

MACROLEX® Fluorescent Yellow 10GN

Colour Index Part I Solvent Yellow 160:1
Part II not listed

Chemical description Coumarin dyestuff

Form supplied powder uncut

Shade fluorescent yellow with a green cast

Density (23°C) approx. 1.32 g/cm³

Bulk density approx. 0.25 g/cm³ (according to DIN ISO 787-11)

Melting point approx. 209°C

Main fields of application Transparent and opaque dyeing of PS, SAN, PMMA, PC, ABS, ABS / PC blends and PA 6.

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 | 2.5 | 12 | 1.5 | 0.4 | 2.0 | 70 | 4.5 | 1.5 |

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 | 260 | 280 | 300 | 350 | 240 | 240 | 280 | 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 |
| 0.100 | 5 | 6-7 | 0.200 | 3-4 | 6 | 0.100 | 4 | 6 |

Materials used for testing of Heat stability and Lightfastness:

PS: BASF Polystyrene 143E
 SB: BASF Polystyrene 472C
 ABS: LANXESS Novodur P2X
 SAN: BASF Luran 368R
 PMMA: Röhm Plexiglas 7H
 PC: Bayer MaterialScience Makrolon 2800

PA 6: LANXESS Durethan B30S
 PA 6.6: LANXESS Durethan A30H 1.0
 PET: Vordian 9921 W
 PBT: LANXESS Pocan B1505
 TiO₂: Kerr McGee Tronox R-FK-3

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

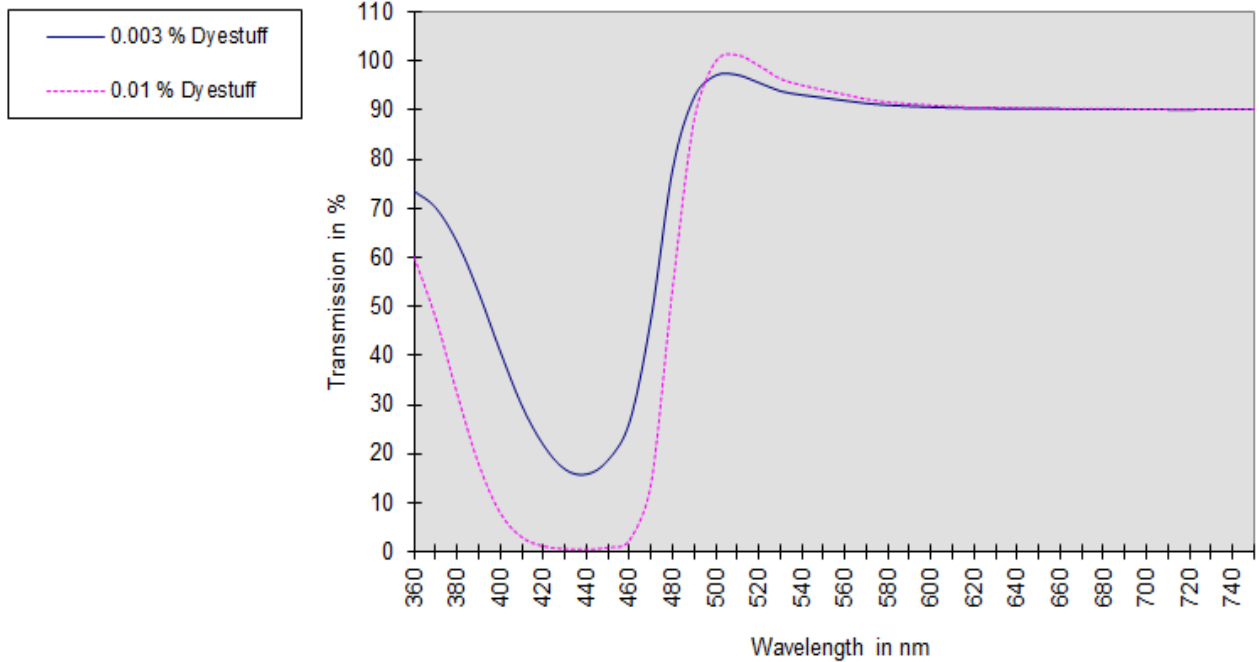
(Suitability for dyeing household utensils)

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)].

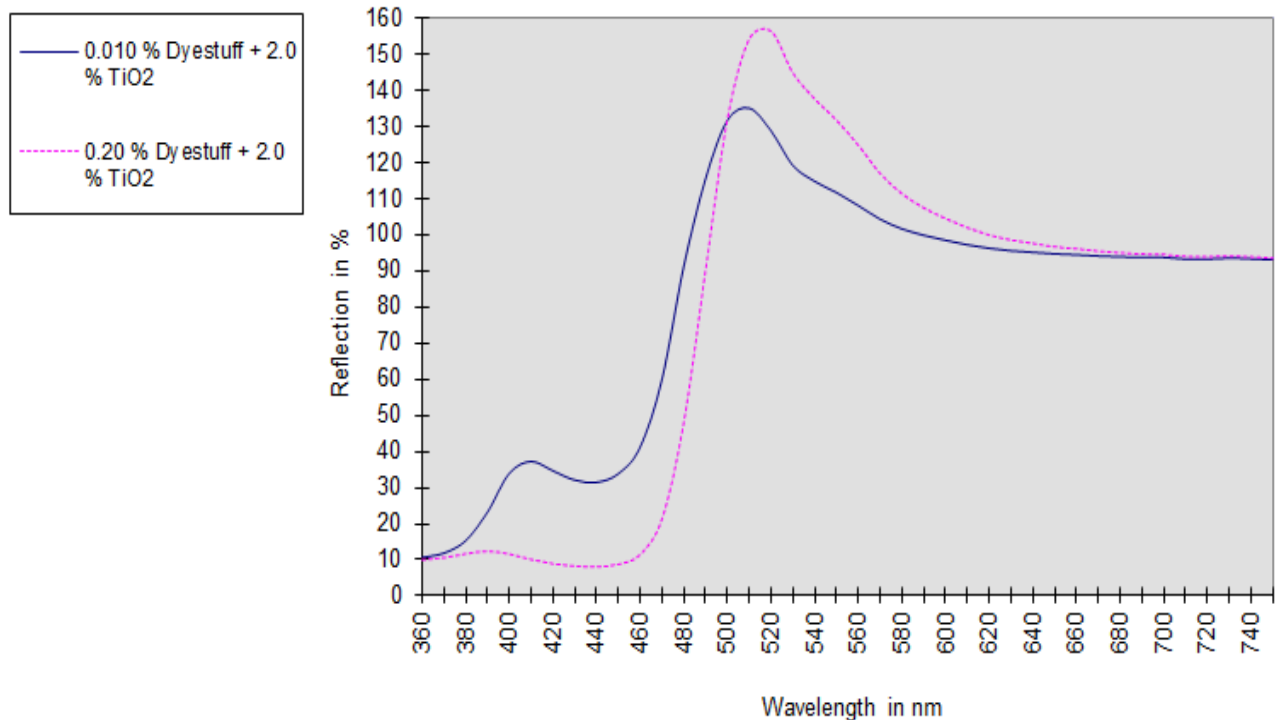
Purity

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

Transmission curve MACROLEX Fluorescent Yellow 10GN in GP-PS (2mm thickness)



Reflection curve MACROLEX Fluorescent Yellow 10GN in GP-PS



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