COLORS & EFFECTS

# Pigments for plastics

## Product selection guide

BASF
We create chemistry



# Table of contents

# A colorful palette of solutions

BASF offers a comprehensive palette of coloring solutions that gives you the intense colors you demand for your plastics. Our pigments provide you with reliable quality, consistent processing behavior, reduced scrap rates, and enhanced productivity, and they enable you to find the optimal combination of coloring value and processing efficiency. Furthermore, our portfolio has been systematically reviewed and evaluated with our Sustainable Solution Steering method, which allows us to assess the sustainability performance of each of our products in its specific application. We create chemistry that makes performance love sustainable solutions.

For coloring plastic, we identified downstream cost savings, energy efficiency, resource efficiency, and durability, as well as health and safety, as the key drivers for more sustainable solutions.

Pigments that contribute substantially to these drivers along the value chain have been classified at BASF as Sustainability Accelerators.

The detailed analysis of our portfolio and externally assured method of clustering our products allow us to offer you and your customers' industries the solutions you need. Let's take a joint look at your specific requirements and find out how we can further improve both your, as well as our, BASF's sustainability profile!

Learn more about BASF's commitment to driving sustainable solutions at: www.basf.com/sustainability

# Explanation of data

## Color shades

All organic pigment shades shown here are based on a full shade concentration of 0.2% pigment; violets are an exception, where 0.1% pigment was used. In the white reductions, the illustrations are based on the respective pigment concentration to achieve 1/3 ISD based on 5% $TiO_2$.

Inorganic pigment shades are based on a full shade concentration of 2% pigment and a ratio of 1:4 for white reductions.

## Application performance

A selection of performance data of the most important properties in polyolefin (HDPE) and PVC (Ba/Zn-stabilized, flexible PVC) is presented here. All data given is for the corresponding base pigment, unless otherwise stated. Pigment concentrations used are those based on powder pigments.

Organic pigments:
Full shade (FS): 0.1%
White reduction (WR): 0.1% + 1% $TiO_2$ (ratio 1:10)

Inorganic pigments:
Full shade (FS): 1%
White reduction (WR): 0.5% + 2% $TiO_2$ (ratio 1:4)

## Heat resistance (HDPE)

Heat resistance was determined by injection molding in accordance with ISO 12877-2.

The results show the highest temperature at which the color difference, versus a standard, is no greater than GS 4 on the ISO 105-A02 grayscale for assessing color change.

For most of the Sicotan® and Sicopal® products, and some high-performance organic pigments, a GS rating of 5 is achieved at the highest testing temperature of 300 °C. Therefore, heat resistance above 300 °C can be achieved under certain circumstances.

## Polymer suitability

Possible fields of application are shown in the table, opposite each pigment. Please note that these are intended only as a general guide.

## Migration (HDPE and PVC-p)

Migration resistance was determined in accordance with DIN 53775 by direct contact between the colored test sheet and a white, flexible PVC contact sheet.

Staining of the contact sheet was assessed using the ISO 105-A03 grayscale (GS) for assessing staining, with GS 5 denoting no migration and steps 4 to 5 being subdivided.

## Light fastness (HDPE and PVC-p)

Light fastness was determined using Xenon lamp exposure tests in accordance with the equivalent test methods ISO 4892-2 or ISO 105-B02.

The samples were assessed against the 1–8 Blue Wool Scale as described in ISO 105-B02, Blue Wool 8 denoting the highest light fastness.

# Explanation of data

## Hot light fastness* (PVC-p)

Exposure was carried out to 600 kJ/m$^2$ in accordance with ASTM SAE J2412 (formally ASTM SAE J1885).

Color changes were assessed using the ISO 105-A02 grayscale (GS) for assessing color change, with GS 5 denoting no change and GS 1 denoting the lowest hot light fastness.

## Weather resistance* (HDPE and PVC-p)

Weather resistance was determined using Xenon light exposure tests in accordance with the equivalent test methods ASTM G155, ISO 4892-2, or the former Ciba internal test method WOM 119/50.

The HDPE samples were exposed for up to 3,000 hours and the PVC-p samples for up to 5,000 hours.

Color changes were assessed using the ISO 105-A02 grayscale (GS) for assessing color change, with GS 5 denoting no change and GS 1 denoting the lowest weather resistance.

## Warping (HDPE)

Influence on the warping tendency of injection-molded HDPE articles was determined in accordance with ISO 294-4/ASTM D955.

Warping tendency was assessed as follows:

- None (N): No significant influence under laboratory test conditions and widely confirmed in practice.
- Low (L): Slight influence determined in laboratory testing but successful in practice.
- High (H): Significant influence in the laboratory and in practice. Use for large or complex HDPE injection moldings is not recommended.

## 1/3 ISD (HDPE and PVC-p)

Color strength is indicated by the number of parts of colored pigment that, in combination with a defined percentage of $TiO_2$ in a particular polymer or compound, gives 1/3 International Standard Depth (ISD) as described in DIN 53.235.

## Density

Density was determined in a pycnometer, as described in ISO/R 787-10, and is expressed as g/cm$^3$.

## Bulk density

Bulk density was determined by the weight of a product sample that can be contained in a vessel of specified volume and is expressed as kg/l. Assessment was in accordance with ISO/R 787-11.

## Product form

Certain inorganic pigments are also available in a fine granule (FG) form. This product form is low-dusting and free-flowing.

* Hot light fastness and weather resistance ratings below GS 3 are not included in this pattern card. Products with a low performance are not recommended for these applications.



# Organic pigments

Organic pigments usually provide the broadest possible coverage of the color space – from vivid opaque or transparent mass tones to reduced tint shades. When used in demanding engineering plastics or diluted for pastel shades, organic pigments may exhibit limitations in performance with regards to processing efficiency or fastness to light or weathering.

## Key portfolio

| Product | Color shade | Chemical type | Key properties |
|---|---|---|---|
| Cinquasia® | Red – Pink / Magenta – Violet | Quinacridones | High-performance pigments for the most important plastic types and end-uses, usually combining outstanding coloristic properties, excellent lightfastness, heat and chemical resistance; in addition, select products offer excellent weather resistance or can be used in more demanding engineering plastics |
| Cromophtal® | Yellow to Red – Brown | Azo condensation | |
| | Yellow – Orange | Benzimidazolone | |
| | Yellow | Pteridine | |
| | Violet | Dioxazine | |
| Irgazin® | Yellow – Orange | Isoindolinone | |
| | Orange – Red – Rubine | DPP | |
| Paliogen® | Red – Violet | Perylene | |
| | Blue | Indanthrone | |
| Heliogen® | Blue – Green | Cu-phthalocyanine | High-performance pigments that dominate the entire blue and green color space thanks to excellent cost/performance balance |
| Paliotol® | Yellow | Isoindoline | With their outstanding coloring efficiency, these medium- to high-performance pigments are designed to efficiently cover most indoor uses for industrial or consumer applications in either plastics or fibers |
| | Yellow | Quinophtalone | |
| | Yellow – Orange – Red | Azo salt / Disazo | |
| Irgalite® | Yellow – Orange – Red – Rubine | 2B, 4B BONA lake | Classical organic pigments with fair processing and end-use performance for non-critical applications |

