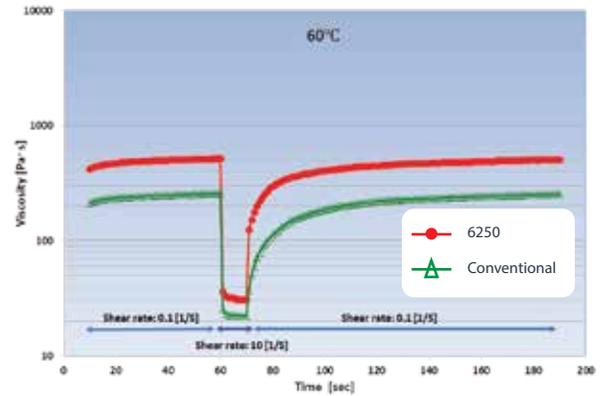
New Thixotropes

DISPARLON® 6250 is a powdered thixotrope based on amide wax for silicone, urethane and polysulfide MS sealants. This product is 100% active and activates at low temperatures of 60°C-80°C for excellent slump resistance, shear thinning and strong structure recovery.

MS-Polymer S-203 / Flow Curve



MS-Polymer S-203H / Viscosity Recovery

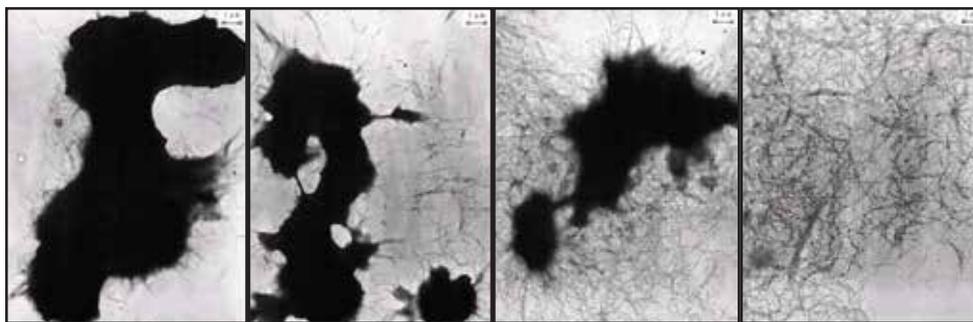


Activation of Powder Thixotropes

The polyamide powder thixotropes need to be activated (swelled and dispersed) in the system. Add the powder to the pigment grind portion of the formulation. While grinding the pigments, allow the temperature of the grind to rise to the temperatures shown in the selection chart below. Once at the “activation temperature” continue to grind for 15 minutes to get full activation of the polyamide. After activating the polyamide, it is generally best to mix slowly during the first 20°C of cool down. The slow mixing during cool down will give the system the most uniform and reproducible rheology.

Please note, these materials will activate at lower temperatures than shown in the chart when in the presence of alcohols or amines, due to increased hydrogen bonding.

