INJECTAPEAK

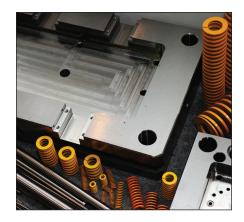
OPTIMIZED COLOR CONCENTRATES FOR INJECTION-MOLDED PARTS



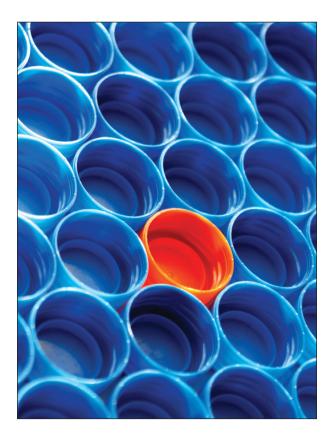
AS INJECTION-MOLDING TECHNOLOGY

has improved over the years, so has the need for more vibrant and durable colorants with enhanced performance capabilities. Penn Color, the industry-leading producer of color concentrates and pigment dispersions for plastics since 1964, delivers all that and more with InjectApeak.

This revolutionary line of color concentrates is formulated specifically for injection-molded parts, providing optimum color, durability and stability. The result: tighter control for more consistent results.



THE PERFECT BLENDING OF FORM AND FUNCTION FOR INJECTION-MOLDED PARTS.



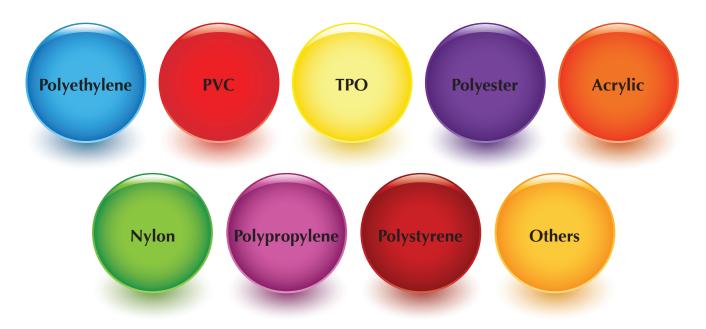
PROCESSING AND PERFORMANCE CHARACTERISTICS THAT CAN BENEFIT FROM INJECTAPEAK:

- Enhanced scratch and mar resistance
- Reduced stress whitening
- Superior impact and stress crack resistance
- Improved contrast in laser marking
- Outstanding exterior durability, where needed
- Excellent mold release
- Improved print adhesion
- · Improved dimensional stability
- Reduced cycle time

In addition, all InjectApeak colorants can be tailored to meet global and local health and safety regulations in the country of use.



INJECTAPEAK COLORANTS



RESEARCH AND DEVELOPMENT

Penn Color provides color matching and product development services at all of our regional sites. In addition, our Global Research Center is home to:

ANALYTICAL LABORATORY

- GPC
- FTIR (ATIR attachment)
- GC/MS
- TGA
- MDSC
- UV/VIS/IR Spectrometer
- Various Laser Particle Size Analyzers
- HPLC
- Rheological/Viscosity Equipment
- ICP

PHYSICAL TESTING LABORATORY

- Co-efficient of Frictions(CoF) Tester
- Drop Impact Tester
- Xenon Weatherometer
- 6-QUV Accelerated Weatherometers
- Ziess High-Powered Microscope With Camera Attachment
- 7 Injection-molding Machines From 35 to 44 Tons With Various Tool Designs





IS ONE OF OUR FAVORITE COLORS

PENN COLOR HAS INVESTED

both time and resources into becoming a more earth-friendly company by developing initiatives that have resulted in a number of reductions in energy use and waste disposal.

Team members with responsibilities in Environmental Management, Chemical Engineering, Process Engineering and Mechanical Engineering work closely with plant management to identify where production can be improved and waste can be reduced.

We also provide training for key employees to qualify in Six Sigma and Lean Manufacturing Production Practices.

PENN COLOR'S EARTH-FRIENDLY INITIATIVES INCLUDE:

- Utilization of heat exchangers on process equipment to provide heat in some facilities
- Installation of Regenerative Thermal and Catalytic Oxidizers to significantly reduce volatile organic compounds and hazardous air pollutants

- Installation of energy-efficient lighting along with motion sensors at selected locations
- Recycling of paper, cardboard packaging, scrap metal and other waste for use as a secondary fuel
- Reuse of cardboard gaylords, steel drums and other by-products of the manufacturing process
- Improved inventory programs to track raw materials and finished products to ensure they do not exceed shelf life
- Process improvements that result in better product quality and reduced process time
- Working with our customers to promote low or no VOC products, through the use of vegetable and aqueous based polymers and diluents
- Formulating products that will optimize the conversion of solar energy
- Improved utilization of manufacturing floor space and existing equipment reducing the need for additional equipment and energy usage

For more information, visit our website.



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