



RE: Photoluminescent Disclaimer notification

Please be aware that the new light stable Photoluminescent pigments have a hardness of seven (7) on the Mohs scale. This means these pigments are harder than the metal (barrel and screw) on your processing equipment.

Chroma Corporation has developed a proprietary method that encapsulates these pigments into resins. This encapsulation process submerses these hard pigments in a particular thermoplastic resin. To minimize the risk of these hard pigments being on the surface, we recommend a precompounded (precolor) product.

These Photoluminescent pigment particles are large (median is 20-30 micron in size) and have sharp edges. When these pigments are subjected to shear, the pigment will grind into the metal, causing the product to discolor. This metal contamination on the pigment will cause the product to experience significant diminished glow brilliance and duration. **Your processing parameters can influence the glow performance of these shear sensitive pigments.**

Chroma recommends the following parameters for processing these products:

- **Thoroughly clean** barrel and screw before processing. Any carbon build-up inside the equipment will become dislodged when running these compounds.
- **Processing temperature** should be on the high side of the manufacturer's recommendations.
- **Minimize shear** – reduce RPM's, injection speed, back pressure, and increase temperatures in the feed section near the hopper.
- **Remove any screen packs**- The glow crystals have a nominal size of 20-30 microns. Some are larger. The larger the glow crystal the brighter and longer the glow will be. Removing the screen packs will eliminate the possibility of screening these larger particles out of the product.
- **Do not use a UV stabilized resin.** The glow crystals and UV stabilizer fight over the same light source (long wavelength UV). Adding a UV stabilizer or UV stabilized resin will diminish the ability of the glow crystals to accept a charge. In addition, the glow crystals absorb the UV light and in themselves act as a UV stabilizer for the polymer.
- **Screw configuration / design**- A straight feeding screw would be the most desired screw configuration. Do not use screws with dispersion plates or mixing chambers as this will only "gray off" the pigment, diminishing the glow and making the parts appear dirty.

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Chroma's Technical Service Representatives are available to visit your facility to help establish the most advantageous operating parameters for these products. To schedule a trial with a Technical Service Representative, Please call me at 815-814-4353.

If you should have any questions, please do not hesitate to contact us. Thank you for your interest in our unique new Photoluminescent product offerings designed for the life safety markets.

Best regards,

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