

# Creating Additive Value



## Polymeric Dispersants for Aqueous Systems

### EDAPLAN® 490, 492, 494

#### FEATURES

- Universal use for organic, inorganic, carbon black pigments and fillers
- High gloss and color strength development
- Excellent pigment stabilization with no flocculation or rub-out issues
- No negative influence on water resistance or film hardness and no foam
- Reduction of grind viscosity to allow high pigment concentration
- Broad compatibility with various binders

	EDAPLAN® 490	EDAPLAN® 492	EDAPLAN® 494
Copolymer structure	Non-ionic, high molecular weight, branched		Anionic, high molecular weight, branched
Active content	40% in water	35% in water	50% in water
pH	7.5	8.5	8.5
Viscosity, mPa.s	1000	200	250
VOC (EPA, Method 24)	0	0	< 1%
Suitable Pigments	<ul style="list-style-type: none"><li>• Organic</li><li>• Carbon black</li><li>• Inorganic</li><li>• TiO<sub>2</sub></li></ul>	<ul style="list-style-type: none"><li>• Carbon black</li><li>• Organic</li><li>• Silica / matting</li><li>• TiO<sub>2</sub></li></ul>	<ul style="list-style-type: none"><li>• Inorganic</li><li>• TiO<sub>2</sub></li><li>• Organic</li><li>• Carbon black</li><li>• Transparent/ nanoscale</li><li>• Alternate to grind resins</li></ul>

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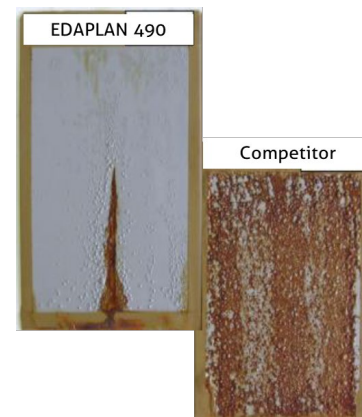
## Exterior Paint

Dispersant @ 0.44%	Ease of pigment Incorporation	Viscosity in Krebs Units (KU) 25°C			Water Sensitivity Test
		Initial	1 week	4 weeks	
Competitor	Moderate	75.4	78.2	85.5	Yellowing, tacky
Polyacrylate	Difficult	72.1	Thick	Thick	Not tested
<b>EDAPLAN® 494</b>	Easy	81	83.6	84.2	Good

**Excellent long-term stability in all types of coatings (architectural, roof, industrial, etc.)**

**Improved water resistance**

## White Anti-corrosion Primer



**Improved corrosion resistance in salt spray test**

## Organic Pigments

**EDAPLAN® 490**

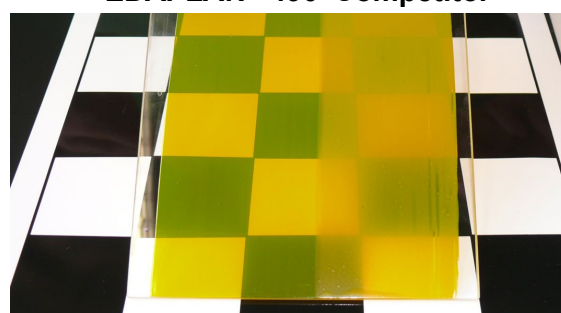
**Competitor**



PV 23 (30% loading)	Competitor 1	Competitor 2	EDAPLAN 490
	65% Dispersant on Pigment		
Appearance of Dispersion	Water-Like	Low Viscosity	Water-Like
Color Strength in Wall Paint	100%	77%	108%

**Increase in color strength and better stability using EDAPLAN® 490**

**EDAPLAN® 490 Competitor**



**Improved transparency and homogeneity in PY-83 dispersion in a printing ink**



# Creating Additive Value



## Universal Dispersing and Wetting Agent

### EDAPLAN® 918

*High molecular weight copolymer with pigment affinic groups*

#### FEATURES

- Designed to disperse organic, inorganic and carbon black pigments
- For universal use in water- and solvent-based systems as well as high solids
- Excellent stabilization with improved resistance to flocculation
- High gloss and color strength
- Good pigment wetting properties (no additional wetting agent required)
- Solvent-free with 100% active

