



# **COLOR PERFECTION**

**HIGH PURITY  
IRON OXIDE PIGMENTS**





# CATHAYPURE™ IRON OXIDE PIGMENTS



CATHAYPURE™ Iron Oxides are synthetic high purity pigments developed to comply with and exceed the requirements of FDA and E172 regulations for cosmetics, food, pharmaceutical and other sensitive applications.

CATHAYPURE™ "Z" grade iron oxides are produced by a unique manufacturing process assuring the lowest level of heavy metal contents. It is a perfect selection for the cosmetic and pharmaceutical industries which choose the highest purity to far exceed all governmental requirements throughout the world.

CATHAYPURE™ "E" grade iron oxides are recommended for the use in pet food and food contact applications. "E" grades conform to the requirements of EC food legislation (E172) as well as American FDA regulations (title 21 section 73).

| Heavy Metal Specification (ppm) | As  | Cd  | Cr    | Cu   | Pb   | Hg    | Ni    | Zn    | Ba   |
|---------------------------------|-----|-----|-------|------|------|-------|-------|-------|------|
| E172                            | ≤ 3 | ≤ 1 | ≤ 100 | ≤ 50 | ≤ 10 | ≤ 1   | ≤ 200 | ≤ 100 |      |
| FDA                             | ≤ 3 |     |       |      | ≤ 10 | ≤ 1   |       |       |      |
| CATHAYPURE™ "E" series          | ≤ 3 | ≤ 1 | ≤ 100 | ≤ 50 | ≤ 10 | ≤ 1   | ≤ 200 | ≤ 100 | ≤ 50 |
| CATHAYPURE™ "Z" series          | ≤ 1 | ≤ 1 | ≤ 25  | ≤ 10 | ≤ 3  | ≤ 0.5 | ≤ 10  | ≤ 35  | ≤ 5  |

| Color  | "E" series | "Z" series | Formula                        | %Fe | Shape      | Particle Size(μ) |       | Specific Surface Area m <sup>2</sup> /g | Oil Absorption g/100g | pH  |
|--------|------------|------------|--------------------------------|-----|------------|------------------|-------|---|-----------------------|-----|
|        |            |            |                                |     |            | Length           | Width |   |                       |     |
| YELLOW | Y2220      | Y5102      | FeOOH                          | 60+ | Acicular   | 0.42             | 0.07  | 14.5                                    | 42                    | 6.5 |
|        | Y2230      | Y5108      | FeOOH                          | 60+ | Acicular   | 0.7              | 0.17  | 11.5                                    | 42                    | 6.5 |
|        | Y5100      |            | FeOOH                          | 60+ | Acicular   | 0.51             | 0.04  | 65                                      | 70                    | 5.5 |
|        | Y2630      |            | FeOOH                          | 60+ | Acicular   | 0.51             | 0.04  | 65                                      | 70                    | 5.5 |
| RED    | R2130      | R5210      | Fe <sub>2</sub> O <sub>3</sub> | 68+ | Spheroidal | 0.07             |       | 13                                      | 20                    | 6.5 |
|        | R2135      | R5215      | Fe <sub>2</sub> O <sub>3</sub> | 68+ | Spheroidal | 0.09             |       | 11                                      | 20                    | 6.5 |
|        | R2160      | R5213      | Fe <sub>2</sub> O <sub>3</sub> | 68+ | Spheroidal | 0.14             |       | 7.5                                     | 19                    | 6.5 |
|        | R2190      | R5214      | Fe <sub>2</sub> O <sub>3</sub> | 68+ | Spheroidal | 0.19             |       | 4.5                                     | 19                    | 6.5 |
| BLACK  | B1105E     | B1105      | Fe <sub>3</sub> O <sub>4</sub> | 68+ | Cubic      | 0.22             |       | 5.25                                    | 21                    | 7   |
|        | B2310      | B1155      | Fe <sub>3</sub> O <sub>4</sub> | 68+ | Cubic      | 0.2              |       | 6.5                                     | 22                    | 6.5 |
|        | B1106E     | B1106      | Fe <sub>3</sub> O <sub>4</sub> | 68+ | Cubic      | 0.19             |       | 7                                       | 21                    | 6.5 |
|        | B2320      | B1166      | Fe <sub>3</sub> O <sub>4</sub> | 68+ | Cubic      | 0.18             |       | 8                                       | 22                    | 6.5 |
|        | B1134      |            | Fe <sub>3</sub> O <sub>4</sub> | 68+ | Cubic      | 0.19             |       | 6.75                                    | 21                    | 7   |
|        | B1138      |            | Fe <sub>3</sub> O <sub>4</sub> | 68+ | Cubic      | 0.18             |       | 8.5                                     | 20                    | 6.5 |
|        | B1139      |            | Fe <sub>3</sub> O <sub>4</sub> | 68+ | Cubic      | 0.18             |       | 7.5                                     | 21                    | 6.5 |
| BROWN  | BPR2870    |            | I.O.Blend                      | 68+ | Blend      | 0.15             |       | 8.75                                    | 21                    | 6.5 |
| ORANGE | OP2660     |            | I.O.Blend                      | 62+ | Blend      | 0.51             |       | 12                                      | 35                    | 6.5 |

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# CATHAYPURE™ IRON OXIDE PIGMENTS

Colors represent masstone and 20% tint colors



| "E" series | "Z" series | Masstone | Tint |
|------------|------------|----------|------|
| Y2220      | Y5102      |          |      |
| Y2230      | Y5108      |          |      |
| Y5100      |            |          |      |
| Y2630      |            |          |      |
| R2130      | R5210      |          |      |
| R2135      | R5215      |          |      |
| R2160      | R5213      |          |      |
| R2190      | R5214      |          |      |
| OP2660     |            |          |      |

| "E" series | "Z" series | Masstone | Tint |
|------------|------------|----------|------|
| B1105E     | B1105      |          |      |
| B2310      | B1155      |          |      |
| B1106E     | B1106      |          |      |
| B2320      | B1166      |          |      |
| B1134      |            |          |      |
| B1138      |            |          |      |
| B1139      |            |          |      |
| BRP2870    |            |          |      |







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