COLORED PIGMENTS ENERGIZED BY LANXESS

Energizing Chemistry

Shade Card for Paints and Coatings – High Performance Pigments

BAYFERROX® Color for Life.

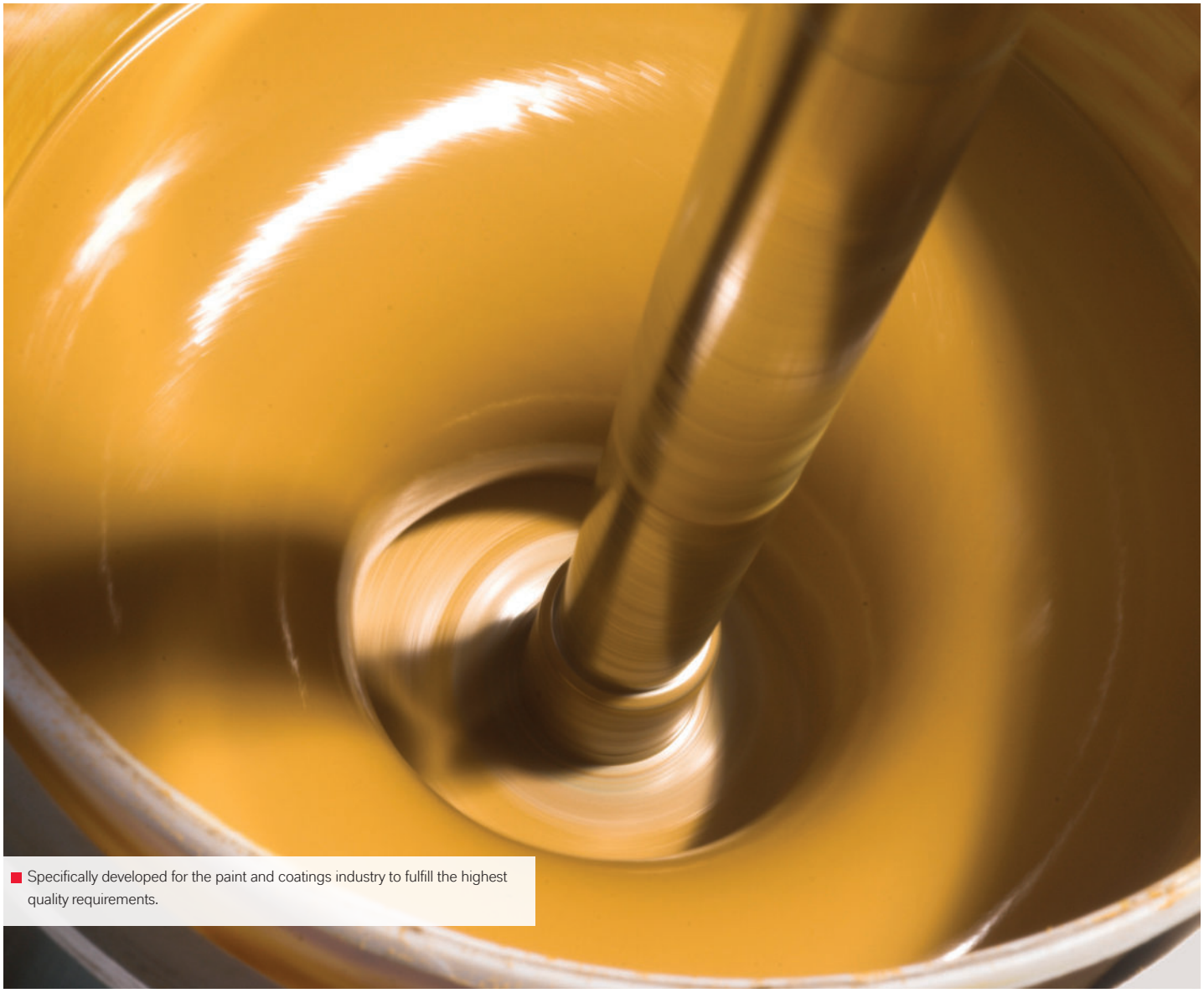
COLORTHERM® Color for Life.

SYNTHETIC IRON OXIDES AND CHROMIUM OXIDES FOR THE PAINT AND COATINGS INDUSTRY

The paint and coatings industry requires higher pigment quality standards than other industries. The high-performance pigments marketed under the core brands Bayferrox® and Colortherm® were specifically developed for this market segment. These pigments fulfill the highest quality requirements, being unique in their product attributes and distinctively different from other products in the market.

The variety of applications include emulsion and decorative paints, industrial and powder coatings, coil coatings, automotive coatings, corrosion protection, and wood or furniture coatings.

LANXESS inorganic pigments' production processes are designed to conserve resources and preserve the environment. In addition to a narrower specification range for color shade, these pigment grades are distinguished by high-dispersibility qualities achieved by the micronization process.



Specifically developed for the paint and coatings industry to fulfill the highest quality requirements.