Suitable Applications	Water based	Solvent based	Universal use	100% UV	High-solid	Organic Pigments	Inorganic Pigments	Carbon Blacks
EDAPLAN® 490	●●					●●	●●	●●
EDAPLAN® 494	●●					●●	●●	●●
EDAPLAN® 918	●	●●	●●	●●	●●	●●	●	●●



Primary recommendation



Secondary recommendation



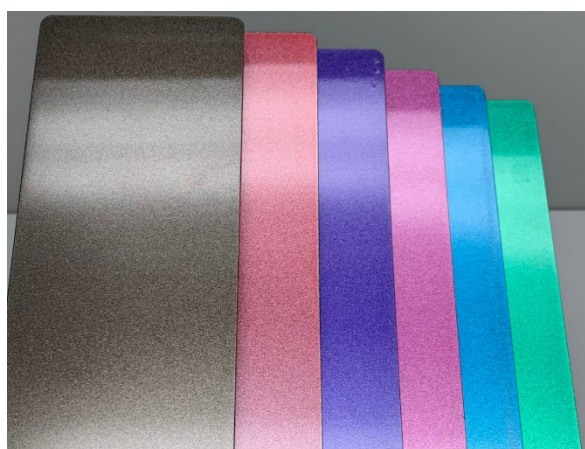


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	Test	PB 15:1	PG 7	PR 122	PR 254	PO 36	PO 73	PY 155	PV 23	PBk 7
Water-based	Color strength	●	●	●	●	●	●	●	●	●
	Rub-out	●	●	●	●	●	●	●	●	●
Solvent-based	Color strength	●	●	●	●	●	●	●	●	●
	Rub-out	●	●	●	●	●	●	●	●	●

- High color strength and stabilization (rub-outs) achieved in water- and solvent-based formulations made from *various universal pigment concentrates* using EDAPLAN 918
- Primary recommendation was EDAPLAN 397



Aluminum pigment, organic pigments in combination with C-black in water borne metallic automotive coating. Excellent stabilization achieved using EDAPLAN 918 and LUBA-print 725.



Improved resistance to flocculation in PR 254 in solvent-based alkyd.



# Creating Additive Value



## Additive for Graffiti Resistance and an Easy-to-Clean Surface

### **METOLAT® ETC 1**

*Siloxane modified acrylate  
(Hydroxyl functional, 32% actives in MPA)*

#### **APPLICATIONS (Solvent-based Coatings)**

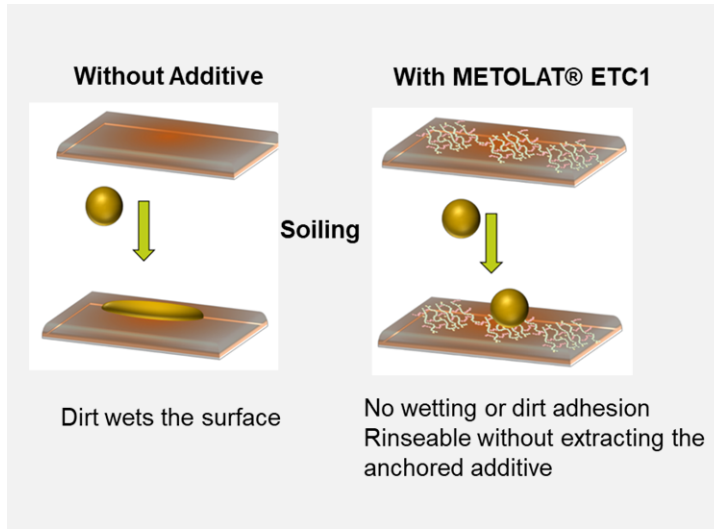
- Topcoats, clear lacquers
- Industrial coatings
- Wood varnish

