

Starting Formulation

Pigment concentrates for water borne systems using DISPERBYK-199

Pos.	Component	Supplier	Function	Kronos	Kronos	Kronos	Kronos	Kronos
				2044	2190	2300	2310	2360
				PW 6	PW 6	PW 6	PW 6	PW 6
1	Water		Solvent	28.9	16.6	16.0	15.5	14.7
2	Preservative		Preservative	0.1	0.1	0.1	0.1	0.1
3	BYK-1640	BYK	Defoamer	0.3	0.4	0.3	0.3	0.3
4	DISPERBYK-199	BYK	Wetting & Dispersing	4.1	3.8	2.8	2.8	2.8
5	OPTIGEL-WX	BYK	Anti-settling	0.5	0.5	0.4	0.5	0.5
6	ASP 170	BASF	Filler	-	-	-	-	-
7	Sachtleben micro	Sachtleben	Filler	-	-	-	-	-
8	Pigment Grinding	see headline	Color	55.0	75.0	75.0	75.0	75.0
9	BYK-1640	BYK	Defoamer	0.2	0.2	0.2	0.2	0.2
10	Water		Solvent	10.9	3.4	5.2	5.6	6.4
				100.0	100.0	100.0	100.0	100.0

Characteristic Data

% Additive Dosage (solids on pigment)

DISPERBYK-199

3.0

2.0

1.5

1.5

1.5

Instructions

Premix position 1-5, add pigment/filler and disperse well (dissolver or beads are recommended), add position 9-10 under stirring

ACTAL®, ADD-MAX®, ADD-VANCE®, ADJUST®, ADVITROL®, ANTI-TERRA®, AQUACER®, AQUAMAT®, AQUATIX®, BENTOLITE®, BYK®, BYK®-DYNWET®, BYK® MAX®, BYK® SILCLEAN®, BYKANOL®, BYKETOL®, BYKJET®, BYKO2BLOCK®, BYKOPLAST®, BYKUMEN®, CARBOBYK®, CERACOL®, CERAFAK®, CERAFLOUR®, CERAMAT®, CERATIX®, CLAYTONE®, CLOISITE®, DISPERBYK®, DISPERPLAST®, FULACOLOR®, FULCAT®, GARAMITE®, GELWHITE®, HORDAMER®, LACTIMON®, LAPONITE®, MINERAL COLLOID®, MINERPOL®, NANOBYPK®, OPTIBENT®, OPTIFLO®, OPTIGEL®, PAPERBYK®, PERMONT®, POLYAD®, PRIEX®, PURE THIX®, RECYCLOBLEND®, RECYCLOBYK®, RECYCLOSSORB®, RECYCLOSTAB®, RHEOBYK®, RHEOCIN®, RHEOTIX®, SCONA®, SILBYK®, TIXOGEL®, VISCOBYK® and Y 25® are registered trademarks of the BYK group.

The information herein is based on our present knowledge and experience. The information merely describes the properties of our products but no guarantee of properties in the legal sense shall be implied. We recommend testing our products as to their suitability for your envisaged purpose prior to use. No warranties of any kind, either express or implied, including warranties of merchantability or fitness for a particular purpose, are made regarding any products mentioned herein and data or information set forth, or that such products, data or information may be used without infringing intellectual property rights of third parties. We reserve the right to make any changes according to technological progress or further developments.

Starting Formulation

Pigment concentrates for water borne systems using DISPERBYK-199

Pos.	Component	Supplier	Function	Ti-Pure	Ti-Pure	Ti-Pure	Tiona	Tiona
				R706	R900	R931	RCL 595	RCL 696
				PW 6	PW 6	PW 6	PW 6	PW 6
1	Water		Solvent	17.0	16.6	25.9	18.0	17.0
2	Preservative		Preservative	0.1	0.1	0.1	0.1	0.1
3	BYK-1640	BYK	Defoamer	0.3	0.4	0.3	0.3	0.3
4	DISPERBYK-199	BYK	Wetting & Dispersing	2.8	3.8	4.1	2.8	2.8
5	OPTIGEL-WX	BYK	Anti-settling	0.6	0.5	0.5	0.5	0.5
6	ASP 170	BASF	Filler	-	-	-	-	-
7	Sachtleben micro	Sachtleben	Filler	-	-	-	-	-
8	Pigment Grinding	see headline	Color	75.0	75.0	55.0	75.0	75.0
9	BYK-1640	BYK	Defoamer	0.2	0.2	0.2	0.2	0.2
10	Water		Solvent	4.0	3.4	13.9	3.1	4.1
				100.0	100.0	100.0	100.0	100.0

Characteristic Data

% Additive Dosage (solids on pigment)

DISPERBYK-199

1.5

2.0

3.0

1.5

1.5

Instructions

Premix position 1-5, add pigment/filler and disperse well (dissolver or beads are recommended), add position 9-10 under stirring

ACTAL®, ADD-MAX®, ADD-VANCE®, ADJUST®, ADVITROL®, ANTI-TERRA®, AQUACER®, AQUAMAT®, AQUATIX®, BENTOLITE®, BYK®, BYK®-DYNWET®, BYK® MAX®, BYK® SILCLEAN®, BYKANOL®, BYKETOL®, BYKJET®, BYKO2BLOCK®, BYKOPLAST®, BYKUMEN®, CARBOBYK®, CERACOL®, CERAFAK®, CERAFLOUR®, CERAMAT®, CERATIX®, CLAYTONE®, CLOISITE®, DISPERBYK®, DISPERPLAST®, FULACOLOR®, FULCAT®, GARAMITE®, GELWHITE®, HORDAMER®, LACTIMON®, LAPONITE®, MINERAL COLLOID®, MINERPOL®, NANOBYPK®, OPTIBENT®, OPTIFLO®, OPTIGEL®, PAPERBYK®, PERMONT®, POLYAD®, PRIEX®, PURE THIX®, RECYCLOBLEND®, RECYCLOBYK®, RECYCLOSSORB®, RECYCLOSTAB®, RHEOBYK®, RHEOCIN®, RHEOTIX®, SCONA®, SILBYK®, TIXOGEL®, VISCOBYK® and Y 25® are registered trademarks of the BYK group.

