



Brilliant Phosphorescent Pigments BPP SERIES

Brilliant BPP Series are inorganic phosphorescent pigments with long afterglow, recommended for applications requiring immediate afterglow with good duration. These pigments are very stable at high temperatures and are resistant to most chemicals.

Applications

Brilliant BPP Series pigments are designed for use in solvent-based paints, screen inks, plastics, and other applications. For screen printing a minimum mesh size of 43T is required, with a loading level of around 35%. For paint applications, a loading level of about 20% is recommended. For paint and ink applications, the use of a white substrate will help generate the best afterglow effect. Plastics require loadings from 5%, depending on the thickness of the part.

For use in water-based systems, please select our "W" grade versions, available for all shades in the series except red, orange and white. For these shades, the standard grades are acceptable for both water and solvent systems.

Color Guide

Product Code	Afterglow Color	Daytime Appearance	Size (um)	Afterglow Intensity*		
				10 min	60 min	Glow Time
BPP-RD1051	Red	White	10-45	25	1.2	>6hr
BPP-OG1029	Orange	White	10-45	25	1.2	>6hr
BPP-YG1001	Yellow-green	Light-yellow	15-40	200	25	10 hr
BPP-YG1002	Yellow-green	Light-yellow	15-40	225	30	10 hr
BPP-YG1007	Yellow-green	Light-yellow	5-15	220	29	>12hr
BPP-BG1023	Blue-green	Light-yellow	15-45	280	35	>12hr
BPP-BL1039	Blue	White	15-50	150	13	6hr
BPP-PR1026	Purple	White	15-45	18	3.5	3 hr
BPP-WH1006	White	White	15-45	170	27	>6hr

Typical Light Source

Excitation illuminance:	1000 lx, D65 standard
Excitation time:	10 minutes
Temperature:	15 degrees C
Measurement standard:	Din 67 510 Part 1

Typical Chemical Properties

Chemical Family:	Europium doped alkaline earth metal aluminate oxide or Europium doped yttrium oxide sulfide
Formula:	$\text{SrAl}_2\text{O}_4:\text{Eu,Dy,B}$ or $\text{Y}_2\text{O}_3:\text{Eu}$
Specific gravity:	$\approx 3.4\text{g/cm}^3$

Dispersion

Brilliant BPP Series pigments can be incorporated into most formulations very easily. It will disperse with high speed stirring. Because of the high specific gravity of the pigments, liquid dispersions should contain suspension agents to reduce hard settling. Due to the abrasive nature of this series, it is recommended that a lubricant should be used during extrusion.

Notes on Use

1. Milling or grinding should be avoided as this may damage the crystalline structure of the pigment, leading to reduction in luminescent emissions. For this reason, the particle size of the pigment makes it unsuitable for use in thin film applications such as lithographic inks.
2. The use of opaque fillers or extenders, as well as conventional pigments should be avoided as these may quench luminescent emissions.
3. If the end product is intended for exterior use then its lightfastness should be checked for suitability.

Storage: When stored in a cool, dry environment, BPP pigments have an indefinite shelf life. Colorant containers should be kept closed to minimize contamination. Contact with strong mineral acids should be avoided as this may lead to the liberation of hydrogen sulfide. Please refer to the separate MSDS for specific information.

Toxicity: Brilliant BPP Pigments are not radioactive and are generally considered to be of a low toxicity if used and stored as recommended. If stored in sealed containers, the shelf life is indefinite.

Important

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