#### **FEATURES**

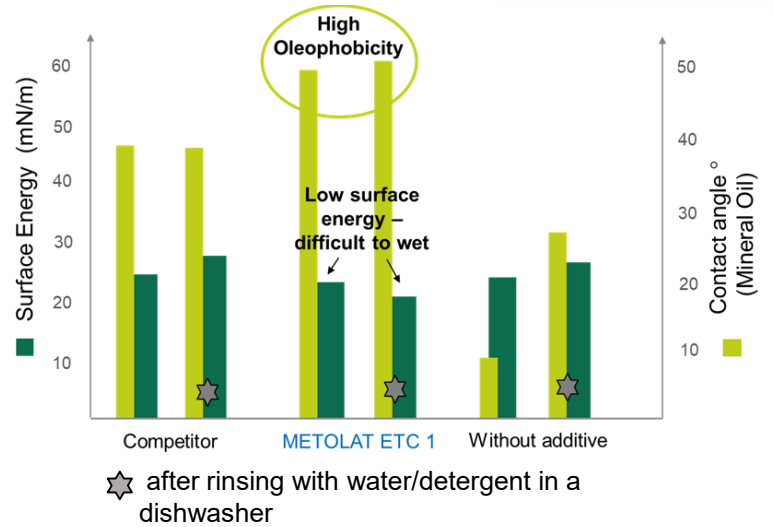
- Improves water, oil and contaminant resistance
- Anti-graffiti properties demonstrated through strong marker resistance and reduced spray paint adhesion
- Provides easy to clean surface
- In suitable 2K systems (e.g., acrylate/isocyanate), it can crosslink and remain permanently anchored to the surface for durability
- Enhanced slip and tape release
- No turbidity in clear coats



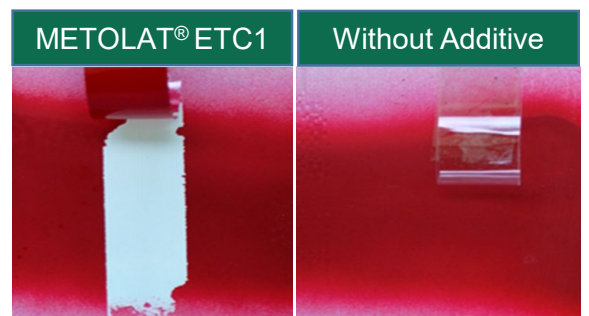
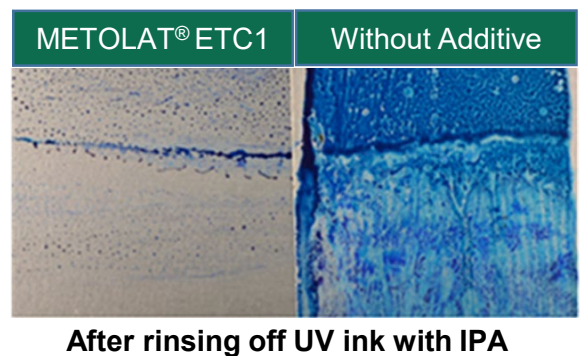
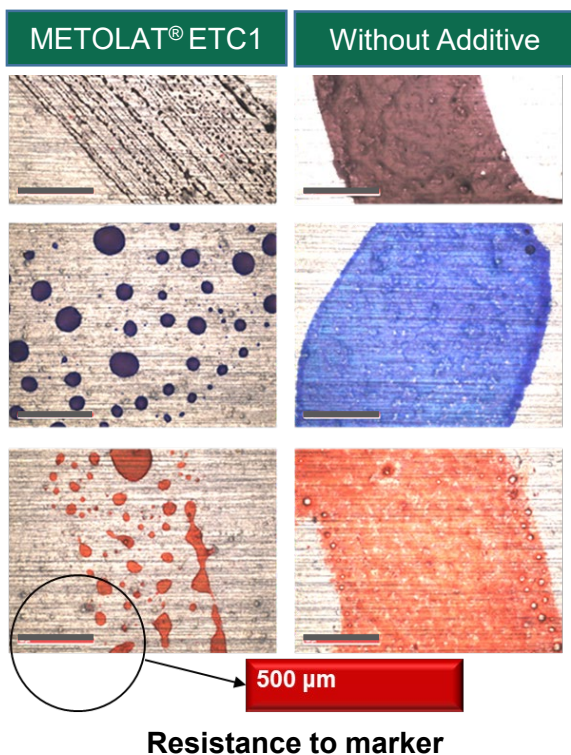
# Creating Additive Value



- METOLAT® ETC 1 significantly lowers the surface energy of the coating.
- This prevents contaminants from wetting or adhering to the surface.



- Low surface energy and high oil resistance (oleophobicity) achieved using METOLAT® ETC 1.
- After several cleaning cycles, properties are preserved (no drop in values before and after).