# Organic pigments

□ Limited suitability ■ Recommended

| Product | Sustainability Accelerator* | Full shade (FS) | White reduction (WR) | Applications | | | | | | | | | | | | | Application performance | | | | | | | | | | | | | | | Physical properties | | | | Available preparations | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | General | | | | | | | | | | | Fibers | | | | HDPE | | | | | | | | PVC-p | | | | | | | | | | | | | |
| | | | | PVC | PO | PS | ABS | PA6 | PET | PC | PMMA | Rubber | PUR | PP | PET | PA | Migration FS 0.1% | Heat FS 0.1% | Heat WR 1:10 | Light FS 0.1% | Light WR 1:10 | Weather (3,000 h) FS 0.1% | Weather (3,000 h) WR 1:10 | Warping | Migration FS 0.1% | Light FS 0.1% | Light WR 1:10 | Hot light (600 kJ) FS 0.1% | Hot light (600 kJ) WR 1:10 | Weather (5,000 h) FS 0.1% | Weather (5,000 h) WR 1:10 | 1/3 ISD in HDPE (1% $TiO_2$) | 1/3 ISD in PVC (1% $TiO_2$) | Density | Bulk density | Eupolen® PE | Microlen® MC | Micranyl® Q | Microlith® KP |
| Paliotol® Yellow K 0961<br>old: Paliotol® Yellow K 0961 HD<br>C.I. Pigment Yellow 138**<br>Quinophthalone | - | | | ■ | ■ | ■ | □ | - | □ | ■ | □ | ■ | ■ | ■ | □ | - | 4–5 | 280 | 270 | 8.0 | 7.0 | - | - | L | 4.5 | 7–8 | 7.0 | 5.0 | 4–5 | - | - | 0.21 | 0.18 | 1.80 | 0.40 | ■ | - | - | - |
| Cromophtal® Yellow K 0990 FP<br>old: Cromophtal® Yellow 8GNP<br>C.I. Pigment Yellow 128<br>Disazo condensation | ■ | | | ■ | ■ | □ | □ | - | - | - | - | ■ | ■ | ■ | - | - | 5.0 | 260 | 260 | 8.0 | 7–8 | 4–5 | 3.0 | N | 5.0 | 8.0 | 7–8 | 5.0 | 4–5 | 4–5 | 4.0 | 0.21 | 0.20 | 1.47 | 0.13 | - | - | - | - |
| Paliotol® Yellow K 1070<br>old: Irgalite® Yellow WGP<br>C.I. Pigment Yellow 168<br>Monoazo salt | - | | | ■ | ■ | □ | □ | - | - | - | - | ■ | □ | - | - | - | 5.0 | 260 | 240 | 7.0 | 7.0 | 3.0 | - | N | 5.0 | 7–8 | 7.0 | - | - | - | - | 0.37 | 0.37 | 1.66 | 0.25 | - | ■ | ■ | - |
| Cromophtal® Yellow K 1210 FP<br>old: Cromophtal® Yellow 3GNP<br>C.I. Pigment Yellow 93<br>Disazo condensation | - | | | ■ | ■ | ■ | □ | - | - | - | □ | ■ | ■ | ■ | - | - | 5.0 | 280 | 280 | 8.0 | 6–7 | 4.0 | - | N | 5.0 | 8.0 | 7–8 | 5.0 | 5.0 | 4.0 | 3–4 | 0.15 | 0.15 | 1.45 | 0.14 | - | ■ | ■ | ■ |
| Paliotol® Yellow K 1300 FP<br>C.I. Pigment Yellow 155<br>Disazo condensation | ■ | | | ■ | ■ | ■ | - | - | - | - | - | ■ | ■ | ■ | - | - | 4.2 | 260 | 260 | 7.0 | 6–7 | 3–4 | - | L | 4.8 | 8.0 | 7–8 | 5.0 | 4.0 | 4–5 | 3 | 0.15 | 0.15 | 1.40 | 0.20 | - | ■ | - | - |
| Cromophtal® Yellow K 1310<br>old: Cromophtal® Yellow 4GV<br>C.I. Pigment Yellow 215<br>Pteridine | ■ | | | □ | ■ | ■ | ■ | ■ | - | - | - | □ | □ | □ | - | - | 5.0 | 300 | 300 | 7.0 | 7.0 | 4–5 | 4.0 | L | 5.0 | 7–8 | 7.0 | 4.0 | 4.0 | - | - | 0.18 | 0.15 | 1.62 | 0.30 | ■ | - | - | - |
| Irgalite® Yellow K 1320<br>old: Irgalite® Yellow BRMO<br>C.I. Pigment Yellow 14***<br>Diarylide | - | | | ■ | □ | - | - | - | - | - | - | ■ | ■ | - | - | - | 2–3 | 200 | 200 | 6–7 | 6.0 | - | - | - | 4.7 | 6.0 | 6.0 | - | - | - | - | 0.13 | 0.11 | 1.63 | 0.21 | - | - | - | - |
| Cromophtal® Yellow K 1410<br>old: Cromophtal® Yellow 2GO<br>C.I. Pigment Yellow 180<br>Benzimidazolone | ■ | | | ■ | ■ | ■ | □ | - | □ | ■ | ■ | □ | □ | ■ | - | - | 5.0 | 300 | 300 | 7–8 | 7.0 | 4–5 | - | L | 5.0 | 8.0 | 7–8 | 5.0 | 4.0 | 4.0 | - | 0.15 | 0.11 | 1.40 | 0.21 | - | ■ | - | - |

The color shade is indicative. The actual shade in use depends on the formulation and may vary.
* Product that has been evaluated with BASF's Sustainable Solution Steering method and contributes substantially to sustainability in the value chain.
** Products with this C.I. number may vary in color and resistance properties in different polymer systems.
*** At temperatures above 200 °C, diarylide pigments may decompose. Users are advised to follow the recommendations of ETAD information No. 2.

# Organic pigments

□ Limited suitability ■ Recommended

| Product | Sustainability Accelerator* | Full shade (FS) | White reduction (WR) | Applications | | | | | | | | | | | | | | Application performance | | | | | | | | | | | | | | | | Physical properties | | | | Available preparations | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | General | | | | | | | | | | | Fibers | | | HDPE | | | | | | | PVC-p | | | | | | | | | | | | | | | | | |
| | | | | PVC | PO | PS | ABS | PA6 | PET | PC | PMMA | Rubber | PUR | PP | PET | PA | Migration FS 0.1% | Heat FS 0.1% | Heat WR 1:10 | Light FS 0.1% | Light WR 1:10 | Weather (3,000 h) FS 0.1% | Weather (3,000 h) WR 1:10 | Warping | Migration FS 0.1% | Light FS 0.1% | Light WR 1:10 | Hot light (600 kJ) FS 0.1% | Hot light (600 kJ) WR 1:10 | Weather (5,000 h) FS 0.1% | Weather (5,000 h) WR 1:10 | 1/3 ISD in HDPE (1% $TiO_2$) | 1/3 ISD in PVC (1% $TiO_2$) | Density | Bulk density | Eupolen® PE | Microlen® MC | Microny® Q | Microlith® KP |
| Irgalite® Yellow K 1415<br>C.I. Pigment Yellow 13***<br>Diarylide | - | | | ■ | □ | - | - | - | - | - | - | ■ | ■ | - | - | - | 4.6 | 200 | 200 | 7–8 | 6–7 | - | - | - | 5.0 | 7.0 | 6.0 | - | - | - | - | 0.10 | 0.08 | 1.34 | 0.21 | - | ■ | - | - |
| Paliotol® Yellow K 1420<br>old: Irgalite® Yellow WSR<br>C.I. Pigment Yellow 62<br>Monoazo salt | - | | | ■ | ■ | □ | □ | - | - | - | - | ■ | □ | - | - | - | 5.0 | 250 | 260 | 7.0 | 7.0 | - | - | L | 5.0 | 7.0 | 7.0 | - | - | - | - | 0.35 | 0.33 | 1.59 | 0.20 | - | ■ | - | - |
| Cromophtal® Yellow K 1500 FP<br>old: Cromophtal® Yellow GRP<br>C.I. Pigment Yellow 95<br>Disazo condensation | - | | | ■ | ■ | ■ | □ | - | - | - | □ | ■ | ■ | ■ | - | - | 5 | 280 | 280 | 7–8 | 6–7 | 3 | - | N | 5 | 8 | 7–8 | 4–5 | 4–5 | 3–4 | - | 0.14 | 0.13 | 1.36 | 0.14 | - | ■ | ■ | - |
| Paliotol® Yellow K 1700<br>C.I. Pigment Yellow 183<br>Monoazo salt | - | | | ■ | ■ | ■ | ■ | □ | □ | □ | ■ | ■ | □ | ■ | □ | - | 5 | 300 | 280 | 7 | 6–7 | - | - | L | 5 | 7 | 6 | 4 | 3–4 | - | - | 0.23 | 0.18 | 1.70 | 0.10 | - | - | - | - |
| Irgalite® Yellow K 1740<br>old: Irgalite® Yellow B3RN<br>C.I. Pigment Yellow 83***<br>Diarylide | - | | | ■ | □ | - | - | - | - | - | - | ■ | ■ | - | - | - | 4.4 | 200 | 200 | 7 | 7 | - | - | - | 5 | 8 | 7–8 | 5 | 3–4 | - | - | 0.07 | 0.05 | 1.51 | 0.20 | - | ■ | ■ | ■ |
| Paliotol® Yellow K 1750<br>C.I. Pigment Yellow 229<br>Monoazo salt | ■ | | | ■ | ■ | □ | □ | - | - | - | □ | ■ | □ | - | - | - | 5 | 300 | 300 | 7 | 5–6 | - | - | N | 5 | 6–7 | 6 | 2–3 | 2–3 | - | - | 0.15 | 0.12 | 1.61 | 0.19 | - | ■ | - | - |
| Paliotol® Yellow K 1760 FP<br>old: Cromophtal® Yellow HRPN<br>C.I. Pigment Yellow 191:1<br>Monoazo salt | - | | | ■ | ■ | ■ | ■ | □ | □ | □ | ■ | ■ | □ | ■ | - | - | 5 | 300 | 300 | 7 | 6–7 | 3–4 | - | N | 5 | 8 | 7 | 4–5 | 3–4 | - | - | 0.35 | 0.31 | 1.43 | 0.21 | ■ | - | ■ | - |
| Paliotol® Yellow K 1800<br>old: Paliotol® Yellow K 2270<br>C.I. Pigment Yellow 183<br>Monoazo salt | - | | | ■ | ■ | ■ | ■ | □ | □ | □ | ■ | ■ | ■ | ■ | - | - | 5 | 300 | 300 | 7 | 6–7 | 3–4 | - | L | 5 | 8 | 7 | 4–5 | 3–4 | - | - | 0.43 | 0.34 | 1.80 | 0.40 | ■ | - | - | - |

The color shade is indicative. The actual shade in use depends on the formulation and may vary.
* Product that has been evaluated with BASF's Sustainable Solution Steering method and contributes substantially to sustainability in the value chain.
** Products with this C.I. number may vary in color and resistance properties in different polymer systems.
*** At temperatures above 200 °C, diarylide pigments may decompose. Users are advised to follow the recommendations of ETAD information No. 2.

