

20/9/2011

Information sheets



Radglo® fluorescent pigments for the paper coating industry



Because of their outstanding brilliance and luminosity, properties that are inherent to fluorescent pigments, RADGLO® colours are particularly useful where an intense and long distance visibility is needed.

These characteristics make them especially applicable for publicity and advertising as well as safety and warning signals.

RADGLO® fluorescent pigments offer a variety of qualities which are tailored for specific formulations and processing procedures. In particular, the RADGLO® JST series are selected for air knife coating because of the high colour strength and high brilliance which yields an optimum price performance.

RADGLO® AFN fluorescent pigment dispersions offer a formaldehyde free alternative, supplied in a paste form.

Selection of RADGLO® fluorescent pigment types is a function of the requirements of the final coated paper quality and the solvent basis of the formulation. Aqueous and non polar solvent compositions are formulated with RADGLO® JST colours. The latter ones are the most popular because they possess a double colour strength combined with high purity which enables the formulator to yield standard colours at a lower concentration of pigment by means of adding transparent extenders at low cost, or decreasing the coating weight.

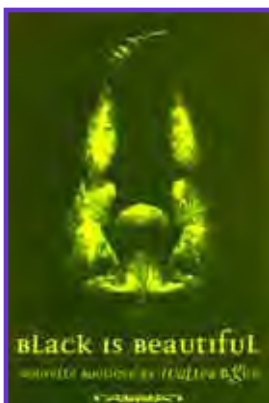
With certain exceptional base stocks, needing polar solvents for achieving proper adhesion by rotogravure, RADGLO® PS/PC fluorescent pigments should be chosen. PC has also a higher colour strength and will produce a standard colour by diluting with extender pigments or by applying less coating. As an average, RADGLO® JST and PC perform well at 3 to 6 g/m².



Pigment types per application

Air knife coating	Aqueous and non-polar solvent formulations	JST/AFN/GWT [Ⓞ]
	Polar solvent formulations	PS/GRT [Ⓞ]
Rotogravure coating	Aqueous and non-polar solvent formulations	JST/AFN/STX
	Polar solvent formulations	PC/GRT [Ⓞ]
Flexographic coating	Aqueous and non-polar solvent formulations	JST/AFN/STX
	Polar solvent formulations	PC/GRT [Ⓞ]
Wire bar coating	Aqueous and non-polar solvent formulations	JST/AFN/GWT [Ⓞ]
	Polar solvent formulations	PC/GRT [Ⓞ]

Ⓞ: Speciality



Properties

RADGLO® fluorescent pigments correspond to specified colour shades of coated paper and cardboard.

Combinations of JST/extender or PC/extender will produce intermediate colour shades, by blending pigments whose colours are adjacent in the spectrum. Because of their semi-transparency, high concentrations are required in order to achieve the desired effect. The same reason will also demand a white base stock for optimum reflectance.

All raw materials should be as clean and transparent as possible in order to avoid quenching of the colour. When, however, special effects are required, a selection of clean conventional colours may be added to produce semi-fluorescent shades.

The particle size of RADGLO® fluorescent pigments is such, that no additional grinding is needed during the dispersing. Dissolver type mixing will generally be sufficient to obtain homogeneous inks with good printing properties.

In aqueous phases, in order to reduce foaming, pigment powder should be stirred into liquids with the highest viscosity, but still good miscible. During letdown, care should be taken to avoid aeration.

RADGLO® fluorescent pigments also withstand three-roll-milling and glass pearl grinding, although such intense treatments are not required.

With all dispersion methods, special attention should be paid to keep the temperature as low as possible, preferably below 40°C.

This should be done when working with aggressive solvents, since the pigment tends to swell and may cause instability of the ink.

RADGLO® fluorescent pigments and pigment dispersions satisfy to most indoor and short life outdoor applications. If improved lightfastness is required, the UV stabilized and more lightfast types should be chosen.

Besides the physical parameters, such as wavelength, intensity and angle of incident light, fading is very much dependent upon the applied weight of the fluorescent pigment.

Higher pigment concentration and thicker printed films will produce the best lightfast results.

Radglo® Specialities

* *Dye programme*

* *50% Waterdispersions of JST pigments: WR series*

® = registered trademark

Disclaimer: This technical information is just an advice. No warranty of fitness for a particular purpose is made.



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