Thixotrope Structure vs. Dispersing Temperature



Not Activated

Begin Activation

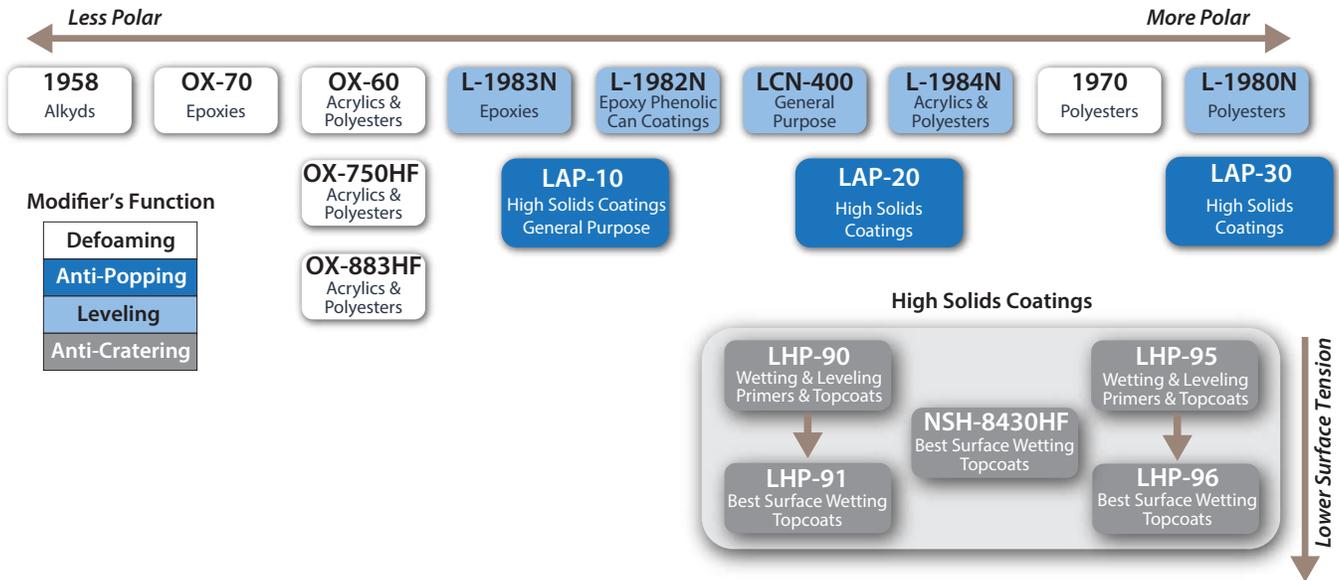
Activation

Fully Activated

	Not Activated	Begin Activation	Activation	Fully Activated
Solvent Epoxy	20-35°C	35-50°C	50-60°C	60-80°C
Solvent-Free Epoxy	20-40°C	40-60°C	60-70°C	70-90°C
Curing Agent	<20°C	20-30°C	30-40°C	40-60°C

Leveling / Anti-cratering / Wetting

Surface Tension Modifiers Selection Chart



Product	Volatile	Active	Additive Level (Total Formula Weight)	Application
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Leveling

1958	Mineral spirits	20% Liquid	0.2-1.0%	For use with long oil alkyds.
1970	Xylene, mineral spirits	40% Liquid	0.2-1.0%	Baking systems, automotive, coil.
L-1980N	-	100% Liquid	0.2-1.0%	Polyesters, can, coil. Complies with FDA 21 CFR*.
L-1982N	-	100% Liquid	0.2-1.0%	Epoxy phenolic can coatings.
L-1983N	-	100% Liquid	0.2-1.0%	Epoxy coatings. Complies FDA 21 CFR*
L-1984N	-	100% Liquid	0.2-1.0%	Most versatile. Acrylic & polyester based coatings. Automotive coatings. Complies with FDA 21 CFR*
LCN-400	Butyl acetate	50% Liquid	0.2-1.5%	General purpose, cost effective, easy to use.

Anti-Cratering and Leveling

* FDA 21 CFR Section 175.300 (b) (3) xii & xiii (a&b)

LHP-90	Solvent naphtha, Ethyl acetate	50% Liquid	1.0-2.0%	Excellent substrate wetting and leveling. Eliminates surface defects. Silicone free. Auto refinish and industrial coatings.
LHP-91	Solvent naphtha, Ethyl acetate	50% Liquid	1.0-2.0%	Silicone modified version of DISPARLON® LHP-90.
LHP-95	Solvent naphtha	50% Liquid	1.0-2.0%	Excellent substrate wetting and leveling. Eliminates surface defects. Silicone free. Auto refinish and industrial coatings.
LHP-96	Solvent naphtha	50% Liquid	1.0-2.0%	Silicone modified version of DISPARLON LHP-95.
NSH-8430HF	Solvent naphtha, Butyl acetate	10% Liquid	0.5-2.0%	Silicone acrylic copolymer. Excellent wetting and leveling with good recoatability. Primers and top coats. Bake systems.

Product	Volatile	Active	Additive Level (Total Formula Weight)	Application
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Defoaming and Anti-Popping

