

MACROLEX® Orange R

| | |
|-----------------------------------|---|
| Colour Index | Part I Solvent Orange 107; Disperse Orange 47 Part II not listed |
| Chemical description | Methine dyestuff |
| Form supplied | powder |
| Shade | orange with a red cast |
| 1/3 Standard depth | 0.090% dyestuff (determined in GP-PS with 2% TiO ₂) |
| Density (23°C) | approx. 1.74 g/cm ³ |
| Bulk density | approx. 0.43 g/cm ³ (according to DIN ISO 787-11) |
| Melting point | approx. 224°C |
| Main fields of application | Transparent and opaque dyeing of PS, PET, ABS and ABS / PC blends. |
| Storage stability | 60 months from delivery ex plant LANXESS Deutschland GmbH |

Solubility in g/l at temperature 23°C (approximate figures)

| Water | Acetone | Benzyl alcohol | Butyl acetate | Ethanol | Methyl methacrylate | Methylene chloride | Styrene (monomer) | Xylene |
|-----------|---------|----------------|---------------|---------|---------------------|--------------------|-------------------|--------|
| insoluble | 3.5 | 65 | 3.0 | 0.8 | 1.5 | 60 | 5.0 | 1.0 |

Heat stability in °C at 1/3 standard depth with 1% TiO₂ (ABS 4% TiO₂ and PS 2% TiO₂) evaluated according to DIN EN 12877; (approximate figures)

| PS | SB* | ABS | SAN | PMMA | PC | PA 6 | PA 6.6 | PET | PBT |
|-----|-----|-----|-----|------|-----|------|--------|-----|-----|
| 300 | 300 | 280 | 300 | 280 | 320 | - | - | 290 | 280 |

* For Styrene-butadiene block copolymer the use of this dye is not recommended.

Lightfastness 1/3 standard depth with 1% TiO₂ (PS 2% TiO₂) according to DIN EN ISO 4892-2; transparent coloration with 0.05% dye; evaluated with 8-step blue wool scale

| PC | | | PS | | | PMMA | | |
|------------------|-----------|-------------|------------------|-----------|-------------|------------------|-----------|-------------|
| Dye content in % | reduction | transparent | Dye content in % | reduction | transparent | Dye content in % | reduction | transparent |
| 0.045 | 5 | 8 | 0.090 | 4 | 7 | 0.045 | 3-4 | 7 |

Materials used for testing of Heat stability and Lightfastness:

| | | | |
|-------|-------------------------------------|--------------------|---------------------------|
| PS: | BASF Polystyrene 143E | PA 6: | LANXESS Durethan B30S |
| SB: | BASF Polystyrene 472C | PA 6.6: | LANXESS Durethan A30H 1.0 |
| ABS: | LANXESS Novodur P2X | PET: | Voridian 9921 W |
| SAN: | BASF Luran 368R | PBT: | LANXESS Pocan B1505 |
| PMMA: | Röhm Plexiglas 7H | TiO ₂ : | Kerr McGee Tronox R-FK-3 |
| PC: | Bayer MaterialScience Makrolon 2800 | | |

The test result were evaluated with the above mentioned conditions and materials. For other polymers, polymergrades, TiO₂ grades and dyes concentrations, the results can be different from the values above.

Fastness to bleeding

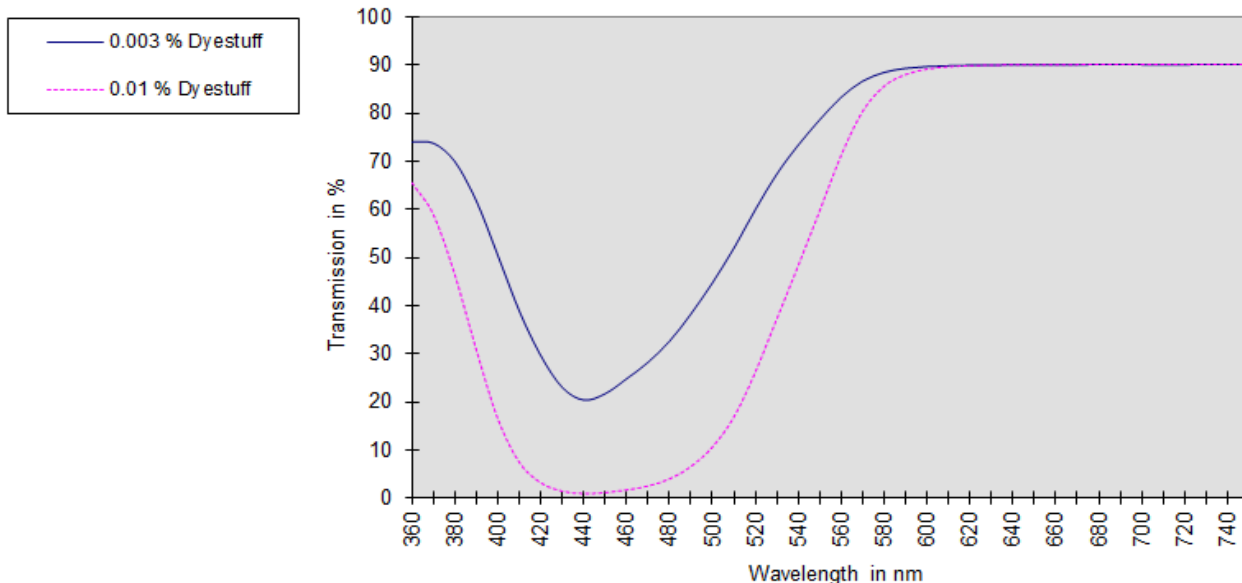
(Suitability for dyeing household utensils)

