



COLORED PIGMENTS ENERGIZED BY

LANXESS
Energizing Chemistry

Shade Card for Paints and Coatings – High Performance Pigments

X BAYFERROX®
Color for Life.

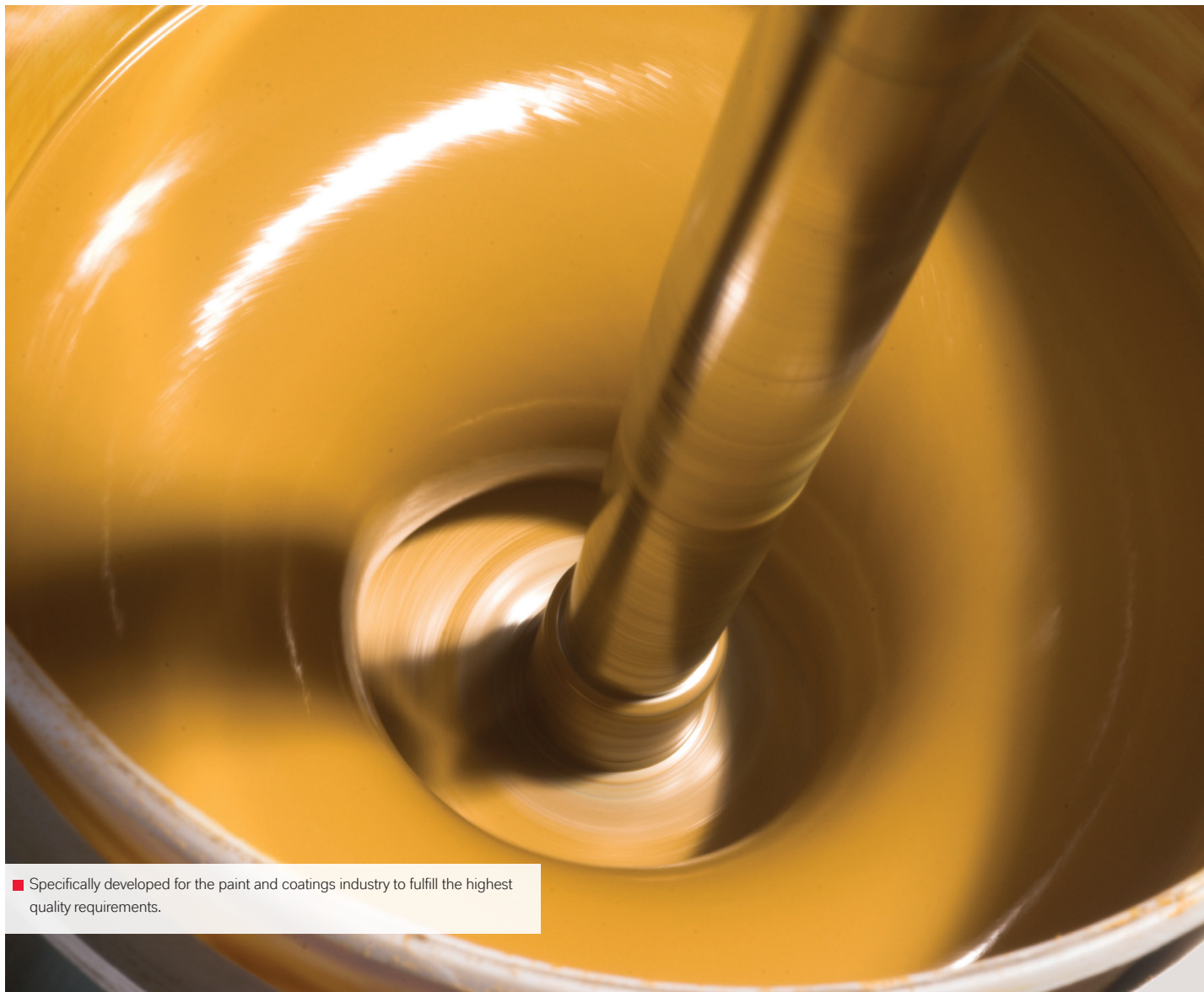
X COLORTHERM®
Color for Life.

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



BAYFERROX® 3910



BAYFERROX® 3920



BAYFERROX® 915



BAYFERROX® 943



BAYFERROX® 912LOM



BAYFERROX® 918LOM



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® 915 has nearly spherical particles and provides low silking properties.

Bayferrox® 943 has a gamma FeO(OH) crystal lattice structure which provides a unique orange color.

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.

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

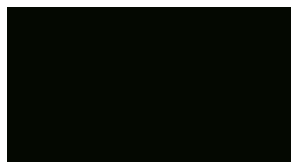


Bayferrox® 222FM is a finely milled red iron oxide pigment for primer applications.

Masstone

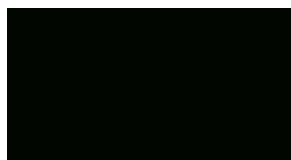
Tint 1:5

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			Bayferrox® 303T is a micronized pigment.
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	$\alpha - \text{Fe}_2\text{O}_3$	> 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	$\alpha - \text{Fe}_2\text{O}_3$	> 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	$\alpha - \text{Fe}_2\text{O}_3$	> 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	$\alpha - \text{Fe}_2\text{O}_3$	> 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	$\alpha - \text{Fe}_2\text{O}_3$	> 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	$\alpha - \text{Fe}_2\text{O}_3$	> 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	$\alpha - \text{Fe}_2\text{O}_3$	> 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	$\alpha - \text{Fe}_2\text{O}_3$	> 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	$\alpha - \text{Fe}_2\text{O}_3$	> 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	$\alpha - \text{FeOOH}$	> 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	$\alpha - \text{FeOOH}$	> 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	$\alpha - \text{FeOOH}$	> 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	$\alpha - \text{FeOOH}$	> 99	32	4.0	0.5 - 0.9	17.0	0.050	0.5	< 13	3.5 - 7.5	Spherical	0.50
Bayferrox® 943	$\alpha - \text{FeOOH}$	> 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	$\alpha - \text{FeOOH}$	> 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	$\alpha - \text{FeOOH}$	> 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	$\alpha - \text{Fe}_3\text{O}_4$	> 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	$\alpha - \text{Fe}_3\text{O}_4$	> 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	$\alpha - \text{FeOOH}$	> 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	$(\text{Mn,Fe})_2\text{O}_3$	> 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	$(\text{Mn,Fe})_2\text{O}_3$	> 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 3. ASTM D 153-84 5. ASTM D 185-84 7. From electron micrographs
 2. ASTM D 281-84 4. ASTM B 527-85 6. ASTM D 1208-84

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