

Technical Data Sheet

MP Pigments

General description

MP series pigments are daylight fluorescent pigments based on a unique thermoset resin matrix plastics application. This formulation is designed to limit migration in PVC, rubber, HDPE, PP and LDPE where dye migration occurs with other types of pigments. MP is a dyed modified benzoguanamine formaldehyde thermoset copolymer.

Applications

- · Specialty coatings and inks
- Solvent sensitive systems
- Thermoplastic and thermoset elastomers
- Vinyl plastisol
- Low density polyethylene (LDPE)
- Polyurethane
- Liquid Colorant
- PVC Calendaring and flexible PVC
- Flexible PVC
- Gel coats
- Natural and synthetic Rubber
- Polypropylene (PP)*
- High Density Polyethylene (HDPE)*
- * Caution: The maximum processing temperature for HDPE and PP is not to exceed 460°F (238°C)

Available Colors		
Product Code	Color	
MP-CH5510	Chartreuse	
MP-GR5511	Green	
MP-OY5512	Orange-Yellow	
MP-OG5513	Orange	
MP-RD5515	Red	
MP-CE5606	Cerise	
MP-PK5661	Pink	
MP-MG5518	Magenta	
MP-PR5547	Purple	
MP-BL6182	Blue	

Packaging:

1 box = 44 lb

Storage & shelf life:

120 months when kept in closed original packaging in a dry place at ambient temperature.

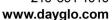
Safety & regulatory:

Safety Data Sheet available on request.

Product features

- Fine particle size and excellent dispersibility.
- Spherical shape offers excellent light scattering/opacity.
- Bleed resistant
- Solvent resistant

Disclaimer: Our technical advice, information, statements, whether given verbally, in writing, or in the form of test results, is offered for your guidance without warranty. No warranty for fitness for a particular purpose is made. This also applies where protective rights of third parties are involved. It does not release the user from obligation to test the suitability of the products and formulas for the intended process and applications. Our guarantee is limited to the consistent quality of our product.





Physical properties		
Delivery form	Powder	
Average particle size	± 5.0 µm	
Hegman grind	2.0 - 3.0	
Decomposition temp.	>255 °C (+/- 5)	
Specific gravity	1.30 g/ml	

Processing	
Heat stability	460°F (238°C)

Solvent Characteristics				
Solvent	Solubility	Bleed		
Water	Insoluble	Negligible		
Mineral Spirits	Insoluble	Negligible		
Toluene	Insoluble	Negligible		
Xylene	Insoluble	Negligible		
Ethanol	Insoluble	Moderate		
Methanol	Insoluble	Considerable		
2-Propanol	Insoluble	Moderate		
Acetone	Insoluble	Considerable		
Methyl Ethyl Ketone	Insoluble	Considerable		
Ethyl Acetate	Insoluble	Slight to Moderate		

Lightfastness

The degree of colorfastness will be dependent on the following factors: Type of plastic, concentration of colorant, film thickness, type of exposure (outdoor versus indoor) and direction of exposure.

Plate-out

One of the challenges that plastics processors have faced when handling fluorescent colorants is the occurrence of plate-out. This phenomenon occurs when lower molecular weight organic materials, such as oligomeric species or fluorescent dyestuffs, thermally decompose and separate from the compounding mixture. These materials deposit on screws, blow-pins, and other metal processing equipment, resulting in what is commonly referred to as plate- out.

Disclaimer: Our technical advice, information, statements, whether given verbally, in writing, or in the form of test results, is offered for your guidance without warranty. No warranty for fitness for a particular purpose is made. This also applies where protective rights of third parties are involved. It does not release the user from obligation to test the suitability of the products and formulas for the intended process and applications. Our guarantee is limited to the consistent quality of our product.



Due to its thermoset nature, the MP series greatly reduces, and in many cases eliminates, the occurrence of plate-out. Therefore, a simple purge with clear has been found to be a sufficient method of cleaning. This results in less down time for the processor due to extensive equipment clean-up.

Processing

MP is recommended for use in plastics encountering process temperatures up to 460° F. However, MP pigments are unlike typical fluorescent colorants which "melt-in," because they remain intact as a pigment. Higher shear is typically applied to the MP series colorants to disperse the pigment and develop optimal color.

In some instances, the MP series has been found to process easily without dispersion aids. However, if it is determined that processing aids are necessary, zinc-based additives should be avoided. 0.10-0.50% of EBS (ethylene bis stearamide) can be added as a dispersion agent in dry blends or masterbatches to promote flow, enhance processability.