	Masstone	Tint 1:5	
BAYFERROX® 3905			Yellow iron oxide pigments are typically needle-shaped and have a high binder demand. Bayferrox® micronized yellow grades give notably reduced oil absorption and excellent dispersibility. These materials exhibit low viscosity properties that allow excellent functionality in highly concentrated paste systems.
BAYFERROX® 3910			
BAYFERROX® 3920			
BAYFERROX® 915			Bayferrox® 915 has nearly spherical particles and provides low silking properties.
BAYFERROX® 943			Bayferrox® 943 has a gamma FeO(OH) crystal lattice structure which provides a unique orange color.
BAYFERROX® 912LOM			LOM (Low Oil Absorption Micronized) grade yellow pigments are produced using a unique manufacturing and milling process that lowers their oil absorption characteristics significantly compared to other micronized and non-micronized grades. This product line is specifically designed for highly concentrated paste systems where high solids and ease of dispersibility are required.
BAYFERROX® 918LOM			

	Masstone	Tint 1:5
BAYFERROX® 110M		
BAYFERROX® 120NM		
BAYFERROX® 120M		
BAYFERROX® 130M		
BAYFERROX® 130BM		
BAYFERROX® 140M		

Micronized pigments are suitable for dispersion on Cowles-type dissolvers when manufacturing paints and coatings.

Bayferrox® red pigments in this series are micronized and display excellent dispersibility. The manufacturing process, with its high temperature calcining step, produces pigments with outstanding heat stability and resistance to color change during high energy dispersion processing. From the Bayferrox® 110M to the Bayferrox® 180NM, the color shade changes from a yellow-shade red to a blue-shade red as the predominant particle size increases.

	Masstone	Tint 1:5	
BAYFERROX® 160M			
BAYFERROX® 180NM			
BAYFERROX® 222FM			Bayferrox® 222FM is a finely milled red iron oxide pigment for primer applications.

	Masstone	Tint 1:5	
BAYFERROX® 318MB			Bayferrox® black pigments have well-balanced dispersibility, heat stability, color shade, and tinting strength properties. Bayferrox® 318MB is a micronized pigment.
BAYFERROX® 360			Bayferrox® 360 is a blue-shade black with very high tinting strength.

	Masstone	Tint 1:5	
COLORTHERM® YELLOW 10			This series of pigments is engineered to have high heat stability properties. Colortherm® 10 achieves heat stability to 480°F (250°C) due to an inorganic surface treatment of the primary particles.
COLORTHERM® YELLOW 30			Colortherm® 30 and Colortherm® 3950 are micronized zinc ferrite pigments. Colortherm® 30 achieves heat stability of 570°F (330°C) and Colortherm® 3950 achieves heat stability of 500°F (260°C).
COLORTHERM® YELLOW 3950			
BAYFERROX® 645T			Bayferrox® 645T and Bayferrox® 303T are iron oxides modified with different amounts of manganese oxide incorporated into the crystal lattice. The heat stability achieved by these pigments is over 930°F (500°C). Bayferrox® 303T is a micronized pigment.
BAYFERROX® 303T			
COLORTHERM® GREEN GN-M			Colortherm® Green GN-M is an inorganic heat stable micronized pigment.
COLORTHERM® GREEN GX			Colortherm® Green GX is a heat stable, darker-shade green inorganic pigment.

