

## 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<sub>2</sub>)

**Density (23°C)** approx. 1.74 g/cm<sup>3</sup>

**Bulk density** approx. 0.43 g/cm<sup>3</sup> (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% TiO<sub>2</sub> (ABS 4% TiO<sub>2</sub> and PS 2% TiO<sub>2</sub>) 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% TiO<sub>2</sub> (PS 2% TiO<sub>2</sub>) 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  
SB: BASF Polystyrene 472C

PA 6: LANXESS Durethan B30S  
PA 6.6: LANXESS Durethan A30H 1.0



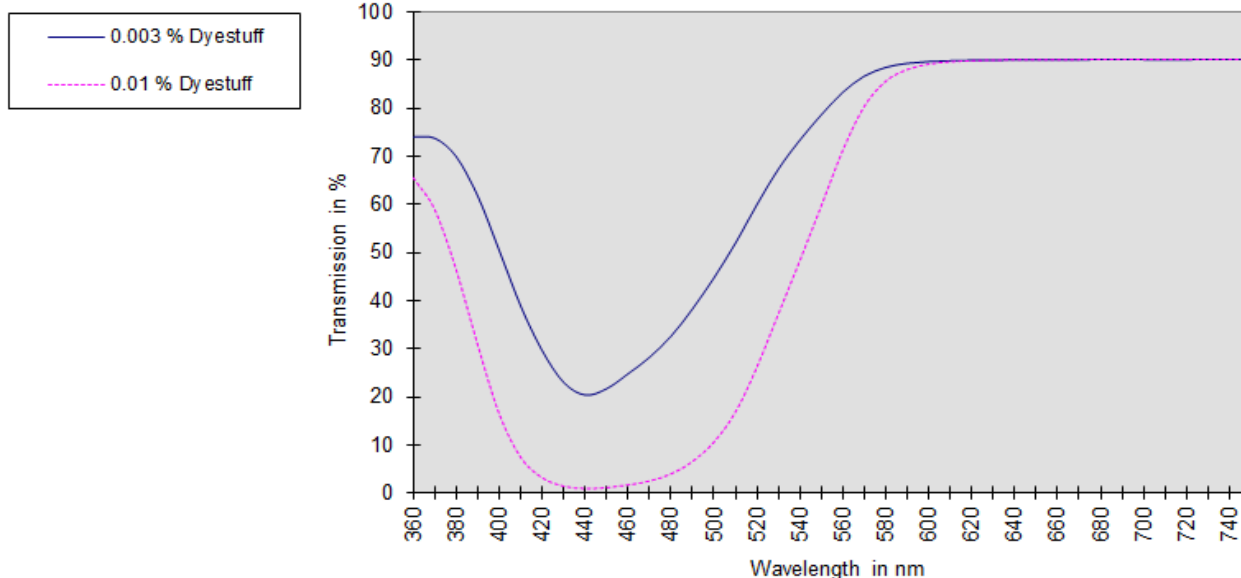
ABS:	LANXESS Novodur P2X	PET:	Voridian 9921 W
SAN:	BASF Luran 368R	PBT:	LANXESS Pocan B1505
PMMA:	Röhm Plexiglas 7H	TiO <sub>2</sub> :	Kerr McGee Tronox R-FK-3
PC:	Bayer MaterialScience Makrolon 2800		

The test result were evaluated with the above mentioned conditions and materials. For other polymers, polymergrades, TiO<sub>2</sub> 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)].

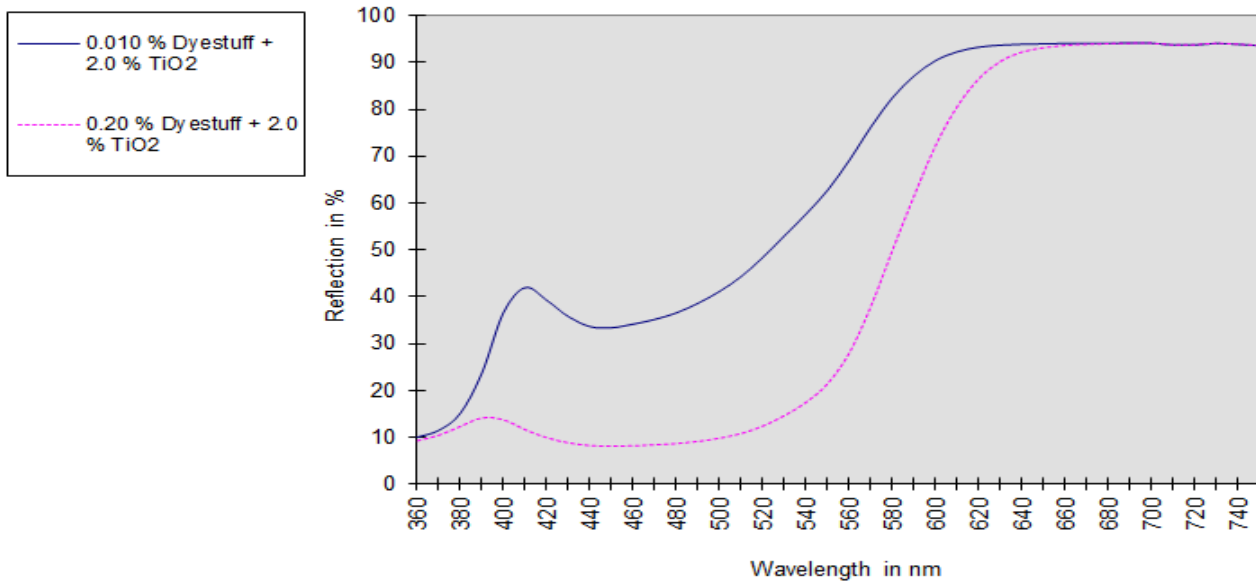
**Purity** This dyestuff meets current purity requirements for dyeing household utensils and toys in Europe.

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



**Reflection curve MACROLEX Orange R in GP-PS**





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