# Organic pigments

□ Limited suitability ■ Recommended

| Product | Sustainability Accelerator* | Full shade (FS) | White reduction (WR) | Applications | | | | | | | | | | | | | | Application performance | | | | | | | | | | | | | | | | Physical properties | | | | Available preparations | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | General | | | | | | | | | | Fibers | | | | HDPE | | | | | | | PVC-p | | | | | | | | | | | | | | | |
| | | | | PVC | PO | PS | ABS | PA6 | PET | PC | PMMA | Rubber | PUR | PP | PET | PA | Migration FS 0.1% | Heat FS 0.1% | Heat WR 1:10 | Light FS 0.1% | Light WR 1:10 | Weather (3,000 h) FS 0.1% | Weather (3,000 h) WR 1:10 | Warping | Migration FS 0.1% | Light FS 0.1% | Light WR 1:10 | Hot light (600 kJ) FS 0.1% | Hot light (600 kJ) WR 1:10 | Weather (5,000 h) FS 0.1% | Weather (5,000 h) WR 1:10 | 1/3 ISD in HDPE (1% $TiO_2$) | 1/3 ISD in PVC (1% $TiO_2$) | Density | Bulk density | Eupolen® PE | Microlen® MC | Microlen® Q | Microlith® KP |
| Paliotol® Yellow K 1841 FP<br>C.I. Pigment Yellow 139**<br>Isoindoline | ■ | | | ■ | □ | □ | - | - | - | - | - | □ | ■ | ■ | - | - | 5 | 240 | 240 | 8 | 7 | 3 | - | L | 4.5 | 7 | 6 | 3–4 | 3–4 | - | - | 0.14 | 0.10 | 1.60 | 0.30 | ■ | - | - | - |
| Irgazin® Yellow K 2060 FP<br>old: Cromophtal® Yellow 3RLP<br>C.I. Pigment Yellow 110<br>Isoindolinone | ■ | | | ■ | ■ | ■ | ■ | - | - | - | - | ■ | ■ | □ | - | - | 5 | 300 | 300 | 7–8 | 8 | 4–5 | 4 | H | 5 | 8 | 8 | 4–5 | 4–5 | 4–5 | 4–5 | 0.30 | 0.30 | 1.80 | 0.23 | ■ | ■ | ■ | ■ |
| Irgazin® Yellow K 2070<br>old: Cromophtal® Yellow 2RLTS<br>C.I. Pigment Yellow 110<br>Isoindolinone | ■ | | | ■ | □ | □ | □ | - | - | - | - | ■ | □ | □ | - | - | 5 | 300 | 300 | 8 | 8 | 4–5 | 3–4 | H | 5 | 8 | 8 | 4–5 | 4–5 | 4–5 | 4–5 | 0.26 | 0.20 | 1.67 | 0.25 | - | ■ | ■ | ■ |
| Irgazin® Yellow K 2080<br>old: Cromophtal® Yellow 2RLP<br>C.I. Pigment Yellow 110<br>Isoindolinone | ■ | | | ■ | ■ | ■ | ■ | - | - | - | - | ■ | ■ | ■ | - | - | 5 | 300 | 300 | 8 | 8 | 4–5 | 3–4 | H | 5 | 8 | 8 | 4–5 | 4–5 | 4–5 | 4–5 | 0.24 | 0.22 | 1.78 | 0.27 | - | - | - | - |
| Irgazin® Orange K 2890<br>old: Cromophtal® Orange 2G<br>C.I. Pigment Orange 61<br>Isoindolinone | ■ | | | ■ | ■ | ■ | □ | - | - | - | □ | ■ | ■ | ■ | - | - | 5 | 300 | 300 | 7–8 | 7–8 | 4–5 | 3 | H | 4.9 | 8 | 8 | 5 | 5 | 4 | 3–4 | 0.23 | 0.20 | 1.66 | 0.30 | - | - | - | - |
| Irgazin® Orange K 2910<br>old: Cromophtal® DPP Orange TRP<br>C.I. Pigment Orange 71<br>Diketopyrrolopyrrole (DPP) | - | | | ■ | ■ | ■ | □ | - | - | - | - | ■ | ■ | ■ | - | - | 5 | 300 | 300 | 7–8 | 7–8 | 4 | - | L | 5 | 7–8 | 7–8 | 4–5 | 4 | - | - | 0.23 | 0.17 | 1.40 | 0.17 | - | ■ | - | - |
| Paliotol® Orange K 2920<br>C.I. Pigment Orange 79**<br>Azo salt | ■ | | | ■ | ■ | □ | □ | - | □ | □ | □ | □ | ■ | - | - | - | 5 | 280 | 280 | 5 | 4 | - | - | L | 5 | 5 | 4 | - | - | - | - | 0.30 | 0.27 | 1.70 | 0.18 | - | - | - | - |
| Irgalite® Orange K 2925<br>old: Irgalite® Orange F2G<br>C.I. Pigment Orange 34***<br>Diarylide | - | | | ■ | □ | - | - | - | - | - | - | ■ | ■ | - | - | - | 3–4 | 200 | 200 | 6–7 | 5 | - | - | - | 4.7 | 6–7 | 5–6 | - | - | - | - | 0.16 | 0.10 | 1.37 | 0.16 | - | ■ | - | - |

The color shade is indicative. The actual shade in use depends on the formulation and may vary.
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** Products with this C.I. number may vary in color and resistance properties in different polymer systems.
*** At temperatures above 200 °C, diarylide pigments may decompose. Users are advised to follow the recommendations of ETAD information No. 2.

# Organic pigments

■ Recommended □ Limited suitability

| Product | Sustainability Accelerator* | Full shade (FS) | White reduction (WR) | Applications | | | | | | | | | | | | | | Application performance | | | | | | | | | | | | | | | | Physical properties | | | | Available preparations | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | General | | | | | | | | | | | Fibers | | | HDPE | | | | | | | PVC-p | | | | | | | | | | | | | | | |
| | | | | PVC | PO | PS | ABS | PA6 | PET | PC | PMMA | Rubber | PUR | PP | PET | PA | Migration FS 0.1% | Heat FS 0.1% | Heat WR 1:10 | Light FS 0.1% | Light WR 1:10 | Weather (3,000 h) FS 0.1% | Weather (3,000 h) WR 1:10 | Warping | Migration FS 0.1% | Light FS 0.1% | Light WR 1:10 | Hot light (600 kJ) FS 0.1% | Hot light (600 kJ) WR 1:10 | Weather (5,000 h) FS 0.1% | Weather (5,000 h) WR 1:10 | 1/3 ISD in HDPE (1% $TiO_2$) | 1/3 ISD in PVC (1% $TiO_2$) | Density | Bulk density | Eupolen® PE | Microlen® MC | Micranyl® Q | Microlith® KP |
| Cromophtal® Orange K 2960<br>old: Cromophtal® Orange GP<br>C.I. Pigment Orange 64<br>Benzimidazolone | - | | | ■ | ■ | ■ | ■ | - | - | □ | □ | ■ | ■ | □ | - | - | 5 | 300 | 300 | 8 | 7–8 | 3–4 | - | L | 5 | 7–8 | 7–8 | 4–5 | 3–4 | - | - | 0.21 | 0.21 | 1.59 | 0.39 | - | ■ | ■ | - |
| Irgazin® Orange K 2990<br>old: Irgazin® DPP Orange RA<br>C.I. Pigment Orange 73<br>Diketopyrrolopyrrole (DPP) | - | | | ■ | □ | - | - | - | - | - | - | ■ | ■ | - | - | - | 4.9 | 300 | 280 | 8 | 7 | 4 | - | H | 4.6 | 7–8 | 6–7 | 3–4 | - | - | - | 0.35 | 0.37 | 1.30 | 0.29 | - | - | - | - |
| Cromophtal® Brown K 3001<br>old: Cromophtal® Brown 5R<br>C.I. Pigment Brown 23<br>Disazo condensation | - | | | ■ | □ | □ | □ | - | - | - | □ | ■ | ■ | - | - | - | 5 | 260 | 260 | 6–7 | 7 | 5 | 3–4 | - | 4.9 | 8 | 7–8 | 5 | 5 | 4 | - | 0.16 | 0.15 | 1.55 | 0.21 | - | - | - | ■ |
| Cromophtal® Scarlet K 3540<br>old: Cromophtal® Scarlet RN<br>C.I. Pigment Red 166<br>Disazo condensation | - | | | ■ | ■ | ■ | □ | - | - | - | □ | ■ | ■ | ■ | - | - | 5 | 300 | 300 | 7–8 | 7–8 | 3–4 | - | H | 5 | 8 | 7 | 5 | 4–5 | 3–4 | - | 0.20 | 0.18 | 1.47 | 0.19 | - | - | ■ | ■ |
| Paliogen® Red K 3580<br>C.I. Pigment Red 149<br>Perylene | - | | | ■ | ■ | ■ | □ | □ | □ | □ | ■ | ■ | ■ | ■ | □ | ■ | 5 | 280 | 280 | 8 | 7 | 4 | 3 | H | 5 | 8 | 7–8 | 5 | 3–4 | 4 | - | 0.15 | 0.12 | 1.40 | 0.23 | - | - | ■ | - |
| Irgazin® Flame Red K 3800<br>old: Cromophtal® DPP Flame Red FP<br>C.I. Pigment Red 272<br>Diketopyrrolopyrrole (DPP) | ■ | | | ■ | ■ | □ | - | - | - | - | - | ■ | ■ | □ | - | - | 4.9 | 300 | 300 | 7–8 | 7–8 | 3–4 | - | L | 4.9 | 7–8 | 7 | 4 | 3–4 | 3–4 | - | 0.18 | 0.15 | 1.38 | 0.18 | - | ■ | - | - |
| Cromophtal® Red K 3830<br>old: Cromophtal® Red G<br>C.I. Pigment Red 220<br>Disazo condensation | - | | | □ | ■ | ■ | □ | □ | - | - | - | □ | □ | □ | - | □ | 5 | 300 | 300 | 7–8 | 7–8 | 3 | - | N | 4.8 | 7 | 7 | - | - | - | - | 0.20 | 0.17 | 1.40 | 0.25 | - | - | - | - |
| Irgazin® Red K 3840<br>old: Cromophtal® Red 2030<br>C.I. Pigment Red 254<br>Diketopyrrolopyrrole (DPP) | ■ | | | ■ | ■ | ■ | □ | - | - | - | - | ■ | ■ | ■ | - | - | 5 | 300 | 300 | 8 | 8 | 4 | - | H | 5 | 8 | 8 | 5 | 5 | 5 | 3 | 0.16 | 0.15 | 1.63 | 0.18 | - | ■ | ■ | ■ |