No staining of distilled water, 2% by weight acetic acid, 10% by volume ethanol, coconut oil or peanut oil in our test on 0.1% dyeing of PS, ABS, SAN, PMMA, PC, PET and PVC-U. The tests were carried out in accordance with the recommendations of the German BfR [for plastic applications (saturated strips of filter paper, 5h at 50°C)].

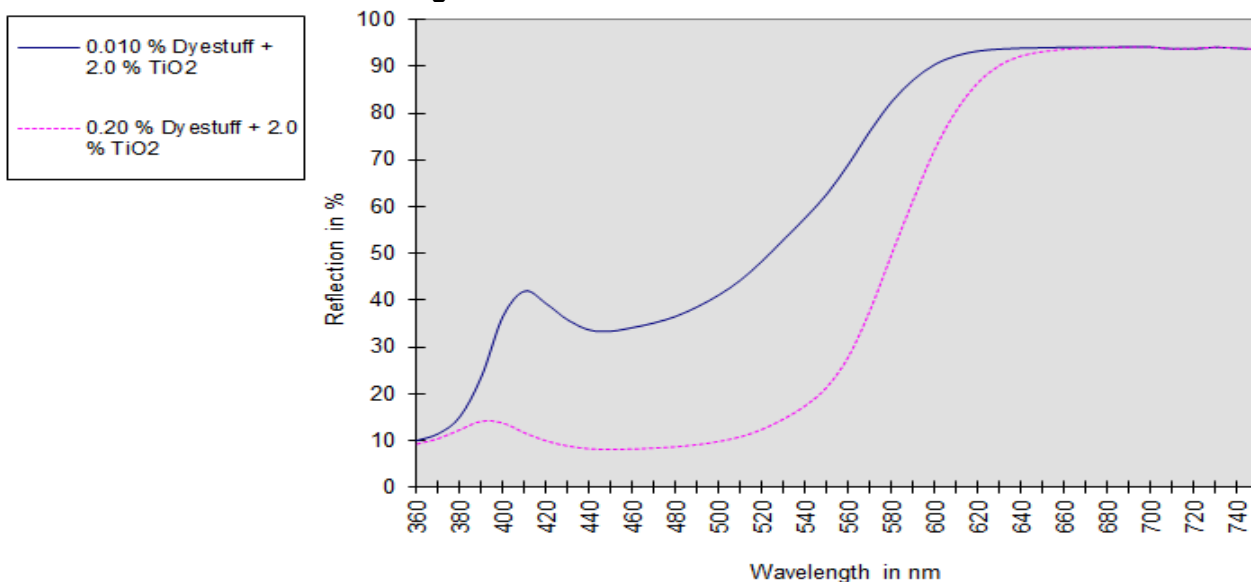
Purity

This dyestuff meets current purity requirements for dyeing household utensils and toys in Europe.

Transmission curve MACROLEX Orange R in GP-PS (2mm thickness)



Reflection curve MACROLEX Orange R in GP-PS



This information and our technical advice - whether verbal, in writing or by way of trials - are given in good faith but without warranty, and this also applies where proprietary rights of third parties are involved. Our advice does not release you from the obligation to verify the information currently provided - especially that contained in our safety data and technical information sheets - and to test our products as to their suitability for the intended processes and uses. The application, use and processing of our products and the products manufactured by you on the basis of our technical advice are beyond our control and, therefore, entirely your own responsibility. Our products are sold in accordance with the current version of our General Conditions of Sale and Delivery.



LANXESS Deutschland GmbH
Business Unit Rhein Chemie Additives
Kennedyplatz 1
50569 Cologne, Germany
<http://rch.lanxess.com>