The information herein is based on our present knowledge and experience. The information merely describes the properties of our products but no guarantee of properties in the legal sense shall be implied. We recommend testing our products as to their suitability for your envisaged purpose prior to use. No warranties of any kind, either express or implied, including warranties of merchantability or fitness for a particular purpose, are made regarding any products mentioned herein and data or information set forth, or that such products, data or information may be used without infringing intellectual property rights of third parties. We reserve the right to make any changes according to technological progress or further developments.

Starting Formulation

Pigment concentrates for water borne systems using DISPERBYK-199

Pos.	Component	Supplier	Function	Tronox	Tronox	Tronox	Tioxide	Tioxide
				CR 813	CR 826	CR 828	RTC 90	TR 81
				PW 6	PW 6	PW 6	PW 6	PW 6
1	Water		Solvent	33.9	17.4	16.6	17.4	16.6
2	Preservative		Preservative	0.1	0.1	0.1	0.1	0.1
3	BYK-1640	BYK	Defoamer	0.3	0.3	0.4	0.3	0.4
4	DISPERBYK-199	BYK	Wetting & Dispersing	4.1	2.8	3.8	2.8	3.8
5	OPTIGEL-WX	BYK	Anti-settling	0.5	0.5	0.5	0.5	0.5
6	ASP 170	BASF	Filler	-	-	-	-	-
7	Sachtleben micro	Sachtleben	Filler	-	-	-	-	-
8	Pigment Grinding	see headline	Color	55.0	75.0	75.0	75.0	75.0
9	BYK-1640	BYK	Defoamer	0.2	0.2	0.2	0.2	0.2
10	Water		Solvent	5.9	3.7	3.4	3.7	3.4
				100.0	100.0	100.0	100.0	100.0

Characteristic Data

% Additive Dosage (solids on pigment)

DISPERBYK-199

3.0

1.5

2.0

1.5

2.0

Instructions

Premix position 1-5, add pigment/filler and disperse well (dissolver or beads are recommended), add position 9-10 under stirring

ACTAL®, ADD-MAX®, ADD-VANCE®, ADJUST®, ADVITROL®, ANTI-TERRA®, AQUACER®, AQUAMAT®, AQUATIX®, BENTOLITE®, BYK®, BYK®-DYNWET®, BYK® MAX®, BYK® SILCLEAN®, BYKANOL®, BYKETOL®, BYKJET®, BYKO2BLOCK®, BYKOPLAST®, BYKUMEN®, CARBOBYK®, CERACOL®, CERAFAK®, CERAFLOUR®, CERAMAT®, CERATIX®, CLAYTONE®, CLOISITE®, DISPERBYK®, DISPERPLAST®, FULACOLOR®, FULCAT®, GARAMITE®, GELWHITE®, HORDAMER®, LACTIMON®, LAPONITE®, MINERAL COLLOID®, MINERPOL®, NANOBYK®, OPTIBENT®, OPTIFLO®, OPTIGEL®, PAPERBYK®, PERMONT®, POLYAD®, PRIEX®, PURE THIX®, RECYCLOBLEND®, RECYCLOBYK®, RECYCLOSSORB®, RECYCLOSTAB®, RHEOBYK®, RHEOCIN®, RHEOTIX®, SCONA®, SILBYK®, TIXOGEL®, VISCOBYK® and Y 25® are registered trademarks of the BYK group.

The information herein is based on our present knowledge and experience. The information merely describes the properties of our products but no guarantee of properties in the legal sense shall be implied. We recommend testing our products as to their suitability for your envisaged purpose prior to use. No warranties of any kind, either express or implied, including warranties of merchantability or fitness for a particular purpose, are made regarding any products mentioned herein and data or information set forth, or that such products, data or information may be used without infringing intellectual property rights of third parties. We reserve the right to make any changes according to technological progress or further developments.

Starting Formulation

Pigment concentrates for water borne systems using DISPERBYK-199

Pos.	Component	Supplier	Function	Tioxide TR 85	Tioxide TR 92	Tioxide TR 94	Bayferrox 420	Bayferrox 943
				PW 6	PW 6	PW 6	PY 42	PY 42
1	Water		Solvent	18.0	17.7	17.7	29.9	25.0
2	Preservative		Preservative	0.1	0.1	0.1	0.1	0.1
3	BYK-1640	BYK	Defoamer	0.3	0.3	0.3	0.4	0.4
4	DISPERBYK-199	BYK	Wetting & Dispersing	1.9	2.8	2.8	8.8	9.6
5	OPTIGEL-WX	BYK	Anti-settling	0.5	0.5	0.5	0.5	0.5
6	ASP 170	BASF	Filler	-	-	-	-	-
7	Sachtleben micro	Sachtleben	Filler	-	-	-	-	-
8	Pigment Grinding	see headline	Color	75.0	75.0	75.0	50.0	55.0
9	BYK-1640	BYK	Defoamer	0.2	0.2	0.2	0.2	0.2
10	Water		Solvent	4.0	3.4	3.4	10.1	9.2
				100.0	100.0	100.0	100.0	100.0

Characteristic Data

% Additive Dosage (solids on pigment)

DISPERBYK-199

1.0

1.5

1.5

7.0

7.0

Instructions

Premix position 1-5, add pigment/filler and disperse well (dissolver or beads are recommended), add position 9-10 under stirring