The color shade is indicative. The actual shade in use depends on the formulation and may vary.
* Product that has been evaluated with BASF's Sustainable Solution Steering method and contributes substantially to sustainability in the value chain.

# Organic pigments

□ Limited suitability ■ Recommended

| Product | Sustainability Accelerator* | Full shade (FS) | White reduction (WR) | Applications | | | | | | | | | | | | | Application performance | | | | | | | | | | | | | | | Physical properties | | | | Available preparations | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | General | | | | | | | | | | | Fibers | | | | HDPE | | | | | | | | PVC-p | | | | | | | | | | | | |
| | | | | PVC | PO | PS | ABS | PA6 | PET | PC | PMMA | Rubber | PUR | PP | PET | PA | Migration FS 0.1% | Heat FS 0.1% | Heat WR 1:10 | Light FS 0.1% | Light WR 1:10 | Weather (3,000 h) FS 0.1% | Weather (3,000 h) WR 1:10 | Warping | Migration FS 0.1% | Light FS 0.1% | Light WR 1:10 | Hot light (600 kJ) FS 0.1% | Hot light (600 kJ) WR 1:10 | Weather (5,000 h) FS 0.1% | Weather (5,000 h) WR 1:10 | 1/3 ISD in HDPE (1% $TiO_2$) | 1/3 ISD in PVC (1% $TiO_2$) | Density | Bulk density | Eupolen® PE | Microlen® MC | Micranyl® Q | Microlith® KP |
| Irgazin® Red K 3840 LW<br>old: Cromophtal® Red 2028<br>C.I. Pigment Red 254<br>Diketopyrrolopyrrole (DPP) | ■ | | | □ | ■ | □ | □ | - | - | - | - | □ | □ | ■ | - | - | 5 | 300 | 300 | 8 | 8 | 4 | - | N | 5 | 8 | 7–8 | 4–5 | 4–5 | 4–5 | 3–4 | 0.16 | 0.15 | 1.63 | 0.18 | - | ■ | - | - |
| Irgazin® Red K 3845<br>old: Irgazin® DPP Red BO<br>C.I. Pigment Red 254<br>Diketopyrrolopyrrole (DPP) | - | | | ■ | ■ | ■ | □ | □ | - | - | □ | ■ | □ | - | - | - | 5 | 300 | 300 | 8 | 8 | 5 | 3 | H | 5 | 8 | 8 | 5 | 5 | 5 | 3–4 | 0.23 | 0.23 | 1.62 | 0.33 | - | - | - | ■ |
| Irgazin® Red K 3845 LW<br>old: Cromophtal® DPP Red BOC<br>C.I. Pigment Red 254<br>Diketopyrrolopyrrole (DPP) | ■ | | | - | ■ | ■ | □ | □ | - | - | □ | ■ | - | - | - | - | 5 | 300 | 300 | 8 | 8 | 5 | 3 | L | - | - | - | - | - | - | - | 0.23 | - | 1.62 | 0.33 | - | ■ | - | - |
| Cromophtal® Red K 3890 FP<br>old: Cromophtal® Red BRNP<br>C.I. Pigment Red 144<br>Disazo condensation | - | | | ■ | ■ | ■ | ■ | - | □ | □ | □ | ■ | □ | ■ | - | - | 5 | 300 | 300 | 7–8 | 7 | 3 | - | H | 4.9 | 8 | 7–8 | 5 | 5 | 3–4 | - | 0.14 | 0.12 | 1.52 | 0.14 | - | ■ | ■ | ■ |
| Cromophtal® Red K 3900 FP<br>old: Cromophtal® Red BNFP PP<br>C.I. Pigment Red 214<br>Disazo condensation | - | | | ■ | ■ | ■ | ■ | □ | ■ | □ | ■ | ■ | □ | ■ | ■ | - | 5 | 300 | 300 | 7–8 | 7 | 4–5 | - | H | 5 | 8 | 7–8 | 5 | 5 | 3 | - | 0.14 | 0.13 | 1.55 | 0.10 | - | - | - | - |
| Paliogen® Red K 3911<br>old: Paliogen® Red K 3911 HD<br>C.I. Pigment Red 178<br>Perylene | - | | | ■ | ■ | ■ | □ | □ | ■ | □ | ■ | ■ | ■ | ■ | □ | □ | 5 | 300 | 300 | 8 | 7 | 3–4 | - | H | 5 | 8 | 7 | 5 | 4 | - | - | 0.26 | 0.18 | 1.60 | 0.22 | ■ | - | - | - |
| Cromophtal® Red K 4035<br>old: Cromophtal® Red 2B<br>C.I. Pigment Red 221<br>Disazo condensation | - | | | ■ | □ | - | - | - | - | - | - | ■ | ■ | - | - | - | 5 | 260 | 260 | 7–8 | 6–7 | 3 | - | - | 5 | 7–8 | 6–7 | 5 | 3 | - | - | 0.12 | 0.11 | 1.33 | 0.30 | - | - | ■ | - |
| Irgalite® Red K 4060 FP<br>old: Irgalite® Red 2BSP<br>C.I. Pigment Red 48:3**<br>BONA (Sr) | - | | | ■ | ■ | □ | □ | - | - | - | - | ■ | ■ | ■ | - | - | 5 | 240 | 260 | 6 | 4 | - | - | L | 5 | 6 | 5–6 | - | - | - | - | 0.17 | 0.14 | 1.82 | 0.22 | - | ■ | - | - |

The color shade is indicative. The actual shade in use depends on the formulation and may vary.
* Product that has been evaluated with BASF's Sustainable Solution Steering method and contributes substantially to sustainability in the value chain.
** Products with this C.I. number may vary in color and resistance properties in different polymer systems.

