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**COLORANTS FOR PLASTICS**  
**-FLUORESCENT-**

**AKROCHEM<sup>®</sup> FLUORESCENT**  
**-COLORANTS FOR PLASTICS-**

Akrochem "HR" Fluorescent colors offer the plastic formulator a broad range of compatible colors for plastics which exhibit brilliant and clean fluorescence. They can be mixed over a wide temperature range of up to 600°F without formaldehyde gassing.

These advantages, along with good dispersion properties at 300-350°F, result in brilliant fluorescent colors for all types of plastic products and processes.

**SPECIFICATIONS:**

Form.....	easy flowing particles
Density:	
lbs/ft <sup>3</sup> .....	79.08
lbs/gal.....	10.56
Softening Point.....	230°F
Color Options.....	red, pink, orange-red, orange, orange-yellow, chartreuse, green

**SUGGESTED COLORANT LEVEL:**

The most brilliance is produced when used in clean, clear plastics. Only surface film fluorescence (resulting in pastel shades) is produced when opaque plastics are used, regardless of the quantity of color used.

In clean, clear plastics, the color level needed will depend upon the part thickness. Suggested levels are as follows:

<u>PART THICKNESS (in.)</u>	<u>% RECOMMENDED</u>
0.003 - 0.010	5 - 7.5
0.010 - 0.030	3.5 - 5
0.030 - 0.060	2.5 - 3.5
0.060 - thicker	2

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## **COLOR INCORPORATION:**

Dry color drum tumble methods are satisfactory for distributing on plastic pellets. Shear and turbulence zones in injection machines improve mixing of marginally distributed colorant/plastic pellet blends.

## **PROCESS TEMPERATURES:**

Good color development can be acquired at as low a temperature as 275°F. These pigments are considered a neutral additive and will not add or detract from the lubricity of the compounds. Temperatures as high as 550-600°F can be encountered. At this high temperature, some color shift is possible and the addition of one part Irganox 1093 antioxidant per hundred plastic will minimize change.

## **PLASTICS UTILIZED:**

Polystyrene.....	GP and impact
Polyethylene.....	High and low density
PVC.....	Rigid and flexible
ABS.....	Clear
Cellulose Acetate Butyrate.....	Clear

## **AGING:**

The degree of colorfastness will depend on the type of plastic used, color concentration, film thickness, and time and type of exposure (months versus years, and outdoor versus indoor).

## **ULTRAVIOLET SCREENS:**

Exterior light stability can be improved 10-30% by incorporating 0.5 - 1.0% of an ultraviolet screen. Benzophenone types are the most effective, although compatibility with the plastic is of prime importance.