ACTAL®, ADD-MAX®, ADD-VANCE®, ADJUST®, ADVITROL®, ANTI-TERRA®, AQUACER®, AQUAMAT®, AQUATIX®, BENTOLITE®, BYK®, BYK®-DYNWET®, BYK® MAX®, BYK® SILCLEAN®, BYKANOL®, BYKETOL®, BYKJET®, BYKO2BLOCK®, BYKOPLAST®, BYKUMEN®, CARBOBYK®, CERACOL®, CERAFAK®, CERAFLOUR®, CERAMAT®, CERATIX®, CLAYTONE®, CLOISITE®, DISPERBYK®, DISPERPLAST®, FULACOLOR®, FULCAT®, GARAMITE®, GELWHITE®, HORDAMER®, LACTIMON®, LAPONITE®, MINERAL COLLOID®, MINERPOL®, NANOBYPK®, OPTIBENT®, OPTIFLO®, OPTIGEL®, PAPERBYK®, PERMONT®, POLYAD®, PRIEX®, PURE THIX®, RECYCLOBLEND®, RECYCLOBYK®, RECYCLOSSORB®, RECYCLOSTAB®, RHEOBYK®, RHEOCIN®, RHEOTIX®, SCONA®, SILBYK®, TIXOGEL®, VISCOBYK® and Y 25® are registered trademarks of the BYK group.

The information herein is based on our present knowledge and experience. The information merely describes the properties of our products but no guarantee of properties in the legal sense shall be implied. We recommend testing our products as to their suitability for your envisaged purpose prior to use. No warranties of any kind, either express or implied, including warranties of merchantability or fitness for a particular purpose, are made regarding any products mentioned herein and data or information set forth, or that such products, data or information may be used without infringing intellectual property rights of third parties. We reserve the right to make any changes according to technological progress or further developments.

Starting Formulation

Pigment concentrates for water bome systems using DISPERBYK-199

Pos.	Component	Supplier	Function	Bayferrox 3905	Bayferrox 3910	Bayferrox 3920	Irgazin yellow 2094	Hansa- brilliant yellow 2GX70
				PY 42	PY 42	PY 42	PY 184	PY 74
1	Water		Solvent	24.0	23.4	23.4	20.0	28.9
2	Preservative		Preservative	0.1	0.1	0.1	0.1	0.1
3	BYK-1640	BYK	Defoamer	0.4	0.4	0.4	0.4	0.4
4	DISPERBYK-199	BYK	Wetting & Dispersing	10.0	9.6	9.6	12.5	15.0
5	OPTIGEL-WX	BYK	Anti-settling	0.5	0.5	0.5	0.8	0.4
6	ASP 170	BASF	Filler	-	-	-	-	-
7	Sachtleben micro	Sachtleben	Filler	-	-	-	10.0	15.0
8	Pigment Grinding	see headline	Color	57.0	55.0	55.0	50.0	40.0
9	BYK-1640	BYK	Defoamer	0.2	0.2	0.2	0.2	0.2
10	Water		Solvent	7.8	10.8	10.8	6.0	
				100.0	100.0	100.0	100.0	100.0

Characteristic Data

% Additive Dosage (solids on pigment)

DISPERBYK-199 7.0 7.0 7.0 10.0 15.0

Instructions

Premix position 1-5, add pigment/filler and disperse well (dissolver or beads are recommended), add position 9-10 under stirring

ACTAL®, ADD-MAX®, ADD-VANCE®, ADJUST®, ADVITROL®, ANTI-TERRA®, AQUACER®, AQUAMAT®, AQUATIX®, BENTOLITE®, BYK®, BYK®-DYNWET®, BYK® MAX®, BYK® SILCLEAN®, BYKANOL®, BYKETOL®, BYKJET®, BYK02BLOCK®, BYKOPLAST®, BYKUMEN®, CARBOBYK®, CERACOL®, CERAFAK®, CERAFLOUR®, CERAMAT®, CERATIX®, CLAYTONE®, CLOISITE®, DISPERBYK®, DISPERPLAST®, FULACOLOR®, FULCAT®, GARAMITE®, GELWHITE®, HORDAMER®, LACTIMON®, LAPONITE®, MINERAL COLLOID®, MINERPOL®, NANOBYPK®, OPTIBENT®, OPTIFLO®, OPTIGEL®, PAPERBYK®, PERMONT®, POLYAD®, PRIEX®, PURE THIX®, RECYCLOBLEND®, RECYCLOBYK®, RECYCLOSSORB®, RECYCLOSTAB®, RHEOBYK®, RHEOCIN®, RHEOTIX®, SCONA®, SILBYK®, TIXOGEL®, VISCOBYK® and Y 25® are registered trademarks of the BYK group.

The information herein is based on our present knowledge and experience. The information merely describes the properties of our products but no guarantee of properties in the legal sense shall be implied. We recommend testing our products as to their suitability for your envisaged purpose prior to use. No warranties of any kind, either express or implied, including warranties of merchantability or fitness for a particular purpose, are made regarding any products mentioned herein and data or information set forth, or that such products, data or information may be used without infringing intellectual property rights of third parties. We reserve the right to make any changes according to technological progress or further developments.