# Organic pigments

□ Limited suitability ■ Recommended

| Product | Sustainability Accelerator* | Full shade (FS) | White reduction (WR) | Applications | | | | | | | | | | | | | Application performance | | | | | | | | | | | | | | | Physical properties | | | | Available preparations | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | General | | | | | | | | | | | Fibers | | | HDPE | | | | | | | PVC-p | | | | | | | | | | | | | | |
| | | | | PVC | PO | PS | ABS | PA6 | PET | PC | PMMA | Rubber | PUR | PP | PET | PA | Migration FS 0.1% | Heat FS 0.1% | Heat WR 1:10 | Light FS 0.1% | Light WR 1:10 | Weather (3,000 h) FS 0.1% | Weather (3,000 h) WR 1:10 | Warping | Migration FS 0.1% | Light FS 0.1% | Light WR 1:10 | Hot light (600 kJ) FS 0.1% | Hot light (600 kJ) WR 1:10 | Weather (5,000 h) FS 0.1% | Weather (5,000 h) WR 1:10 | 1/3 ISD in HDPE (1% $TiO_2$) | 1/3 ISD in PVC (1% $TiO_2$) | Density | Bulk density | Eupolen® PE | Microlen® MC | Microlen® Q | Microlith® KP |
| Irgazin® Rubine K 4080 / K 4085<br>old: Cromophtal® Rubine TR / Irgazin® DPP Rubine TR<br>C.I. Pigment Red 264<br>Diketopyrrolopyrrole (DPP) | ■ | | | ■ | ■ | □ | □ | □ | □ | - | - | ■ | ■ | ■ | ■ | - | 5 | 300 | 300 | 7–8 | 7–8 | 4–5 | 3 | N | 5 | 8 | 7–8 | 5 | 3–4 | 4–5 | - | 0.11 | 0.09 | 1.40 | 0.26 | - | ■ | - | - |
| Paliogen® Red K 4180<br>C.I. Pigment Red 179<br>Perylene | ■ | | | ■ | ■ | ■ | □ | □ | □ | □ | □ | ■ | ■ | ■ | □ | ■ | 5 | 300 | 300 | 8 | 8 | 5 | 4 | H | 5 | 8 | 8 | 5 | 5 | 5 | 4–5 | 0.17 | 0.13 | 1.50 | 0.36 | - | - | - | - |
| Cinquasia® Red K 4104<br>old: Cromophtal® Red 2020<br>C.I. Pigment Violet 19<br>Quinacridone | ■ | | | ■ | ■ | ■ | ■ | - | □ | - | - | ■ | ■ | ■ | ■ | - | 5 | 300 | 300 | 8 | 8 | 4–5 | 3–4 | L | 5 | 8 | 8 | 5 | 5 | 4–5 | 3–4 | 0.37 | 0.33 | 1.51 | 0.21 | - | ■ | - | - |
| Cinquasia® Red K 4111<br>old: Cromophtal® Red TBR<br>C.I. Pigment Violet 19<br>Quinacridone | - | | | ■ | ■ | ■ | □ | - | - | - | - | ■ | ■ | □ | - | - | 4.8 | 260 | 260 | 8 | 8 | 4–5 | 3 | L | 5 | 8 | 7–8 | 4–5 | 4–5 | 4 | - | 0.29 | 0.29 | 1.50 | 0.24 | - | - | ■ | - |
| Irgalite® Red K 4170 FP<br>old: Irgalite® Red 2BP<br>C.I. Pigment Red 48:2**<br>BONA (Ca) | - | | | ■ | ■ | □ | - | - | - | - | - | ■ | ■ | ■ | - | - | 5 | 220 | 240 | 7 | 6 | - | - | L | 5 | 7 | 6 | - | - | - | - | 0.13 | 0.12 | 1.57 | 0.18 | - | ■ | ■ | - |
| Irgalite® Rubine K 4270 FP<br>old: Irgalite® Rubine 4BP<br>C.I. Pigment Red 57:1**<br>BONA (Ca) | - | | | ■ | ■ | □ | - | - | - | - | - | ■ | ■ | ■ | - | - | 5 | 240 | 260 | 6–7 | 4–5 | - | - | L | 5 | 6 | 4 | - | - | - | - | 0.15 | 0.10 | 1.50 | 0.17 | - | ■ | ■ | - |
| Irgalite® Rubine K 4275 FP<br>old: Irgalite® Rubine 4BFP<br>C.I. Pigment Red 57:1**<br>BONA (Ca) | - | | | ■ | ■ | □ | - | - | - | - | - | ■ | ■ | ■ | - | - | 5 | 220 | 240 | 6–7 | 4 | - | - | L | 5 | 6–7 | 6 | - | - | - | - | 0.15 | 0.10 | 1.57 | 0.22 | - | - | - | - |
| Cinquasia® Red K 4330<br>old: Cinquasia® Red B RT-195-D<br>–<br>Quinacridone | - | | | ■ | ■ | ■ | □ | - | □ | - | - | ■ | ■ | ■ | □ | - | 5 | 290 | 300 | 8 | 8 | 4 | - | L | 5 | 8 | 8 | 5 | 4–5 | 4–5 | 4 | 0.30 | 0.29 | 1.59 | 0.20 | - | ■ | - | - |

The color shade is indicative. The actual shade in use depends on the formulation and may vary.
* Product that has been evaluated with BASF's Sustainable Solution Steering method and contributes substantially to sustainability in the value chain.v
** Products with this C.I. number may vary in color and resistance properties in different polymer systems.

# Organic pigments

□ Limited suitability ■ Recommended

| Product | Sustainability Accelerator* | Full shade (FS) | White reduction (WR) | Applications | | | | | | | | | | | | | Application performance | | | | | | | | | | | | | | | Physical properties | | | | Available preparations | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | General | | | | | | | | | | | Fibers | | | | HDPE | | | | | | | | PVC-p | | | | | | | | | | | | | |
| | | | | PVC | PO | PS | ABS | PA6 | PET | PC | PMMA | Rubber | PUR | PP | PET | PA | Migration FS 0.1% | Heat FS 0.1% | Heat WR 1:10 | Light FS 0.1% | Light WR 1:10 | Weather (3,000 h) FS 0.1% | Weather (3,000 h) WR 1:10 | Warping | Migration FS 0.1% | Light FS 0.1% | Light WR 1:10 | Hot light (600 kJ) FS 0.1% | Hot light (600 kJ) WR 1:10 | Weather (5,000 h) FS 0.1% | Weather (5,000 h) WR 1:10 | 1/3 ISD in HDPE (1% $TiO_2$) | 1/3 ISD in PVC (1% $TiO_2$) | Density | Bulk density | Eupolen® PE | Microlen® MC | Microlen® Q | Microlith® KP |
| Cinquasia® Pink K 4410<br>old: Cromophtal® Pink 2000<br>C.I. Pigment Red 122<br>Quinacridone | - | | | ■ | ■ | ■ | ■ | - | □ | - | □ | ■ | ■ | □ | □ | □ | 5 | 300 | 300 | 8 | 8 | 4–5 | 3–4 | L | 5 | 8 | 8 | 5 | 5 | 4–5 | 4–5 | 0.20 | 0.20 | 1.50 | 0.10 | ■ | - | - | - |
| Cinquasia® Pink K 4430 FP<br>old: Cromophtal® Pink PT<br>C.I. Pigment Red 122<br>Quinacridone | - | | | ■ | ■ | ■ | ■ | - | □ | - | □ | ■ | ■ | ■ | ■ | ■ | 5 | 300 | 300 | 8 | 8 | 4–5 | 3–4 | L | 5 | 8 | 7–8 | 5 | 5 | 4–5 | 4–5 | 0.20 | 0.19 | 1.49 | 0.15 | - | ■ | - | - |
| Cinquasia® Magenta K 4535 FP<br>old: Cromophtal® Magenta P<br>C.I. Pigment Red 202<br>Quinacridone | - | | | ■ | ■ | ■ | ■ | ■ | ■ | - | □ | ■ | ■ | ■ | ■ | ■ | 5 | 300 | 300 | 8 | 8 | 4 | 3 | L | 5 | 8 | 7–8 | 5 | 4–5 | 4–5 | 4 | 0.23 | 0.20 | 1.67 | 0.14 | - | ■ | - | ■ |
| Cinquasia® Violet K 5350 FP<br>old: Cromophtal® Violet RP<br>C.I. Pigment Violet 19<br>Quinacridone | - | | | ■ | ■ | ■ | □ | - | □ | - | - | ■ | ■ | ■ | ■ | - | 5 | 300 | 300 | 8 | 7–8 | 4 | - | L | 5 | 7–8 | 7 | 4–5 | 4 | 4 | 3 | 0.23 | 0.15 | 1.49 | 0.17 | - | - | ■ | - |
| Paliogen® Red Violet K 5411<br>old: Paliogen® Red Violet K 5011<br>C.I. Pigment Violet 29<br>Perylene | ■ | | | ■ | ■ | ■ | □ | □ | □ | □ | ■ | ■ | ■ | ■ | ■ | ■ | 5 | 300 | 300 | 8 | 8 | 4 | 3 | H | 5 | 8 | 8 | 5 | 5 | 5 | 3–4 | 0.18 | 0.06 | 1.60 | 0.23 | - | - | - | - |
| Cromophtal® Violet K 5700<br>old: Cromophtal® Violet B<br>C.I. Pigment Violet 37<br>Dioxazine | - | | | ■ | ■ | ■ | - | - | □ | - | - | ■ | ■ | □ | - | - | 4.9 | 280 | 260 | 8 | 7–8 | 4–5 | 3 | L | 5 | 7–8 | 6–7 | 4–5 | - | 3–4 | - | 0.09 | 0.07 | 1.32 | 0.38 | - | ■ | ■ | ■ |
| Cromophtal® Violet K 5800<br>old: Cromophtal® Violet GT<br>C.I. Pigment Violet 23<br>Dioxazine | - | | | ■ | □ | □ | - | □ | □ | - | - | ■ | ■ | ■ | - | ■ | 3–4 | 240 | 260 | 7–8 | 3–4 | 4 | 3–4 | L | 4.3 | 8 | 6–7 | 4–5 | 3 | 4–5 | - | 0.07 | 0.06 | 1.42 | 0.35 | - | ■ | - | - |

The color shade is indicative. The actual shade in use depends on the formulation and may vary.
* Product that has been evaluated with BASF's Sustainable Solution Steering method and contributes substantially to sustainability in the value chain.

