

Luxilum™ photoluminescent pigments **Glowstone® glow-in-the-dark aggregate**

Nite-Glo Innovations, the parent company of NichePlas, markets a range of photoluminescent pigments (tradename Luxilum™) and products. Full details are given at www.nite-glo.com

What is photoluminescence?

This is the delayed emission of light from a material as a result of absorption of radiation (typically UV and visible spectrum). Such emission continues for a noticeable length of time after excitation (mins to weeks).

Synonyms: *Phosphorescence*
Glow in the dark

The **Luxilum™** range of photoluminescent pigments is available in 4 after-glow colours: Yellow-green, Aqua blue, Sky blue and Violet. These pigments are a light cream colour in daylight, but emit in the above range of colours in the dark. The Yellow-green pigment emits at around 525nm. The human eye is very sensitive to this part of the visible spectrum so sees the emission very strongly. Aqua blue also has a strong luminance, while the Violet is the weakest.

In application, luminance reduces with time after the excitation source is removed (e.g. the sun sets, or lights are turned off), but the best quality pigments are still able to be seen after > 12 hours in the dark. The pigments have the property of being able to activate/discharge (glow) for an almost indefinite number of cycles.

Typical applications for Luxilum™ pigments include:

- Water based paints and emulsions;
- Plastic injection moulding and extrusion (via masterbatches or as straight addition);
- Solvent based paints and lacquers;
- Cast products (polyester, polyurethane, silicone etc);
- Screen printing;
- Powder coating;
- Textile printing.

Glowstone® is a synthetic aggregate, based on Luxilum™ pigment and synthetic resin. The aggregate will thus luminesce following exposed to light sources.

Glowstone® is specially formulated from non-shrinking, extremely hard polyester for use in Concrete, Pavers and Terrazzo products as an exposed aggregate. One of the commonly used sizes is 6-15mm aggregate, but finer sizes are also available (e.g. 2-6mm; 0.5-2mm) where the material can be included in surface top-coatings such as urethane and epoxy.

Glowstone® enhances safety by marking the pathway in Low Light Level conditions.

Glowstone® is easy to use:

- In a homogenous mix or as a surface topping for concrete paths, steps and terrazzo floors.
- It can be used as an additive into pebble paving or loose laid into gravel paths.
- It looks and acts like quartz, yet is able to glow in the dark to provide that special night-time effect.
- Added to the surface pour of the concrete tile, it can be exposed by lightly blasting the cured tile surface.

Please contact Nite-Glo Innovations for any information or assistance regarding the use of photoluminescent pigment and products.

Email address is info@nite-glo.com