



➤ PRODUCT BULLETIN

Colorants & Additives for Thermoplastic Polyurethane (TPU) Wire & Cable Applications

Thermoplastic polyurethane (TPU) has excellent mechanical performance, chemical and abrasion resistance. These qualities make TPU a suitable material for use in demanding wire and cable applications such as industrial cables, drag chain or automation applications, consumer electronics, automotive cables, electrical vehicle charging cables, and more.

When adding color to TPU materials for use in wire and cable applications, it is important to maintain the original TPU performance characteristics. Avient colorants for TPU applications are specifically designed to reach high quality standards. Additives can also be used to further enhance the performance characteristics of TPU materials and help customers reach end use specifications.

ONCOLOR™ COLORANTS FOR WIRE & CABLE

Key Features

- A color range for unfilled TPU, providing good opacity at low addition levels
- Includes colors for filled, non-halogen flame retardant TPUs that are designed to enhance color strength
- The same color concentrate reference can be used for both unfilled and filled TPU resin, minimizing inventory
- Custom solutions can be formulated for charging cables to help maintain performance including good weather and hydrolysis resistance as well as providing high color strength for bright colors
- Compared to regular colorants, OnColor™ Colorants for wire and cable can help reduce dosing levels and maximize the original properties of the TPU material



Avient Additives for Wire & Cable

- Cesa™ Flame Retardant Additives: Flame-retardant additives that add or improve flame resistance. The inclusion of these additives can help a cable to pass flame resistance tests, even if the resin originally used is not flame retardant
- Cesa™ Light Additives: UV light stabilizers that improve weather resistance and provide long term protection against weather degradation
- Semi-conductive TPU formulations to enhance cable performance
- Cesa™ Laser Additives: Includes laser-marking additives for durable cable marking. They provide excellent contrast for dark or light colors with high resistance to external friction or chemicals
- Smartbatch™ Combination Colorants & Additives: Combines colorants and performance enhancing additives in a single formulation for easier dosing. e.g., long-term light stabilization additive and custom color in one pellet. This can help to reduce inventory and can allow the use of general-purpose resin

Avient Value-Added Services

Avient supports these colorant and additive technologies including:

- A focus on sustainability with innovative materials and solutions to help you meet your sustainability goals, including PCR Color Predication Service and Product Footprint Calculator
- Leading Color Trend and Design Services - Trend and color insights along with product development assistance from concept through commercialization to optimize design and gain speed to market
- Avient Design - A highly specialized group of industrial designers and project engineers that provides advanced design and detailed analysis to foster higher levels of innovation
- Application Development and Technical Support - Technical experts specifically trained to work directly with your team to solve definitive application challenges with new or existing approaches
- Regulatory Support - Dedicated product stewardship assisting with new product approvals to reduce regulatory overheads and minimize risk
- Reliable field technical services and support - Onsite support for tool design, startup, and production optimization to gain manufacturing efficiencies and help resolve technical issues



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