# Organic pigments

□ Limited suitability ■ Recommended

| Product | Sustainability Accelerator* | Full shade (FS) | White reduction (WR) | Applications | | | | | | | | | | | | | | Application performance | | | | | | | | | | | | | | | | Physical properties | | | | Available preparations | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | General | | | | | | | | | | | Fibers | | | HDPE | | | | | | | PVC-p | | | | | | | | | | | | | | | | | |
| | | | | PVC | PO | PS | ABS | PA6 | PET | PC | PMMA | Rubber | PUR | PP | PET | PA | Migration FS 0.1% | Heat FS 0.1% | Heat WR 1:10 | Light FS 0.1% | Light WR 1:10 | Weather (3,000 h) FS 0.1% | Weather (3,000 h) WR 1:10 | Warping | Migration FS 0.1% | Light FS 0.1% | Light WR 1:10 | Hot light (600 kJ) FS 0.1% | Hot light (600 kJ) WR 1:10 | Weather (5,000 h) FS 0.1% | Weather (5,000 h) WR 1:10 | 1/3 ISD in HDPE (1% $TiO_2$) | 1/3 ISD in PVC (1% $TiO_2$) | Density | Bulk density | Eupolen® PE | Microlen® MC | Microlen® Q | Microlith® KP |
| Heliogen® Blue K 6860<br>C.I. Pigment Blue 15<br>Cu-phthalocyanine | - | | | ■ | □ | - | - | - | - | - | - | ■ | □ | - | - | - | 5 | 220 | 220 | 8 | 8 | 5 | 5 | H | 5 | 8 | 8 | 5 | 3–4 | 3–4 | 3–4 | 0.09 | 0.08 | 1.62 | 0.21 | - | - | - | - |
| Heliogen® Blue K 6902<br>C.I. Pigment Blue 15:1<br>Cu-phthalocyanine | - | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | - | - | - | 5 | 300 | 300 | 8 | 8 | 5 | 5 | H | 5 | 8 | 8 | 5 | 4–5 | 4–5 | 4 | 0.11 | 0.09 | 1.60 | 0.32 | ■ | - | - | - |
| Heliogen® Blue K 6907<br>C.I. Pigment Blue 15:1<br>Cu-phthalocyanine | - | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 5 | 300 | 300 | 8 | 8 | 5 | 5 | H | 5 | 8 | 8 | 4–5 | 4–5 | 5 | 4 | 0.10 | 0.08 | 1.60 | 0.32 | ■ | ■ | - | - |
| Heliogen® Blue K 6911 /<br>K 6912 FP<br>old: Heliogen® Blue<br>K 6911 D / FP<br>C.I. Pigment Blue 15:1<br>Cu-phthalocyanine | - | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 5 | 300 | 300 | 8 | 8 | 5 | 5 | H | 5 | 8 | 8 | 4–5 | 4–5 | 5 | 4 | 0.09 | 0.07 | 1.60 | 0.33 | - | ■ | ■ | - |
| Heliogen® Blue K 6916<br>C.I. Pigment Blue 15:1<br>Cu-phthalocyanine | - | | | □ | ■ | □ | □ | ■ | ■ | □ | □ | ■ | ■ | ■ | ■ | ■ | 5 | 260 | 280 | 7–8 | 7–8 | 4–5 | 4–5 | H | 4.5 | 8 | 6–7 | 5 | 3–4 | 5 | 4 | 0.09 | 0.08 | 1.60 | 0.20 | - | ■ | - | - |
| Heliogen® Blue K 7090 FP<br>C.I. Pigment Blue 15:3<br>Cu-phthalocyanine | - | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 5 | 280 | 280 | 8 | 8 | 5 | 5 | H | 5 | 8 | 8 | 4–5 | 5 | 4–5 | 4–5 | 0.12 | 0.09 | 1.60 | 0.20 | ■ | - | ■ | ■ |
| Heliogen® Blue K 7096<br>old: Irgalite® Blue GBP<br>C.I. Pigment Blue 15:3<br>Cu-phthalocyanine | - | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 5 | 300 | 300 | 8 | 8 | 5 | 5 | H | 5 | 7–8 | 7–8 | 4–5 | 4–5 | 4–5 | 3–4 | 0.11 | 0.09 | 1.60 | 0.32 | - | - | - | - |
| Heliogen® Blue K 7104 LW<br>C.I. Pigment Blue 15:4<br>Cu-phthalocyanine | ■ | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | - | - | - | 5 | 300 | 300 | 8 | 8 | 5 | 5 | L | 5 | 8 | 8 | 4–5 | 4 | 4 | 3–4 | 0.11 | 0.09 | 1.60 | 0.20 | ■ | - | - | - |

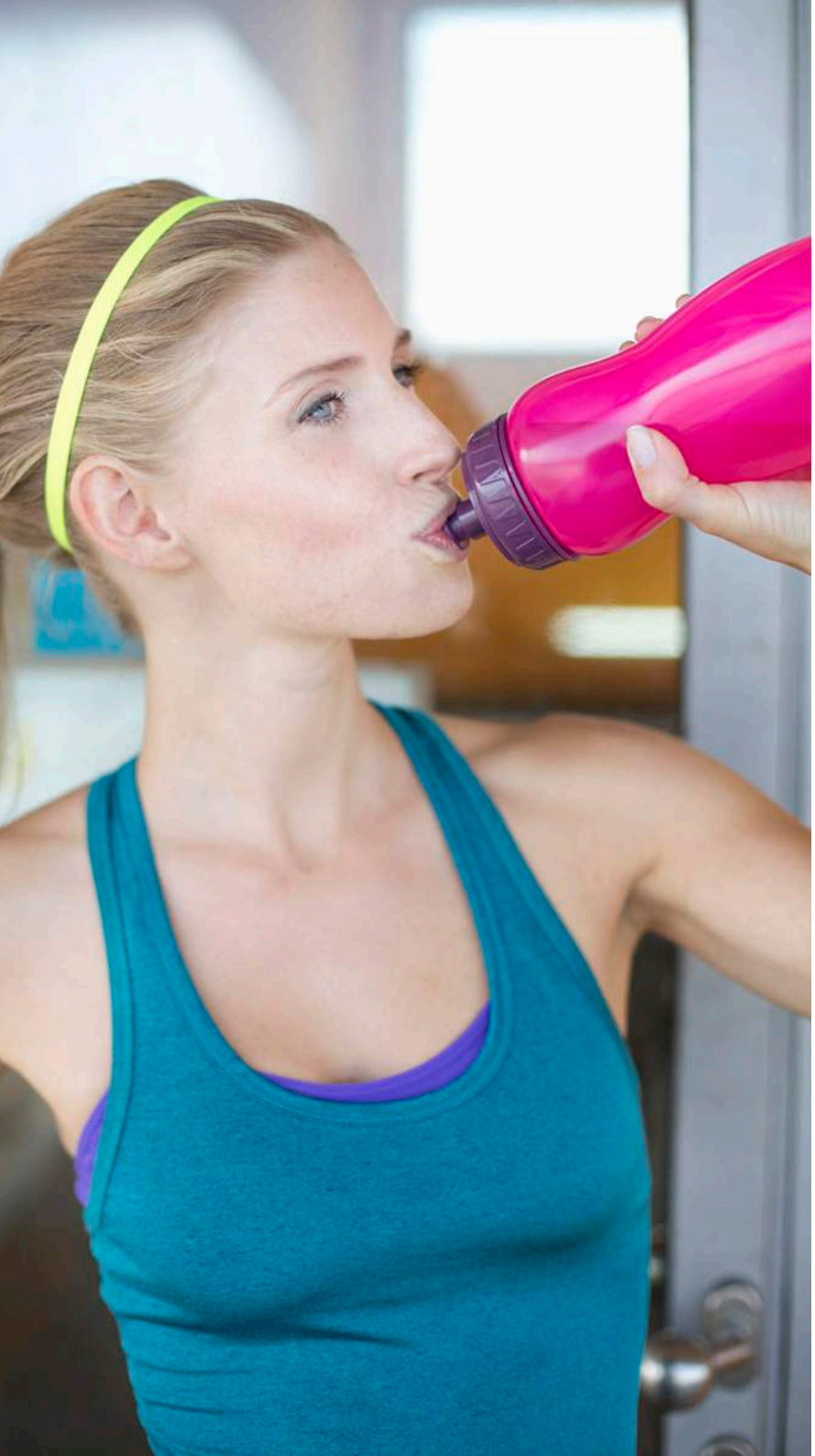
The color shade is indicative. The actual shade in use depends on the formulation and may vary.
* Product that has been evaluated with BASF's Sustainable Solution Steering method and contributes substantially to sustainability in the value chain.