**Resistance to spray paint and 'easy to remove' with tape**







## 'Green' Defoamer for Water-based Systems

**AGITAN® 352**

*Combination of Vegetable Oil, Alkoxylated Compounds,  
Silica and Emulsifiers (100% actives)*

### APPLICATIONS

- Architectural Coatings
- Paper Coatings
- Industrial & Wood Coatings
- Overprint Varnish (OPV)
- Adhesives
- Polymerization

### FEATURES

- Mineral oil- and silicone-free with 50% bio-based content
- High efficiency
- Excellent stability
- Suitable over a broad pH range (between 3 and 11)
- Broad FDA and BfR regulatory clearances



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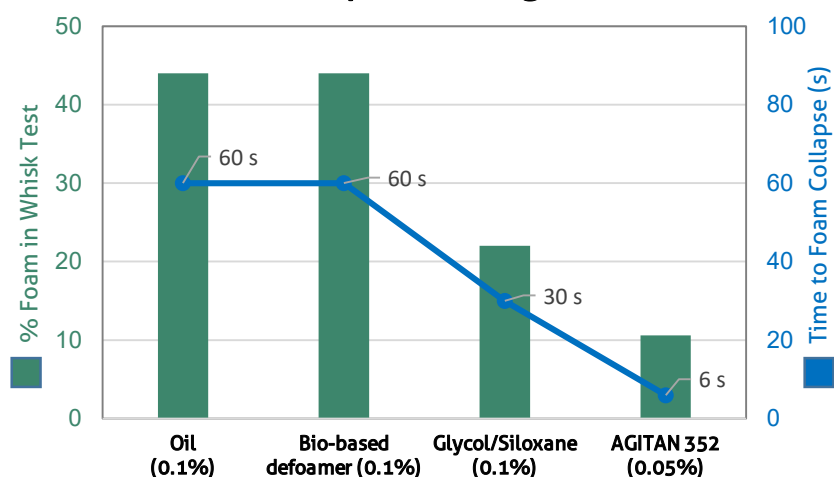


## Architectural Coating

High Gloss Acrylic Trim	24-Hr Stability	% Foam	Roller Application 10 = no foam
Blank	homogeneous	28	1
Competitor	homogeneous	14	7
Oil based	slight oil drops	16	4
Glycol based	homogeneous	10	4
<b>AGITAN 352</b>	homogeneous	<b>5</b>	<b>8</b>

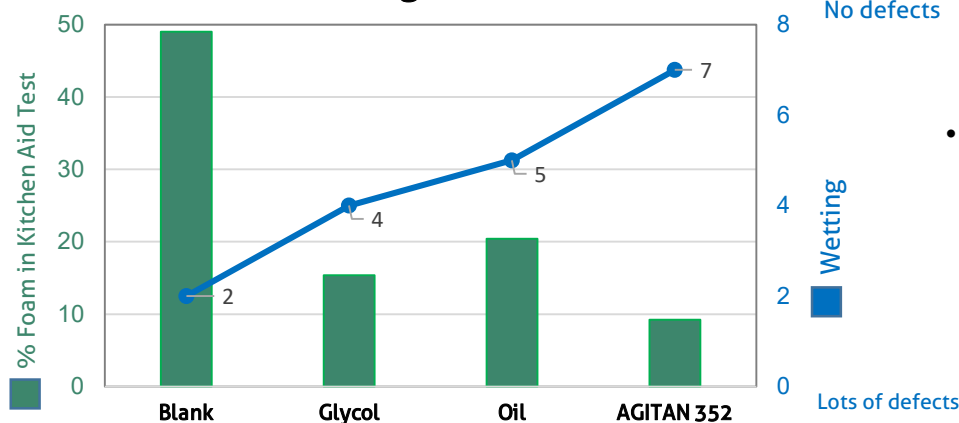
- Improved process foam control over typical defoamers
- Fast foam break during application
- No gloss reduction, good leveling and no surface defects
- Suitable for grind and let-down

## Paper Coating



- Excellent foam control in low to high shear application
- Fast foam break prevents build up of foam
- Minimal wetting defects

## Flooring Adhesive



- Minimal wetting defects vs. other defoamers while maintaining good foam control