PIGMENTS TYPICAL ANALYSIS

	Chemical Formula	Composition Percent (%)	Oil Absorption (g/100g)	Density (g/ml)	Tap Density (g/ml)	Surface Area (m^2/g)	325 Mesh Retent. (max %)	Water Sol. Salts (max %)	Ignition Loss (max %)	pH	Particle Shape	Predominant Particle Size (Microns)
Bayferrox® Red Pigments												
(C.I. - Red 101 C.I. # - 77491)												
Bayferrox® 110M	α – Fe_2O_3	> 94	28	5.0	0.6 - 1.0	14.9	0.002	0.5	0.7	5.0 - 8.0	Spherical	0.09
Bayferrox® 120NM	α – Fe_2O_3	> 94	28	5.0	0.8 - 1.2	11.4	0.002	0.5	0.7	5.0 - 8.0	Spherical	0.11
Bayferrox® 120M	α – Fe_2O_3	> 94	28	5.0	0.9 - 1.3	10.9	0.002	0.5	0.7	5.0 - 8.0	Spherical	0.12
Bayferrox® 130M	α – Fe_2O_3	> 94	27	5.0	0.7 - 1.1	8.4	0.002	0.4	0.7	5.0 - 8.0	Spherical	0.17
Bayferrox® 130BM	α – Fe_2O_3	> 94	26	5.0	0.8 - 1.2	7.0	0.002	0.4	0.7	5.0 - 8.0	Spherical	0.22
Bayferrox® 140M	α – Fe_2O_3	> 94	24	5.0	0.9 - 1.3	6.7	0.002	0.4	0.7	5.0 - 8.0	Spherical	0.30
Bayferrox® 160M	α – Fe_2O_3	> 94	22	5.0	1.1 - 1.5	6.0	0.002	0.4	0.7	5.0 - 8.0	Spherical	0.40
Bayferrox® 180NM	α – Fe_2O_3	> 94	24	5.0	1.3 - 1.7	3.8	0.002	0.3	0.7	5.0 - 8.0	Spherical	0.70
Primer Red Pigments												
Bayferrox® 222 FM	α – Fe_2O_3	> 99	15	5.0	1.4 - 1.8	4.4	0.003	0.5	1.0	5.0 - 8.0	Spherical	0.2
Bayferrox® Yellow Pigments												
(C.I -Yellow 42 C.I. # - 77492)												
Bayferrox® 3905	α – FeOOH	> 94	38	4.0	0.5 - 0.9	16.8	0.002	0.5	< 13	4.5 - 7.5	Acicular	0.10 x 0.40
Bayferrox® 3910	α – FeOOH	> 94	35	4.0	0.5 - 0.9	15.2	0.002	0.5	< 14	4.5 - 7.5	Acicular	0.10 x 0.40
Bayferrox® 3920	α – FeOOH	> 94	35	4.0	0.5 - 0.9	13.9	0.002	0.5	< 13	4.5 - 7.5	Acicular	0.10 x 0.40
Bayferrox® 915	α – FeOOH	> 99	32	4.0	0.5 - 0.9	17.0	0.050	0.5	< 13	3.5 - 7.5	Spherical	0.50
Bayferrox® 943	α – FeOOH	> 99	30	4.0	0.6 - 1.0	16.7	0.050	0.5	< 13	3.5 - 7.5	Acicular	0.05 x 0.30
Low Oil Absorption - Low Viscosity Bayferrox® Yellow Pigments												
(C.I -Yellow 42 C.I. # - 77492)												
Bayferrox® 912LOM	α – FeOOH	> 99	25	4.0	0.6 - 0.9	17.9	0.008	0.5	< 13	4.0 - 8.0	Acicular	0.10 x 0.40
Bayferrox® 918LOM	α – FeOOH	> 99	25	4.0	0.6 - 0.9	19.1	0.008	0.5	< 13	4.0 - 8.0	Acicular	0.10 x 0.40
Bayferrox® Black Pigments												
(C.I. - Black 11 C.I. # - 77499)												
Bayferrox® 318MB	α – Fe_3O_4	> 97	21	4.6	0.9 - 1.3	9.8	0.005	0.7	< 3.5	4.0 - 8.0	Spherical	0.20
Bayferrox® 360	α – Fe_3O_4	> 99	20	4.6	1.2 - 1.6	7.5	0.100	0.5	< 1.0	4.0 - 8.0	Spherical	0.30
Special Grades												
(C.I. - Yellow 42 C.I. # - 77492)												
Colortherm Yellow 10	α – FeOOH	> 72	50	4.0	0.4 - 0.8	26.2	0.05	0.5	< 16	3.5 - 7.5	Acicular	0.10 x 0.70
(C.I. - Yellow 119 C.I. # - 77496)												
Colortherm Yellow 30	$ZnFe_2O_4$	> 95	14	5.2	0.8- 1.2	4.5	0.005	0.5	0.5	6.0 - 10.0	Acicular	0.15 x 0.50
(C.I. - Yellow 119 C.I. # - 77496)												
Colortherm Yellow 3950	$ZnFe_2O_4$	> 99	16	5.2	0.9 - 1.3	5.7	0.005	0.5	0.5	6.0 - 10.0	Acicular	0.15 x 0.50
(C.I. - Brown 43 C.I. # - 77536)												
Bayferrox® 645T	$(Mn,Fe)_2O_3$	> 90	28	4.5	0.6 - 1.0	9.1	0.100	0.8	0.5	5.5 - 8.5	Spherical	0.30
(C.I. - Black 33 C.I. # - 77537)												
Bayferrox® 303T	$(Mn,Fe)_2O_3$	> 77	16	4.6	1.1 - 1.5	2.7	0.005	0.7	0.6	7.0 - 10.0	Spherical	0.60
Chromium Oxide Greens												
(C.I. - Green 17 C.I. # - 77288)												
Colortherm Green GN-M	Cr_2O_3	99	11	5.2	0.8 - 1.2	5.3	0.005	0.3	0.4	5.0 - 7.0	Spherical	0.30
Colortherm Green GX	Cr_2O_3	99	11	5.2	1.0 - 1.3	3.3	0.100	0.3	0.4	5.0 - 7.0	Spherical	0.35

*These items are provided as general information only. They are approximate values and are not considered part of the product specifications.

†Test References
1. DIN 55913
2. ASTM D 281-84
3. ASTM D 153-84
4. ASTM B 527-85
5. ASTM D 185-84
6. ASTM D 1208-84
7. From electron micrographs

As with any product, use of the products mentioned in this publication in a given application must be tested (including field testing, etc.) by the user in advance to determine suitability.

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Note: The information contained in this publication is current as of DECEMBER 2014. Please contact LANXESS Corporation to determine if this publication has been revised.

LANXESS
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LANXESS Corporation
Business Unit Inorganic Pigments
111 RIDC Park West Drive
Pittsburgh, PA 15275-1112
USA
Tel. + 412 809 1000
www.lanxess.com
www.bayferrox.com
www.bayferrox.us

Version 12/2014