

Low VOC colorant technology for alkyd paints

Color Solutions

Monicolor™ K

Vibrantz Technologies' innovation helps paint manufacturers meet the latest regulations for architectural alkyd paints.

Vibrantz Technologies is the leading producer of low VOC (Volatile Organic Compounds) colorants for water-based applications in the architectural paint sector. Our expertise drives us to develop solutions for solvent-based paints, which are still an important part of the product mix, both within and outside Europe. Although the EU directive does not impose specific limitations on colorants, Vibrantz Technologies wants to ensure that solvent-based, architectural alkyd paints, tinted with Vibrantz Technologies' colorants, continue to meet the legal requirements of VOC levels below 300 grams per liter.

Application

Vibrantz Technologies' Monicolor K is the first commercially available colorant range specifically developed for the tinting of various types of long and medium oil alkyd paints, for both interior and exterior applications.

Properties

Monicolor K colorants are based on alkyd resin and aromatic-free solvents. The reduced VOC content (< 300 g/l) and newly approved anti-skinning agent, guarantees compliance with the current EU directive, provided that the paint itself meets its requirements. The Monicolor K family exists of medium to highly concentrated colorants for optimal economic performance. Two transparent iron oxide colorant options are available for wood finishing products. As a result of their transparent nature, the wood structure remains visible, yet important physical properties of the paint, such as weather resistance and UV barrier are unaffected by the colorant.

The Monicolor K colorants have been tested in many available alkyd paints, demonstrating excellent compatibility and minimal effect on properties such as gloss and drying. The colorants can be added up to 15% by volume in order to obtain good hiding power. The technology has been successfully tested in different dispensers with gear, bellow and piston pump technologies.

Mixed systems

Monicolor K colorants are fully compatible in mixed technology systems as they can be used in combination with water based universal colorants. They can be combined with B and C technologies.



This mixing of technologies is a perfect tool for creating a customized system, covering a complete paint technology portfolio and optimizing system performance including color space, costs and technical performance.

Our Services

As a frontrunner in integrating tinting solutions, Vibrantz Technologies provides excellent service in the set-up of your tinting systems as well as smooth colorant technology conversions. Our technical support includes:

- Assurance of colorant and base paint compatibility
- System design, optimization and pigment selection
- Color matching and database development
- Equipment compatibility and sales support

Stringent production controls and processes ensure that all colorants are manufactured to rigid specifications for color shade, strength and rheology. The end result is assured color accuracy and reproducibility.

| Name | Color | Pigment | Pigment content of colorant [%] | Light Fastness of Pigment ¹ | | Weather Resistance of Pigment ² | | 1288Density of Colorant (kg/m ³) |
|------|------------------|---------|---------------------------------|--|------|--|------|--|
| | | | | Mass | Tint | Mass | Tint | |
| KL | White | PW 6 | 60 | 8 | N.A. | 5 | N.A. | 1648 |
| JL | Black HC | PBk 7 | 40 | 8 | 8 | 5 | 5 | 1050 |
| XL | Black LC | PBk 7 | 13 | 8 | 8 | 5 | 5 | 1004 |
| TL | Yellow Oxide | PY 42 | 55 | 8 | 8 | 5 | 5 | 1512 |
| YM | Red Oxide | PR 101 | 60 | 8 | 8 | 5 | 5 | 1803 |
| ML | BiVa Yellow | PY 184 | 53 | 8 | 8 | 4-5 | 4-5 | 1394 |
| QL | Yellow | PY 74 | 41 | 7-8 | 6-7 | 4-5 | 3 | 1047 |
| AM | Red | PR 254 | 26 | 8 | 8 | 4-5 | 4 | 1020 |
| BL | Magenta | PR 122 | 20 | 7 | 7-8 | 4 | 4-5 | 951 |
| VM | Red | PR 112 | 40 | 8 | 6 | 4-5 | 3 | 1005 |
| RA | Blue | PB 15:4 | 25 | 8 | 8 | 5 | 4-5 | 999 |
| PM | Green | PG 7 | 30 | 8 | 8 | 5 | 4-5 | 1016 |
| ZM | Violet | PV 23 | 21 | 8 | 8 | 5 | 4 | 990 |
| UL | Orange | PO 67 | 40 | 8 | 6-7 | 4-5 | 2 | 1057 |
| CM | Yellow Oxide Tr. | PY 42 | 40 | 8 | 8 | 5 | 5 | 1338 |
| DM | Red Oxide Tr. | PR 101 | 40 | 8 | 8 | 5 | 5 | 1318 |

The values given in the table are guidance figures only. The data is obtained from pigment suppliers, individual testing is recommended.

¹ Light fastness is measured on an eight step blue scale, where 1 = very poor light fastness, 8 = excellent light fastness.

² Weather resistance is measured on a five step gray scale, where 1 = very poor weather resistance, 5 = excellent weather resistance.

³ Colorant containing inorganic pigment(s). Vibrantz Technologies recommends to use only colorants containing inorganic pigments in high alkaline environments and in exterior silicate or silicone based products.

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