Starting Formulation

Pigment concentrates for water borne systems using DISPERBYK-199

Pos.	Component	Supplier	Function	Chromo- phthal yellow 3G	Paliotol yellow L 0960 HD	Paliotol yellow L 0962 HD	Sico orange L 3052 HD	Novoperm orange HL 70
				PY 93	PY 138	PY 138	PO 5	PO 36
1	Water		Solvent	29.9	29.9	30.8	27.0	27.9
2	Preservative		Preservative	0.1	0.1	0.1	0.1	0.1
3	BYK-1640	BYK	Defoamer	0.4	0.7	0.4	0.4	0.4
4	DISPERBYK-199	BYK	Wetting & Dispersing	20.0	20.0	16.3	18.8	17.5
5	OPTIGEL-WX	BYK	Anti-settling	-	0.3	-	0.5	0.3
6	ASP 170	BASF	Filler	-	-	8.0	-	-
7	Sachtleben micro	Sachtleben	Filler	-	-	10.0	-	-
8	Pigment Grinding	see headline	Color	40.0	40.0	25.0	50.0	35.0
9	BYK-1640	BYK	Defoamer	0.2	0.2	0.2	0.2	0.2
10	Water		Solvent	7.4	8.8	9.2	3.0	18.6
				98.0	100.0	100.0	100.0	100.0

Characteristic Data

% Additive Dosage (solids on pigment)

DISPERBYK-199	20.0	20.0	26.1	15.0	20.0
----------------------	-------------	-------------	-------------	-------------	-------------

Instructions

Premix position 1-5, add pigment/filler and disperse well (dissolver or beads are recommended), add position 9-10 under stirring

ACTAL®, ADD-MAX®, ADD-VANCE®, ADJUST®, ADVITROL®, ANTI-TERRA®, AQUACER®, AQUAMAT®, AQUATIX®, BENTOLITE®, BYK®, BYK®-DYNWET®, BYK® MAX®, BYK® SILCLEAN®, BYKANOL®, BYKETOL®, BYKJET®, BYKO2BLOCK®, BYKOPLAST®, BYKUMEN®, CARBOBYK®, CERACOL®, CERAFAK®, CERAFLOUR®, CERAMAT®, CERATIX®, CLAYTONE®, CLOISITE®, DISPERBYK®, DISPERPLAST®, FULACOLOR®, FULCAT®, GARAMITE®, GELWHITE®, HORDAMER®, LACTIMON®, LAPONITE®, MINERAL COLLOID®, MINERPOL®, NANOBYPK®, OPTIBENT®, OPTIFLO®, OPTIGEL®, PAPERBYK®, PERMONT®, POLYAD®, PRIEX®, PURE THIX®, RECYCLOBLEND®, RECYCLOBYK®, RECYCLOSSORB®, RECYCLOSTAB®, RHEOBYK®, RHEOCIN®, RHEOTIX®, SCONA®, SILBYK®, TIXOGEL®, VISCOBYK® and Y 25® are registered trademarks of the BYK group.

The information herein is based on our present knowledge and experience. The information merely describes the properties of our products but no guarantee of properties in the legal sense shall be implied. We recommend testing our products as to their suitability for your envisaged purpose prior to use. No warranties of any kind, either express or implied, including warranties of merchantability or fitness for a particular purpose, are made regarding any products mentioned herein and data or information set forth, or that such products, data or information may be used without infringing intellectual property rights of third parties. We reserve the right to make any changes according to technological progress or further developments.

Starting Formulation

Pigment concentrates for water borne systems using DISPERBYK-199

Pos.	Component	Supplier	Function	Cinilex DPP orange SJ1C	Bayferrox 105M	Bayferrox 110M	Bayferrox 120M	Bayferrox 130M
				PO 73	PR 101	PR 101	PR 101	PR 101
1	Water		Solvent	28.0	24.5	24.3	22.9	18.7
2	Preservative		Preservative	0.1	0.1	0.1	0.1	0.1
3	BYK-1640	BYK	Defoamer	0.4	0.4	0.4	0.4	0.4
4	DISPERBYK-199	BYK	Wetting & Dispersing	17.5	9.6	9.0	8.2	8.2
5	OPTIGEL-WX	BYK	Anti-settling	0.3	0.5	0.6	0.6	0.6
6	ASP 170	BASF	Filler	-	-	-	-	-
7	Sachtleben micro	Sachtleben	Filler	-	-	-	-	-
8	Pigment Grinding	see headline	Color	35.0	55.0	60.0	65.0	65.0
9	BYK-1640	BYK	Defoamer	0.2	0.2	0.2	0.2	0.2
10	Water		Solvent	18.5	9.7	5.4	2.6	6.8
				100.0	100.0	100.0	100.0	100.0

Characteristic Data

% Additive Dosage (solids on pigment)

DISPERBYK-199

20.0

7.0

6.0

5.0

5.0

Instructions

Premix position 1-5, add pigment/filler and disperse well (dissolver or beads are recommended), add position 9-10 under stirring

ACTAL®, ADD-MAX®, ADD-VANCE®, ADJUST®, ADVITROL®, ANTI-TERRA®, AQUACER®, AQUAMAT®, AQUATIX®, BENTOLITE®, BYK®, BYK®-DYNWET®, BYK® MAX®, BYK® SILCLEAN®, BYKANOL®, BYKETOL®, BYKJET®, BYKO2BLOCK®, BYKOPLAST®, BYKUMEN®, CARBOBYK®, CERACOL®, CERAFAK®, CERAFLOUR®, CERAMAT®, CERATIX®, CLAYTONE®, CLOISITE®, DISPERBYK®, DISPERPLAST®, FULACOLOR®, FULCAT®, GARAMITE®, GELWHITE®, HORDAMER®, LACTIMON®, LAPONITE®, MINERAL COLLOID®, MINERPOL®, NANOBYPK®, OPTIBENT®, OPTIFLO®, OPTIGEL®, PAPERBYK®, PERMONT®, POLYAD®, PRIEX®, PURE THIX®, RECYCLOBLEND®, RECYCLOBYK®, RECYCLOSSORB®, RECYCLOSTAB®, RHEOBYK®, RHEOCIN®, RHEOTIX®, SCONA®, SILBYK®, TIXOGEL®, VISCOBYK® and Y 25® are registered trademarks of the BYK group.

The information herein is based on our present knowledge and experience. The information merely describes the properties of our products but no guarantee of properties in the legal sense shall be implied. We recommend testing our products as to their suitability for your envisaged purpose prior to use. No warranties of any kind, either express or implied, including warranties of merchantability or fitness for a particular purpose, are made regarding any products mentioned herein and data or information set forth, or that such products, data or information may be used without infringing intellectual property rights of third parties. We reserve the right to make any changes according to technological progress or further developments.

