

MACROLEX® Yellow 3G FG

Colour Index	Part I Solvent Yellow 93 Part II 48160
Chemical description	Pyrazolone dyestuff
Form supplied	powder
Shade	yellow with a green cast
1/3 Standard depth	0.26% dyestuff (determined in GP-PS with 2% TiO ₂)
Density (23°C)	approx. 1.32 g/cm ³
Bulk density	approx. 0.44 g/cm ³ (according to DIN ISO 787-11)
Melting point	approx. 181°C
Main fields of application	Transparent and opaque dyeing of PS, SAN, PMMA, and PC.
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	10	5.0	8.0	0.6	7.0	180	50	25

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	280	-	270	300	340	-	-	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
0.142	7	8	0.260	6-7	8	0.142	6-7	8

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



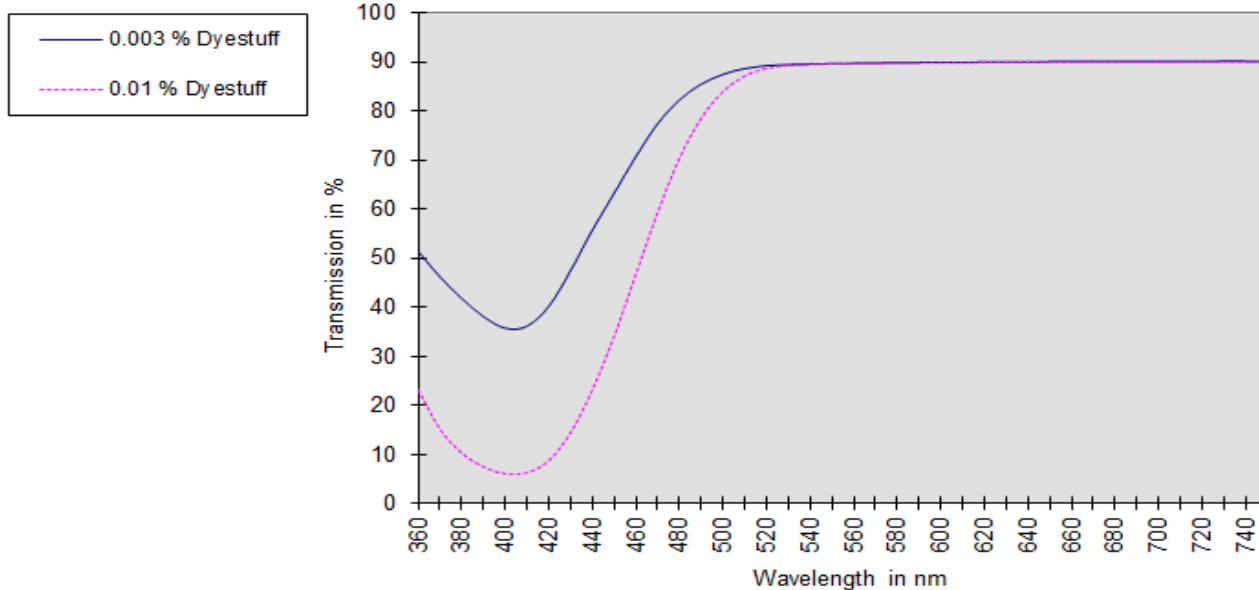
ABS:	LANXESS Novodur P2X	PET:	Voridian 9921 W
SAN:	BASF Luran 368R	PBT:	LANXESS Pocan B1505
PMMA:	Röhm Plexiglas 7H	TiO ₂ :	Kerr McGee Tronox R-FK-3
PC:	Bayer MaterialScience Makrolon 2800		

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)].

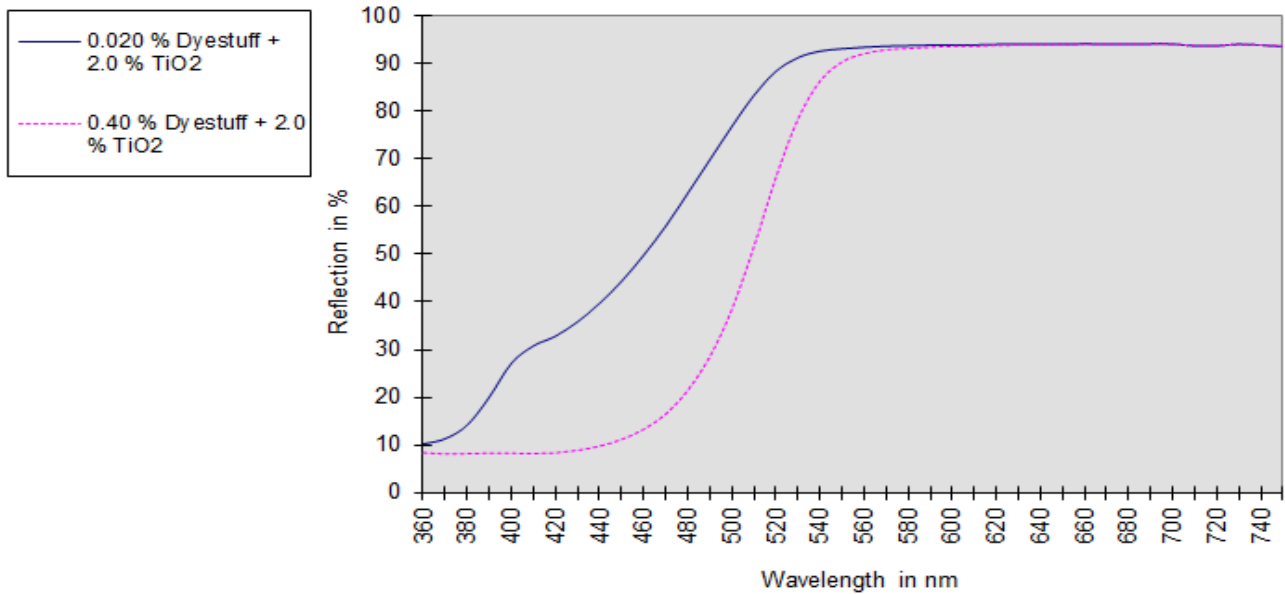
Purity This dyestuff meets current purity requirements for dyeing household utensils and toys in Europe.

Transmission curve MACROLEX Yellow 3G FG in GP-PS (2mm thickness)



Reflection curve MACROLEX Yellow 3G FG in GP-PS





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