BYK-220S BYK-P 104 BYK-P 104S BYK-P 105 LACTIMON

Wetting and Dispersing Additives for Solvent-Borne Systems

Composition

BYK-220S	Solution of a lower molecular weight unsaturated acidic polycarboxylic acid polyester with a polysiloxane copolymer
BYK-P 104	Solution of a lower molecular weight unsaturated polycarboxylic acid polymer
BYK-P 104S	Solution of a lower molecular weight unsaturated polycarboxylic acid polymer and a polysiloxane copolymer
BYK-P 105	Lower molecular weight unsaturated polycarboxylic acid polymer
LACTIMON	Solution of a partial amide and alkylammonium salt of a lower molecular weight unsaturated polycarboxylic acid polymer and apolisiloxane copolymer

Typical Properties

	Amine value in mg KOH/g	Acid value in mg KOH/g	Weight/ U.S. gal. (lb.gal.) at 68°F	Non-volatile matter in %	Flash Point in °F	Solvents
BYK-220S	–	100	8.00	52.0	118	Alkylbenzenes
BYK-P 104	–	180	7.91	50.0	82	Xylene/Diisobutylketone 9/1
BYK-P 104S	–	150	7.87	50.0	82	Xylene/Diisobutylketone 9/1
BYK-P 105	–	365	8.70	98.5	> 230	–
LACTIMON	13	60	7.58	50.0	75	Xylene/Isobutanol 5/1

Values indicated in this data sheet describe typical properties and do not constitute specification limits.

Recommended Levels

	% additive (as supplied) based upon		
	inorganic pigments	**organic pigments**	**titanium dioxide**
BYK-220S	3 - 10	8 - 16	1 - 3
BYK-P 104 **BYK-P 104S**	3 - 10	10 - 20	0.5 - 2.5
BYK-P 105	2 - 5	5 - 10	0.5 - 1.5
LACTIMON	3 - 10	10 - 20	1 - 3

The above mentioned usage levels strongly depend on pigment particle size. Optimal levels are determined through a **series of laboratory tests**.

Incorporation and Processing Instructions

For optimum performance, these additives must be incorporated into the millbase before addition of pigments. Before processing, **BYK-P 105** should be preheated until the additive has good flow properties. This leads to more accurate dosing.

Applications

	Coating System			Coating Application					
	Solvent-borne	**Solvent-free**	**Water-soluble**	**Industrial coatings**	**Architectural coatings**	**Wood and furniture coatings**	**Automotive coatings**	**Protective coatings**	**Coil coatings**
BYK-220S	■	□	–	■	■	□	■	–	–
BYK-P 104	■	□	□	■	■	■	□	■	■
BYK-P 104S	■	□	□	■	■	■	□	■	–
BYK-P 105	□	■	□	■	■	■	–	■	□
LACTIMON	■	□	–	■	■	–	□	■	■

■ **recommended** □ **suitable**

Function

These additives lead to a **controlled flocculation** of pigments. „Bridges“ are formed between single pigment particles causing three-dimensional structures to develop. Through controlled flocculation of pigments, flooding and floating, settling, and sagging of pigments is avoided.

Special Features and Benefits

BYK-220S	BYK-220 S is able to stabilize all pigments and is preferably used in industrial paint systems. BYK-220 S increases gloss, prevents flooding/floating and reduces the mill base viscosity. BYK-220 S is distinguished by a broad compatibility in two-component acrylic systems. The additive also contains a small amount of a polysiloxane copolymer to more effectively avoid flooding. This silicone content is additionally helpful in preventing Bénard cells and silking, and also improves surface slip, leveling and orientation of flatting agents or aluminium flakes. Therefore it is oftentimes not necessary to add a separate dosage of an otherwise needed silicone additive.
BYK-P 104	Suitable for medium to high polar systems and particularly effective in preventing flooding of titanium dioxide in combination with other color pigments. It is also used in amine-neutralized aqueous coatings; it is not compatible with mineral spirits. When used in anti-corrosion primers, in many cases the protective properties are enhanced.
BYK-P 104S	BYK-P 104 S can be used in the same systems as **BYK-P 104**. The additive also contains a small amount of a polysiloxane copolymer to more effectively avoid flooding. This silicone content is additionally helpful in preventing Bénard cells and silking, and also improves surface slip, leveling and orientation of flatting agents or aluminium flakes. Therefore it is oftentimes not necessary to add a separate dosage of an otherwise needed silicone additive.
BYK-P 105	BYK-P 105 is the solvent-free version of **BYK-P 104**.
LACTIMON	LACTIMON is especially suitable for systems in the medium and high polar range. It also prevents flooding and floating in „co-grinds“. The additive also contains a small amount of a polysiloxane copolymer to more effectively avoid flooding. This silicone content is additionally helpful in preventing Bénard cells and silking, and also improves surface slip, leveling and orientation of flatting agents or aluminium flakes. Therefore it is oftentimes not necessary to add a separate dosage of an otherwise needed silicone additive.

Special Note

Products have limited compatibility with mineral spirits or systems reduced with mineral spirits.

Storage and Transportation

BYK-P 104 **BYK-P 104S**	Separation or turbidity may occur during storage and transportation. Mix well before use. Warm to 30-60°C (90-140°F) and mix well.
LACTIMON	Product is hygroscopic. Store dry.

Available Packaging

Drums and pails
Containers not completely emptied must be closed immediately after use!

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