Starting Formulation

Pigment concentrates for water bome systems using DISPERBYK-199

Pos.	Component	Supplier	Function	Bayferrox 140M	Bayferrox 160M	Bayferrox 180M	Ferro PS 22-5091	Ferro PS 21-4030
				PR 101	PR 101	PR 101	PR 101	PR 101
1	Water		Solvent	18.7	18.7	18.5	20.2	24.0
2	Preservative		Preservative	0.1	0.1	0.1	0.1	0.1
3	BYK-1640	BYK	Defoamer	0.4	0.4	0.4	0.4	0.4
4	DISPERBYK-199	BYK	Wetting & Dispersing	8.2	8.2	8.2	11.3	7.5
5	OPTIGEL-WX	BYK	Anti-settling	0.6	0.6	0.6	0.6	0.6
6	ASP 170	BASF	Filler	-	-	-	-	-
7	Sachtleben micro	Sachtleben	Filler	-	-	-	-	-
8	Pigment	see headline	Color	65.0	65.0	65.0	60.0	60.0
	Grinding							
9	BYK-1640	BYK	Defoamer	0.2	0.2	0.2	0.2	0.2
10	Water		Solvent	6.8	6.8	7.0	7.2	7.2
				100.0	100.0	100.0	100.0	100.0

Characteristic Data

% Additive Dosage (solids on pigment)

DISPERBYK-199	5.0	5.0	5.0	7.5	5.0
----------------------	------------	------------	------------	------------	------------

Instructions

Premix position 1-5, add pigment/filler and disperse well (dissolver or beads are recommended), add position 9-10 under stirring

ACTAL®, ADD-MAX®, ADD-VANCE®, ADJUST®, ADVITROL®, ANTI-TERRA®, AQUACER®, AQUAMAT®, AQUATIX®, BENTOLITE®, BYK®, BYK®-DYNWET®, BYK® MAX®, BYK® SILCLEAN®, BYKANOL®, BYKETOL®, BYKJET®, BYKO2BLOCK®, BYKOPLAST®, BYKUMEN®, CARBOBYK®, CERACOL®, CERAFAK®, CERAFLOUR®, CERAMAT®, CERATIX®, CLAYTONE®, CLOISITE®, DISPERBYK®, DISPERPLAST®, FULACOLOR®, FULCAT®, GARAMITE®, GELWHITE®, HORDAMER®, LACTIMON®, LAPONITE®, MINERAL COLLOID®, MINERPOL®, NANOBYK®, OPTIBENT®, OPTIFLO®, OPTIGEL®, PAPERBYK®, PERMONT®, POLYAD®, PRIEX®, PURE THIX®, RECYCLOBLEND®, RECYCLOBYK®, RECYCLOSSORB®, RECYCLOSTAB®, RHEOBYK®, RHEOCIN®, RHEOTIX®, SCONA®, SILBYK®, TIXOGEL®, VISCOBYK® and Y 25® are registered trademarks of the BYK group.

The information herein is based on our present knowledge and experience. The information merely describes the properties of our products but no guarantee of properties in the legal sense shall be implied. We recommend testing our products as to their suitability for your envisaged purpose prior to use. No warranties of any kind, either express or implied, including warranties of merchantability or fitness for a particular purpose, are made regarding any products mentioned herein and data or information set forth, or that such products, data or information may be used without infringing intellectual property rights of third parties. We reserve the right to make any changes according to technological progress or further developments.

Starting Formulation

Pigment concentrates for water borne systems using DISPERBYK-199

Pos.	Component	Supplier	Function	Permanent red FGR	Permanent red FGR 70	Hostaperm Scarlett GO	Monastral magenta RT 2436-D	Hostaperm red D2G 70
				PR 112	PR 112	PR 168	PR 202	PR 254
1	Water		Solvent	39.9	39.9	34.8	35.0	26.9
2	Preservative		Preservative	0.1	0.1	0.1	0.1	0.1
3	BYK-1640	BYK	Defoamer	0.4	0.4	0.4	0.8	0.4
4	DISPERBYK-199	BYK	Wetting & Dispersing	17.0	17.0	17.5	25.0	20.0
5	OPTIGEL-WX	BYK	Anti-settling	-	-	-	-	0.4
6	ASP 170	BASF	Filler	-	-	10.0	-	-
7	Sachtleben micro	Sachtleben	Filler	-	-	10.0	-	10.0
8	Pigment Grinding	see headline	Color	40.0	40.0	20.0	30.0	40.0
9	BYK-1640	BYK	Defoamer	0.2	0.2	0.2	0.2	0.2
10	Water		Solvent	2.4	2.4	7.0	8.9	2.0
				100.0	100.0	100.0	100.0	100.0

Characteristic Data

% Additive Dosage (solids on pigment)

DISPERBYK-199

17.0

17.0

35.0

33.3

20.0

Instructions

Premix position 1-5, add pigment/filler and disperse well (dissolver or beads are recommended), add position 9-10 under stirring

ACTAL®, ADD-MAX®, ADD-VANCE®, ADJUST®, ADVITROL®, ANTI-TERRA®, AQUACER®, AQUAMAT®, AQUATIX®, BENTOLITE®, BYK®, BYK®-DYNWET®, BYK® MAX®, BYK® SILCLEAN®, BYKANOL®, BYKETOL®, BYKJET®, BYKO2BLOCK®, BYKOPLAST®, BYKUMEN®, CARBOBYK®, CERACOL®, CERAFAK®, CERAFLOUR®, CERAMAT®, CERATIX®, CLAYTONE®, CLOISITE®, DISPERBYK®, DISPERPLAST®, FULACOLOR®, FULCAT®, GARAMITE®, GELWHITE®, HORDAMER®, LACTIMON®, LAPONITE®, MINERAL COLLOID®, MINERPOL®, NANOBYPK®, OPTIBENT®, OPTIFLO®, OPTIGEL®, PAPERBYK®, PERMONT®, POLYAD®, PRIEX®, PURE THIX®, RECYCLOBLEND®, RECYCLOBYK®, RECYCLOSSORB®, RECYCLOSTAB®, RHEOBYK®, RHEOCIN®, RHEOTIX®, SCONA®, SILBYK®, TIXOGEL®, VISCOBYK® and Y 25® are registered trademarks of the BYK group.

