



## » APPLICATION BULLETIN

# MEVOPUR™ Bio-Based Polymer Solutions for Medical Devices and Pharmaceutical Packaging

Manufacturers of medical devices and pharmaceutical packaging are increasingly faced with the challenge of integrating sustainability into the design of their products. One way to achieve this is to switch to bio-polymers where possible. Bio-polyolefins are already used with success in packaging, but to be used in healthcare applications, they need to be evaluated to the relevant protocols to support regulatory compliance of the end article.

Avient provides pre-tested colorants and functional additive technologies based on bio-polyethylene to minimize the risk of non-compliance and support a more sustainable profile for plastic products used in the healthcare industry. Solutions based on bio-polypropylene are under development as well.

## KEY CHARACTERISTICS

- Based on bio-polyethylene – bio-based content up to 95%, calculated to ASTM D6866 standard
- Manufactured at three ISO 13485 certified sites, providing global consistency and security of supply
- Documented change control beyond CAS number reducing risk of change
- Drop-in solutions that can be processed like fossil-based grades on common injection molding and extrusion machines
- Can be provided as ready-to-use pre-colored or additive formulation

## REGULATORY SUPPORT

- Raw materials tested to:
  - ISO 10993-1
  - USP <87> and <88> (incl. class VI)
  - European Pharmacopeia, monograph 3.1.3/3.1.5 (polyolefin packaging materials)
  - USP <661.1> (polyethylene)
  - Elemental impurities as per ICH Q3D
- Registered Drug Master File (Type III) and/or Device Master File
- Food contact according to US FDA and EU norms

Sustainability Spotlight



Bio-polymers





Healthcare use limitations apply—see below. Contact Avient for more information.

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Avient products have not been designed for nor are they promoted or intended for use in:

- (a) medical devices categorized by either the United States Food and Drug Administration (FDA) or the International Standards Organization (ISO) as an “implant” device; or “Permanent” as defined under US Pharmacopoeia (USP) or ISO standards; or
- (b) active implantable medical devices as defined in EU Directive 90/385/EEC as amended; or
- (c) medical devices for “Long Term” use as defined in EU Directive 93/42/EEC as amended.

Without limiting the generality of this statement, Avient products shall not be used in any medical device application intended for:

- (1) exposure to human tissue or body fluids for 30 days or greater;
- (2) “plastic” (cosmetic or reconstructive) surgery use;
- (3) reproductive implants or any birth control device; or
- (4) any critical component in a permanently (greater than 30 days) implanted medical device that supports or sustains human life.

It is the responsibility of the medical device manufacturer and the person placing the medical device on the market to ensure compliance of the medical device, including the suitability of all raw materials and components used for its manufacture, and with all applicable laws and regulations.