# Organic pigments

□ Limited suitability ■ Recommended

| Product | Sustainability Accelerator* | Full shade (FS) | White reduction (WR) | Applications | | | | | | | | | | | | | Application performance | | | | | | | | | | | | | | | Physical properties | | | | Available preparations | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | General | | | | | | | | | | | Fibers | | | HDPE | | | | | | | PVC-p | | | | | | | | | | | | | | |
| | | | | PVC | PO | PS | ABS | PA6 | PET | PC | PMMA | Rubber | PUR | PP | PET | PA | Migration FS 0.1% | Heat FS 0.1% | Heat WR 1:10 | Light FS 0.1% | Light WR 1:10 | Weather (3,000 h) FS 0.1% | Weather (3,000 h) WR 1:10 | Warping | Migration FS 0.1% | Light FS 0.1% | Light WR 1:10 | Hot light (600 kJ) FS 0.1% | Hot light (600 kJ) WR 1:10 | Weather (5,000 h) FS 0.1% | Weather (5,000 h) WR 1:10 | 1/3 ISD in HDPE (1% $TiO_2$) | 1/3 ISD in PVC (1% $TiO_2$) | Density | Bulk density | Eupolen® PE | Microlen® MC | Micranyl® Q | Microlith® KP |
| Heliogen® Green K 8730 / FP<br>C.I. Pigment Green 7<br>Cu-phthalocyanine | - | | | ■ | ■ | ■ | ■ | □ | □ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 5 | 300 | 300 | 8 | 8 | 5 | 5 | H | 5 | 8 | 8 | 5 | 5 | 5 | 4–5 | 0.24 | 0.19 | 2.10 | 0.30 | ■ | ■ | ■ | ■ |
| Heliogen® Green K 9360<br>C.I. Pigment Green 36<br>Cu-phthalocyanine | - | | | ■ | ■ | ■ | □ | □ | ■ | ■ | ■ | ■ | ■ | □ | □ | □ | 5 | 300 | 300 | 8 | 8 | 5 | 5 | H | 5 | 8 | 8 | 5 | 5 | 5 | 4–5 | 0.30 | 0.26 | 2.10 | 0.40 | ■ | - | - | - |
| Lumogen® Black FK 4280<br>C.I. Pigment Black<br>Perylene | ■ | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | □ | □ | □ | □ | □ | 4.8 | 300 | 300 | 7–8 | 7–8 | 4–5 | 4–5 | H | 5 | 8 | 8 | 5 | 5 | 4–5 | 3–4 | 0.16 | 0.12 | 1.63 | 0.13 | - | - | - | - |
| Lumogen® Black FK 4281<br>C.I. Pigment Black<br>Perylene | ■ | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | □ | □ | □ | □ | □ | 4.8 | 300 | 300 | 7–8 | 7–8 | 4–5 | 4–5 | H | 5 | 7 | 7 | 5 | 4–5 | 4 | 3–4 | 0.24 | 0.18 | 1.71 | 0.13 | - | - | - | - |

The color shade is indicative. The actual shade in use depends on the formulation and may vary.
* Product that has been evaluated with BASF's Sustainable Solution Steering method and contributes substantially to sustainability in the value chain.





# Inorganic pigments

The perfect complement to organic pigments, inorganic pigments do offer very robust processing performance even for highly demanding engineering plastics or for warping sensitive applications. Also, as base components or as shading partners, they ensure ultimate durability for most end-uses.

## Key portfolio

| Product | Color shade | Chemical type | Key properties |
|---|---|---|---|
| Sicotan® | Yellow – Brown | CICP (Ni, Cr Titanate) | These inorganic, mixed-phase pigments have outstanding fastness to heat, light, weather, chemicals, and solvents – even in very low concentrations. Their exceptionally high heat and chemical resistance makes them suitable for almost all polymer types |
| Sicopal® | Yellow | Bismuth Vanadate | These inorganic pigments, with their spinel structure, are based on various metal oxides. All have outstanding fastness to light and weather, and most of them achieve the highest heat resistance |
| | Orange | Sn-titanate | |
| | Blue – Green | Cobalt pigments | |
| | Brown – Black | Iron mixed oxides | |
| Sicotrans® | Red | Iron oxides | These extremely fine and transparent iron oxide red pigments have excellent fastness to heat, light, and weather |

# Inorganic pigments

□ Limited suitability ■ Recommended

| Product | Sustainability Accelerator* | Full shade (FS) | White reduction (WR) | Applications | | | | | | | | | | | | | Application performance | | | | | | | | | | | | | | | Physical properties | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | General | | | | | | | | | | | Fibers | | | HDPE | | | | | | | | PVC-p | | | | | | | | | | | |
| | | | | PVC | PO | PS | ABS | PA6 | PET | PC | PMMA | Rubber | PUR | PP | PET | PA | Migration FS 1% | Heat FS 1% | Heat WR 1:4 | Light FS 1% | Light WR 1:4 | Weather (3,000 h) FS 1% | Weather (3,000 h) WR 1:4 | Warping | Migration FS 1% | Light FS 1% | Light WR 1:4 | Hot light (600 kJ) FS 1% | Hot light (600 kJ) WR 1:4 | Weather (5,000 h) FS 1% | Weather (5,000 h) WR 1:4 | 1/3 ISD in PVC (1% $TiO_2$) | Density | Bulk density | Available forms | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Powder | Fine granule |
| Sicotan® Yellow K 1010<br>C.I. Pigment Yellow 53<br>Ni/Sb/Ti oxide | - | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | □ | □ | □ | 5 | 300 | 300 | 8 | 8 | 5 | 5 | N | 5 | 8 | 8 | 5 | 5 | 5 | 5 | 3.3 (1/9 ISD) | 4.50 | 0.90 | ■ | - |
| Sicotan® Yellow K 1011 FG<br>C.I. Pigment Yellow 53<br>Ni/Sb/Ti oxide | ■ | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | □ | □ | □ | 5 | 300 | 300 | 8 | 8 | 5 | 5 | N | 5 | 8 | 8 | 5 | 5 | 5 | 5 | 3.1 (1/9 ISD) | 4.40 | 0.80 | ■ | ■ |
| Sicotan® Yellow K 2001 FG<br>C.I. Pigment Brown 24<br>Cr/Sb/Ti oxide | ■ | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | □ | □ | □ | 5 | 300 | 300 | 8 | 8 | 5 | 5 | N | 5 | 8 | 8 | 5 | 5 | 5 | 5 | 2.7 | 4.50 | 0.60 | ■ | ■ |
| Sicotan® Yellow K 2011<br>C.I. Pigment Brown 24<br>Cr/Sb/Ti oxide | - | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | □ | □ | □ | 5 | 300 | 300 | 8 | 8 | 5 | 5 | N | 5 | 8 | 8 | 5 | 5 | 5 | 5 | 3.8 | 4.50 | 0.70 | ■ | - |
| Sicotan® Yellow K 2111 FG<br>C.I. Pigment Brown 24<br>Cr/Sb/Ti oxide | ■ | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | □ | □ | □ | 5 | 300 | 300 | 8 | 8 | 5 | 5 | N | 5 | 8 | 8 | 5 | 5 | 5 | 5 | 3.0 | 4.40 | 0.80 | ■ | ■ |
| Sicotan® Yellow K 2112 FG<br>C.I. Pigment Brown 24<br>Cr/Sb/Ti oxide | ■ | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | □ | □ | □ | 5 | 300 | 300 | 8 | 8 | 5 | 5 | N | 5 | 8 | 8 | 5 | 5 | 5 | 5 | 3.4 | 4.40 | 0.90 | ■ | ■ |
| Sicotan® Brown K 2611<br>C.I. Pigment Yellow 164<br>Mn/Sb/Ti oxide | - | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | - | ■ | □ | □ | □ | 5 | 300 | 300 | 8 | 8 | 5 | 5 | N | 5 | 8 | 8 | 5 | 5 | 5 | 5 | 3.2 | 4.30 | 0.90 | ■ | - |
| Sicotan® Brown K 2711<br>C.I. Pigment Yellow 164<br>Mn/Sb/Ti oxide | - | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | - | ■ | □ | □ | □ | 5 | 300 | 300 | 8 | 8 | 5 | 5 | N | 5 | 8 | 8 | 5 | 5 | 5 | 5 | 2.5 | 4.80 | 0.90 | ■ | - |

The color shade is indicative. The actual shade in use depends on the formulation and may vary.
* Product that has been evaluated with BASF's Sustainable Solution Steering method and contributes substantially to sustainability in the value chain.