The information herein is based on our present knowledge and experience. The information merely describes the properties of our products but no guarantee of properties in the legal sense shall be implied. We recommend testing our products as to their suitability for your envisaged purpose prior to use. No warranties of any kind, either express or implied, including warranties of merchantability or fitness for a particular purpose, are made regarding any products mentioned herein and data or information set forth, or that such products, data or information may be used without infringing intellectual property rights of third parties. We reserve the right to make any changes according to technological progress or further developments.

Starting Formulation

Pigment concentrates for water borne systems using DISPERBYK-199

Pos.	Component	Supplier	Function	Irgazin red	Hostaperm	Sunfast	Hostaperm	Ultramarin
				L3670HD	pink E	violet 228-1119	violet RL-NF	blue Nubicoat HWR
				PR 254	PR 122	PV 19	PV 23	PB 29
1	Water		Solvent	19.9	36.8	35.0	18.0	23.0
2	Preservative		Preservative	0.1	0.1	0.1	0.1	0.1
3	BYK-1640	BYK	Defoamer	0.4	0.4	0.4	0.4	0.3
4	DISPERBYK-199	BYK	Wetting & Dispersing	20.0	22.5	18.8	22.5	13.8
5	OPTIGEL-WX	BYK	Anti-settling	0.4	-	-	0.3	0.4
6	ASP 170	BASF	Filler	10.0	-	-	10.0	-
7	Sachtleben micro	Sachtleben	Filler	-	10.0	-	-	-
8	Pigment Grinding	see headline	Color	40.0	30.0	25.0	30.0	55.0
9	BYK-1640	BYK	Defoamer	0.2	0.2	0.2	0.2	0.2
10	Water		Solvent	9.0	-	20.5	18.5	7.2
				100.0	100.0	100.0	100.0	100.0

Characteristic Data

% Additive Dosage (solids on pigment)

DISPERBYK-199

20.0

30.0

30.1

30.0

10.0

Instructions

Premix position 1-5, add pigment/filler and disperse well (dissolver or beads are recommended), add position 9-10 under stirring

ACTAL®, ADD-MAX®, ADD-VANCE®, ADJUST®, ADVITROL®, ANTI-TERRA®, AQUACER®, AQUAMAT®, AQUATIX®, BENTOLITE®, BYK®, BYK®-DYNWET®, BYK® MAX®, BYK® SILCLEAN®, BYKANOL®, BYKETOL®, BYKJET®, BYKO2BLOCK®, BYKOPLAST®, BYKUMEN®, CARBOBYK®, CERACOL®, CERAFAK®, CERAFLOUR®, CERAMAT®, CERATIX®, CLAYTONE®, CLOISITE®, DISPERBYK®, DISPERPLAST®, FULACOLOR®, FULCAT®, GARAMITE®, GELWHITE®, HORDAMER®, LACTIMON®, LAPONITE®, MINERAL COLLOID®, MINERPOL®, NANOBYK®, OPTIBENT®, OPTIFLO®, OPTIGEL®, PAPERBYK®, PERMONT®, POLYAD®, PRIEX®, PURE THIX®, RECYCLOBLEND®, RECYCLOBYK®, RECYCLOSSORB®, RECYCLOSTAB®, RHEOBYK®, RHEOCIN®, RHEOTIX®, SCONA®, SILBYK®, TIXOGEL®, VISCOBYK® and Y 25® are registered trademarks of the BYK group.

The information herein is based on our present knowledge and experience. The information merely describes the properties of our products but no guarantee of properties in the legal sense shall be implied. We recommend testing our products as to their suitability for your envisaged purpose prior to use. No warranties of any kind, either express or implied, including warranties of merchantability or fitness for a particular purpose, are made regarding any products mentioned herein and data or information set forth, or that such products, data or information may be used without infringing intellectual property rights of third parties. We reserve the right to make any changes according to technological progress or further developments.

Starting Formulation

Pigment concentrates for water borne systems using DISPERBYK-199

Pos.	Component	Supplier	Function	Hostaperm blue A4R	Sunfast blue 248-3754	Sunfast blue 249-1284	Hostaperm blue B2G	Heliogen blue L7101F
				PB 15:1	PB 15:2	PB 15:3	PB 15:3	PB 15:4
1	Water		Solvent	21.0	25.0	40.0	35.0	22.0
2	Preservative		Preservative	0.1	0.1	0.1	0.1	0.1
3	BYK-1640	BYK	Defoamer	0.4	0.8	0.4	0.4	0.4
4	DISPERBYK-199	BYK	Wetting & Dispersing	26.3	30.0	15.0	15.0	26.3
5	OPTIGEL-WX	BYK	Anti-settling	0.4	-	0.3	0.3	0.4
6	ASP 170	BASF	Filler	-	-	-	-	10.0
7	Sachtleben micro	Sachtleben	Filler	10.0	-	-	-	-
8	Pigment Grinding	see headline	Color	35.0	35.0	30.0	30.0	35.0
9	BYK-1640	BYK	Defoamer	0.2	0.3	0.2	0.2	0.2
10	Water		Solvent	6.6	8.8	14.0	19.0	5.6
				100.0	100.0	100.0	100.0	100.0

