

PPSU in medical applications

Medical devices and accessories are lighter, and easier to customize and clean when they're made of polymer instead of metal. So for the healthcare industry, PPSU is ready to serve.

The medical world is filled with all types of instruments that we're used to seeing in the hands of nurses, doctors and dentists: surgical accessories, endoscopic devices, anesthesiology equipment, cases, trays, etc. We tend to keep a traditional mental image of these instruments and imagine them made of stainless steel and aluminum, but the reality of that is changing.



Advanced healthcare materials for better patient outcomes

The rationale for switching to thermoplastic materials is well established and similar to the one for other categories of medical devices (such as long-term implants). The arguments are chiefly lightweighting and design flexibility, but one additional aspect is crucial when it comes to reusable medical instruments: resistance to sterilization. PPSU is a remarkably strong polymer. For example, objects made with it can be steam-sterilized over 1,000 times without losing their properties.

Sure, lightweighting might not be as critical an issue for medical device manufacturers as it has been for the **automotive** and **aerospace** industries, but it does play a role as a driver for the adoption of polymers in the field of **healthcare**, with lighter products manufactured at Feronyl, we achieve lower cost and higher production rates.

“Using polymer can improve comfort and ergonomics when the instruments as well as the trays themselves are no longer made of metal.” As for design flexibility, the possibilities offered by polymers tend to lower instruments' total cost of ownership, thanks to better-adapted designs.

PPSU materials also are selected due to extensive additional advantages, as design is not limited and complex functionalities and design features can be easily added to the product design. The raw material can be colored, changing a medical device to some sexy product.



Key Features

High impact & toughness	Colorable
Medical devices	Transparent
Dental and surgical instruments	Sterilization
Chemical resistance	Hot water applications
Flame retardant	Aircraft interiors
High HDT	Airline catering trolleys
Extensive processing expertise	Hot water applications

Contact our experts:

Arthur Ollivier

Technical – sales engineer

Material Chemistry - engineering degree

a.ollivier@feronyl.com

Boulevard Industriel, 101

7700 – Mouscron [Belgium]

Tel: +32 56 85 75 30

Mail: feronyl@feronyl.com

Established in Mouscron (Belgium) since 1950, Feronyl is one of the SUB-ALLIANCE E.I.G. companies.

SUB-ALLIANCE is specialized in manufacturing of advanced mechanical systems, mainly composed of polymers, composites, metals and transmissions. The four business units can provide stand-alone manufacturing capabilities or join forces on common Research & Development projects.

The four business units are Feronyl, Dedecker Precision Mechanics DPM, Tecnonlon Works and Grimonprez Transmissions Gears.