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□ Limited suitability ■ Recommended

| Product | Sustainability Accelerator* | Full shade (FS) | White reduction (WR) | Applications | | | | | | | | | | | | | Application performance | | | | | | | | | | | | | | | Physical properties | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | General | | | | | | | | | | | Fibers | | | | | HDPE | | | | | | | | PVC-p | | | | | | | | | Available forms | |
| | | | | PVC | PO | PS | ABS | PA6 | PET | PC | PMMA | Rubber | PUR | PP | PET | PA | Migration FS 1% | Heat FS 1% | Heat WR 1:4 | Light FS 1% | Light WR 1:4 | Weather (3,000 h) FS 1% | Weather (3,000 h) WR 1:4 | Warping | Migration FS 1% | Light FS 1% | Light WR 1:4 | Hot light (600 kJ) FS 1% | Hot light (600 kJ) WR 1:4 | Weather (5,000 h) FS 1% | Weather (5,000 h) WR 1:4 | 1/3 ISD in PVC (1% $TiO_2$) | Density | Bulk density | Powder | Fine granule |
| Sicopal® Yellow K 1120 FG<br>C.I. Pigment Yellow 184<br>Bismuth vanadate | ■ | | | □ | □ | □ | □ | - | - | □ | □ | □ | □ | - | - | - | 5 | 250 | 260 | 8 | 8 | 5 | 5 | N | 5 | 8 | 8 | - | - | - | - | 1.0 | 4.10 | 0.80 | - | ■ |
| Sicopal® Yellow K 1160 FG<br>C.I. Pigment Yellow 184<br>Bismuth vanadate | - | | | □ | ■ | ■ | □ | ■ | □ | □ | ■ | ■ | □ | ■ | ■ | ■ | 5 | 280 | 260 | 8 | 8 | 5 | 5 | N | 5 | 8 | 8 | - | - | - | - | 1.6 | 4.10 | 0.80 | - | ■ |
| Sicopal® Orange K 2430<br>C.I. Pigment Orange 82<br>Sn/Zn/Ti oxide | - | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 5 | 300 | 300 | 8 | 8 | 5 | 5 | N | 5 | 8 | 8 | 5 | 5 | 5 | 5 | 2.2 | 4.80 | 0.75 | ■ | - |
| Sicopal® Brown K 2595<br>C.I. Pigment Yellow 119<br>Zn/Fe oxide | - | | | □ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | □ | □ | □ | 5 | 300 | 300 | 8 | 8 | 5 | 5 | N | 5 | 8 | 8 | - | - | - | - | 1.6 | 5.30 | 0.70 | ■ | - |
| Sicopal® Brown K 2795 FG<br>C.I. Pigment Brown 29<br>Fe/Cr oxide | ■ | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | □ | □ | □ | 5 | 300 | 300 | 8 | 8 | 5 | 5 | N | 5 | 8 | 8 | - | - | - | - | 0.5 | 5.20 | 0.50 | - | ■ |
| Sicopal® Blue K 6210<br>C.I. Pigment Blue 28<br>Co/Al oxide | - | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | □ | □ | □ | 5 | 300 | 300 | 8 | 8 | 5 | 5 | N | 5 | 8 | 8 | 5 | 5 | 5 | 5 | 3.4 | 4.00 | 0.50 | ■ | - |
| Sicopal® Blue K 6310<br>C.I. Pigment Blue 28<br>Co/Al oxide | - | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | □ | □ | □ | 5 | 300 | 300 | 8 | 8 | 5 | 5 | N | 5 | 8 | 8 | 5 | 5 | 5 | 5 | 3.1 | 4.50 | 0.40 | ■ | - |
| Sicopal® Blue K 7210<br>C.I. Pigment Blue 36<br>Co/Al/Cr oxide | - | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | □ | □ | □ | 5 | 300 | 300 | 8 | 8 | 5 | 5 | N | 5 | 8 | 8 | 5 | 5 | 5 | 5 | 2.6 | 4.50 | 0.50 | ■ | - |

The color shade is indicative. The actual shade in use depends on the formulation and may vary.
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# Inorganic pigments

□ Limited suitability ■ Recommended

| Product | Sustainability Accelerator* | Full shade (FS) | White reduction (WR) | Applications | | | | | | | | | | | | | | Application performance | | | | | | | | | | | | | | | | Physical properties | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | General | | | | | | | | | | | Fibers | | | HDPE | | | | | | | PVC-p | | | | | | | | | | | | Available forms | |
| | | | | PVC | PO | PS | ABS | PA6 | PET | PC | PMMA | Rubber | PUR | PP | PET | PA | Migration FS 1% | Heat FS 1% | Heat WR 1:4 | Light FS 1% | Light WR 1:4 | Weather (3,000 h) FS 1% | Weather (3,000 h) WR 1:4 | Warping | Migration FS 1% | Light FS 1% | Light WR 1:4 | Hot light (600 kJ) FS 1% | Hot light (600 kJ) WR 1:4 | Weather (5,000 h) FS 1% | Weather (5,000 h) WR 1:4 | 1/3 ISD in PVC (1% $TiO_2$) | Density | Bulk density | Powder | Fine granule |
| Sicopal® Green K 9610<br>C.I. Pigment Green 50<br>Co/Ti/Ni/Zn oxide | - | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | □ | □ | □ | 5 | 300 | 300 | 8 | 8 | 5 | 5 | N | 5 | 8 | 8 | 5 | 5 | 5 | 5 | 2.9 | 4.90 | 0.90 | ■ | - |
| Sicopal® Green K 9715<br>C.I. Pigment Green 50<br>Co/Ti/Ni/Zn oxide | - | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | □ | □ | □ | 5 | 300 | 300 | 8 | 8 | 5 | 5 | N | 5 | 8 | 8 | 5 | 5 | 5 | 5 | 2.9 | 5.4 | 0.51 | ■ | - |
| Sicopal® Black K 0090<br>C.I. Pigment Black 27<br>Co/Cr/Fe/Mn oxide | - | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | □ | □ | □ | 5 | 300 | 300 | 8 | 8 | 5 | 5 | N | 5 | 8 | 8 | 5 | 5 | 5 | 5 | 1.5 | 4.90 | 1.00 | ■ | - |
| Sicopal® Black K 0095<br>C.I. Pigment Brown 29<br>Fe/Cr oxide | ■ | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | □ | □ | □ | 5 | 300 | 300 | 8 | 8 | 5 | 5 | N | 5 | 8 | 8 | 5 | 5 | 5 | 5 | 1.4 | 5.20 | 0.70 | ■ | - |

The color shade is indicative. The actual shade in use depends on the formulation and may vary.
* Product that has been evaluated with BASF's Sustainable Solution Steering method and contributes substantially to sustainability in the value chain.

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□ Limited suitability ■ Recommended

| Product | Sustainability Accelerator* | Full shade (FS) | White reduction (WR) | Applications | | | | | | | | | | | | | Application performance | | | | | | | | | | | | | | | Physical properties | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | General | | | | | | | | | | | Fibers | | | HDPE | | | | | | | | PVC-p | | | | | | | | | | Available forms | |
| | | | | PVC | PO | PS | ABS | PA6 | PET | PC | PMMA | Rubber | PUR | PP | PET | PA | Migration FS 1% | Heat FS 1% | Heat WR 1:4 | Light FS 1% | Light WR 1:4 | Weather (3,000 h) FS 1% | Weather (3,000 h) WR 1:4 | Warping | Migration FS 1% | Light FS 1% | Light WR 1:4 | Hot light (600 kJ) FS 1% | Hot light (600 kJ) WR 1:4 | Weather (5,000 h) FS 1% | Weather (5,000 h) WR 1:4 | 1/3 ISD in PVC (1% $TiO_2$) | Density | Bulk density | Powder | Fine granule |
| Sicotrans® Red K 2819<br>C.I. Pigment Red 101<br>Iron oxide | - | | | □ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | □ | □ | □ | 5 | 300 | 300 | 8 | 8 | 5 | 5 | N | 5 | 8 | 8 | - | - | - | - | 0.58 | 4.40 | 0.30 | ■ | - |
| Sicotrans® Red K 2915<br>C.I. Pigment Red 101<br>Iron oxide | - | | | □ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | □ | □ | □ | 5 | 300 | 300 | 8 | 8 | 5 | 5 | N | 5 | 8 | 8 | - | - | - | - | 0.27 | 5.10 | 0.50 | ■ | - |

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# Contacts

**BASF Colors & Effects**

Pigments for plastics
G-EDP

Phone: +49 621 60-29459

Visit our website: www.colors-effects.basf.com



EDC 1715