Characteristic Data

% Additive Dosage (solids on pigment)

DISPERBYK-199	30.1	34.3	20.0	20.0	30.1
----------------------	-------------	-------------	-------------	-------------	-------------

Instructions

Premix position 1-5, add pigment/filler and disperse well (dissolver or beads are recommended), add position 9-10 under stirring

ACTAL®, ADD-MAX®, ADD-VANCE®, ADJUST®, ADVITROL®, ANTI-TERRA®, AQUACER®, AQUAMAT®, AQUATIX®, BENTOLITE®, BYK®, BYK®-DYNWET®, BYK® MAX®, BYK® SILCLEAN®, BYKANOL®, BYKETOL®, BYKJET®, BYKO2BLOCK®, BYKOPLAST®, BYKUMEN®, CARBOBYK®, CERACOL®, CERAFAK®, CERAFLOUR®, CERAMAT®, CERATIX®, CLAYTONE®, CLOISITE®, DISPERBYK®, DISPERPLAST®, FULACOLOR®, FULCAT®, GARAMITE®, GELWHITE®, HORDAMER®, LACTIMON®, LAPONITE®, MINERAL COLLOID®, MINERPOL®, NANOBYPK®, OPTIBENT®, OPTIFLO®, OPTIGEL®, PAPERBYK®, PERMONT®, POLYAD®, PRIEX®, PURE THIX®, RECYCLOBLEND®, RECYCLOBYK®, RECYCLOSSORB®, RECYCLOSTAB®, RHEOBYK®, RHEOCIN®, RHEOTIX®, SCONA®, SILBYK®, TIXOGEL®, VISCOBYK® and Y 25® are registered trademarks of the BYK group.

The information herein is based on our present knowledge and experience. The information merely describes the properties of our products but no guarantee of properties in the legal sense shall be implied. We recommend testing our products as to their suitability for your envisaged purpose prior to use. No warranties of any kind, either express or implied, including warranties of merchantability or fitness for a particular purpose, are made regarding any products mentioned herein and data or information set forth, or that such products, data or information may be used without infringing intellectual property rights of third parties. We reserve the right to make any changes according to technological progress or further developments.

Starting Formulation

Pigment concentrates for water borne systems using DISPERBYK-199

Pos.	Component	Supplier	Function	Heliogen green L8730	Heuco green 600703	Raven 410	Monarch 120	Monarch 480
				PG 7	PG 7	PBk 7	PBk 7	PBk 7
1	Water		Solvent	22.5	23.0	39.0	19.1	19.1
2	Preservative		Preservative	0.1	0.1	0.1	0.1	0.1
3	BYK-1640	BYK	Defoamer	0.4	0.4	0.8	0.4	0.4
4	DISPERBYK-199	BYK	Wetting & Dispersing	26.3	26.3	24.7	20.0	25.0
5	OPTIGEL-WX	BYK	Anti-settling	0.5	0.5	-	0.2	0.2
6	ASP 170	BASF	Filler	8.0	10.0	-	15.0	10.0
7	Sachtleben micro	Sachtleben	Filler	-	-	-	-	-
8	Pigment Grinding	see headline	Color	35.0	35.0	33.0	20.0	25.0
9	BYK-1640	BYK	Defoamer	0.2	0.2	0.3	0.2	0.2
10	Water		Solvent	7.0	4.5	2.1	25.0	20.0
				100.0	100.0	100.0	100.0	100.0

Characteristic Data

% Additive Dosage (solids on pigment)

DISPERBYK-199	30.1	30.1	29.9	40.0	40.0
----------------------	-------------	-------------	-------------	-------------	-------------

Instructions

Premix position 1-5, add pigment/filler and disperse well (dissolver or beads are recommended), add position 9-10 under stirring

ACTAL®, ADD-MAX®, ADD-VANCE®, ADJUST®, ADVITROL®, ANTI-TERRA®, AQUACER®, AQUAMAT®, AQUATIX®, BENTOLITE®, BYK®, BYK®-DYNWET®, BYK® MAX®, BYK® SILCLEAN®, BYKANOL®, BYKETOL®, BYKJET®, BYKO2BLOCK®, BYKOPLAST®, BYKUMEN®, CARBOBYK®, CERACOL®, CERAFAK®, CERAFLOUR®, CERAMAT®, CERATIX®, CLAYTONE®, CLOISITE®, DISPERBYK®, DISPERPLAST®, FULACOLOR®, FULCAT®, GARAMITE®, GELWHITE®, HORDAMER®, LACTIMON®, LAPONITE®, MINERAL COLLOID®, MINERPOL®, NANOBYK®, OPTIBENT®, OPTIFLO®, OPTIGEL®, PAPERBYK®, PERMONT®, POLYAD®, PRIEX®, PURE THIX®, RECYCLOBLEND®, RECYCLOBYK®, RECYCLOSSORB®, RECYCLOSTAB®, RHEOBYK®, RHEOCIN®, RHEOTIX®, SCONA®, SILBYK®, TIXOGEL®, VISCOBYK® and Y 25® are registered trademarks of the BYK group.

The information herein is based on our present knowledge and experience. The information merely describes the properties of our products but no guarantee of properties in the legal sense shall be implied. We recommend testing our products as to their suitability for your envisaged purpose prior to use. No warranties of any kind, either express or implied, including warranties of merchantability or fitness for a particular purpose, are made regarding any products mentioned herein and data or information set forth, or that such products, data or information may be used without infringing intellectual property rights of third parties. We reserve the right to make any changes according to technological progress or further developments.