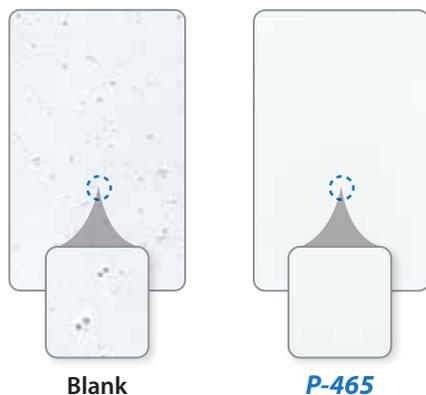
LAP-10	Solvent naphtha, Butyl acetate	20% Liquid	0.5-2.0%	All high solids systems. Select based on coating polarity. Coil coatings.
LAP-20	Butyl acetate	20% Liquid	0.5-2.0%	All high solids systems. Select based on coating polarity. Intermediate polarity coatings.
LAP-30	Butyl acetate	20% Liquid	0.5-2.0%	All high solids systems. Select based on coating polarity. Intermediate polarity coatings.
OX-60	Xylene	50% Liquid	0.2-1.0%	Ambient cure and bake finishes. Acrylic and polyester coatings. Excellent in urethane coatings.
OX-70	Toluene, mineral spirits	30% Liquid	0.2-1.0%	Epoxy coatings. Ambient cure.
OX-750HF	Solvent naphtha	10% Liquid	0.5-1.5%	Acrylic and polyester coatings. Bake coatings. Automotive. HAPS free.
OX-883HF	Solvent naphtha	30% Liquid	0.2-1.5%	Acrylic and polyester coatings. Bake coatings. Automotive. HAPS free.

Defoamers

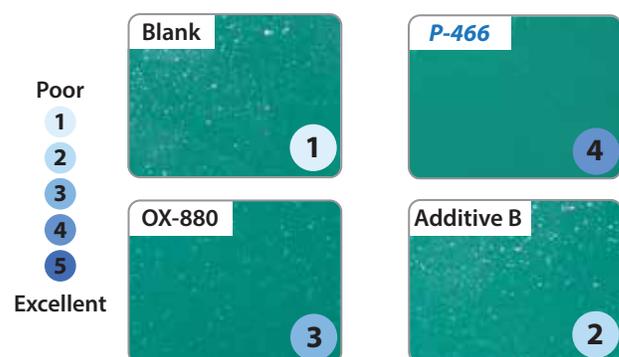
NEW **DISPARLON® P-465, P-466, and P-467** are silicone-free defoamers for use in roller and squeegee applied floor coatings. The P-Series was specifically designed for modern high solids and solvent-free flooring formulations including epoxy, polyurethane, and polyaspartics. These formulations are typically applied as thick films with high viscosity making defoaming difficult.

P-465	Isoparaffin	40%	0.5-1.0%	Thick films. Modern high solids and solvent-free flooring formulations including epoxy, polyurethane, and polyaspartics.
P-466	Isoparaffin	40%	0.5-1.0%	
P-467	Isoparaffin	80%	0.5-1.0%	

100% Solid Epoxy Fast Cure System



2K Polyurethane Waterproofing Coating



Product	Volatile	Active	Additive Level (Total Formula Weight)	Application
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UV Additives

UVX-188	-	100% Liquid	0.1-2.0%	For use in cationic epoxy based UV systems.
UVX-189	-	100% Liquid	0.1-2.0%	General purpose. For use in cationic epoxy and acrylic based UV systems.
UVX-35	-	100% Liquid	0.1-2.0%	For use in highly polar UV systems.
UVX-36	-	100% Liquid	0.1-2.0%	For use in acrylic UV systems.

Dispersants

DA-325	-	100% Liquid	1.0-20% (In-organic pig) 30-100% (Organic pig)	Solvent-free. Dispersing of organic pigments.
DA-375	-	100% Liquid		Solvent-free. Dispersing of organic pigments.

NEW

New Dispersants & Flood/Float Additives

DISPARLON® DA-325 is a solvent free wetting and dispersing agent based on an amine salt of polyether phosphate, designed for dispersing pigments in solvent free coating systems. It is particularly effective when used with filler and inorganic pigments.

DISPARLON DA-375 is a solvent free wetting and dispersing agent, based on polyether phosphate ester. DISPARLON DA-375 is effective in decreasing viscosity in coating systems that are highly filled with pigments or fillers.

Pearl Pigment Wetting

IRIODIN 121 [MERCK] 10.0
Xylene 11.5 Dissolver: 1,000rpm-5min.
DA-325/DA-375



BLANK

DA-325

DA-375



Choosing the correct *additives* will optimize your system and give your product the edge over its competition. King Industries offers a wide variety of *thixotropes, dispersants and surface control* additives. We encourage our customers to work with our highly experienced technical service team to select the proper additive for their demanding *coatings application*.

Notes:



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