Starting Formulation

Pigment concentrates for water borne systems using DISPERBYK-199

Pos.	Component	Supplier	Function	Elftex 415	Elftex 430	Lamp black 101	Special black 4	Special black 100
				PBk 7	PBk 7	PBk 7	PBk 7	PBk 7
1	Water		Solvent	20.0	15.0	18.0	19.1	35.5
2	Preservative		Preservative	0.1	0.1	0.1	0.1	0.1
3	BYK-1640	BYK	Defoamer	0.4	0.4	0.4	0.4	0.4
4	DISPERBYK-199	BYK	Wetting & Dispersing	9.0	25.0	20.0	20.0	6.5
5	OPTIGEL-WX	BYK	Anti-settling	0.4	0.2	0.2	0.5	0.5
6	ASP 170	BASF	Filler	20.0	10.0	10.0	10.0	20.0
7	Sachtleben micro	Sachtleben	Filler	-	-	-	-	20.0
8	Pigment Grinding	see headline	Color	9.0	25.0	20.0	20.0	4.0
9	BYK-1640	BYK	Defoamer	0.2	0.2	0.2	0.2	0.2
10	Water		Solvent	40.9	24.1	31.1	29.7	12.8
				100.0	100.0	100.0	100.0	100.0

Characteristic Data

% Additive Dosage (solids on pigment)

DISPERBYK-199	40.0	40.0	40.0	40.0	65.0
----------------------	-------------	-------------	-------------	-------------	-------------

Instructions

Premix position 1-5, add pigment/filler and disperse well (dissolver or beads are recommended), add position 9-10 under stirring

ACTAL®, ADD-MAX®, ADD-VANCE®, ADJUST®, ADVITROL®, ANTI-TERRA®, AQUACER®, AQUAMAT®, AQUATIX®, BENTOLITE®, BYK®, BYK®-DYNWET®, BYK® MAX®, BYK® SILCLEAN®, BYKANOL®, BYKETOL®, BYKJET®, BYKO2BLOCK®, BYKOPLAST®, BYKUMEN®, CARBOBYK®, CERACOL®, CERAFAK®, CERAFLOUR®, CERAMAT®, CERATIX®, CLAYTONE®, CLOISITE®, DISPERBYK®, DISPERPLAST®, FULACOLOR®, FULCAT®, GARAMITE®, GELWHITE®, HORDAMER®, LACTIMON®, LAPONITE®, MINERAL COLLOID®, MINERPOL®, NANOBYK®, OPTIBENT®, OPTIFLO®, OPTIGEL®, PAPERBYK®, PERMONT®, POLYAD®, PRIEX®, PURE THIX®, RECYCLOBLEND®, RECYCLOBYK®, RECYCLOSSORB®, RECYCLOSTAB®, RHEOBYK®, RHEOCIN®, RHEOTIX®, SCONA®, SILBYK®, TIXOGEL®, VISCOBYK® and Y 25® are registered trademarks of the BYK group.

The information herein is based on our present knowledge and experience. The information merely describes the properties of our products but no guarantee of properties in the legal sense shall be implied. We recommend testing our products as to their suitability for your envisaged purpose prior to use. No warranties of any kind, either express or implied, including warranties of merchantability or fitness for a particular purpose, are made regarding any products mentioned herein and data or information set forth, or that such products, data or information may be used without infringing intellectual property rights of third parties. We reserve the right to make any changes according to technological progress or further developments.

Starting Formulation

Pigment concentrates for water borne systems using DISPERBYK-199

Pos.	Component	Supplier	Function	Special black 100
				PBk 7
1	Water		Solvent	20.0
2	Preservative		Preservative	0.1
3	BYK-1640	BYK	Defoamer	0.4
4	DISPERBYK-199	BYK	Wetting & Dispersing	21.9
5	OPTIGEL-WX	BYK	Anti-settling	0.5
6	ASP 170	BASF	Filler	8.0
7	Sachtleben micro	Sachtleben	Filler	15.0
8	Pigment Grinding	see headline	Color	20.0
9	BYK-1640	BYK	Defoamer	0.2
10	Water		Solvent	13.9
				100.0

Characteristic Data

% Additive Dosage (solids on pigment)

DISPERBYK-199

43.8

Instructions

Premix position 1-5, add pigment/filler and disperse well (dissolver or beads are recommended), add position 9-10 under stirring

ACTAL®, ADD-MAX®, ADD-VANCE®, ADJUST®, ADVITROL®, ANTI-TERRA®, AQUACER®, AQUAMAT®, AQUATIX®, BENTOLITE®, BYK®, BYK®-DYNWET®, BYK® MAX®, BYK® SILCLEAN®, BYKANOL®, BYKETOL®, BYKJET®, BYKO2BLOCK®, BYKOPLAST®, BYKUMEN®, CARBOBYK®, CERACOL®, CERAFAK®, CERAFLOUR®, CERAMAT®, CERATIX®, CLAYTONE®, CLOISITE®, DISPERBYK®, DISPERPLAST®, FULACOLOR®, FULCAT®, GARAMITE®, GELWHITE®, HORDAMER®, LACTIMON®, LAPONITE®, MINERAL COLLOID®, MINERPOL®, NANOBYPK®, OPTIBENT®, OPTIFLO®, OPTIGEL®, PAPERBYK®, PERMONT®, POLYAD®, PRIEX®, PURE THIX®, RECYCLOBLEND®, RECYCLOBYK®, RECYCLOSSORB®, RECYCLOSTAB®, RHEOBYK®, RHEOCIN®, RHEOTIX®, SCONA®, SILBYK®, TIXOGEL®, VISCOBYK® and Y 25® are registered trademarks of the BYK group.

The information herein is based on our present knowledge and experience. The information merely describes the properties of our products but no guarantee of properties in the legal sense shall be implied. We recommend testing our products as to their suitability for your envisaged purpose prior to use. No warranties of any kind, either express or implied, including warranties of merchantability or fitness for a particular purpose, are made regarding any products mentioned herein and data or information set forth, or that such products, data or information may be used without infringing intellectual property rights of third parties. We reserve the right to make any changes according to technological progress or further developments.