PRESS RELEASE

TRADITIONALLY INNOVATIVE

Infusion filters

MediPure™ IV filters with a CYROLITE® housing ensure safe infusions

- **MediPure™ Adult IV filters from ITW Medical protect patients from bacteria, microparticles and trapped air**
- **Filter housings made of CYROLITE® can be sterilized and are robust, disinfectants- and pressure-resistant**
- **ITW Medical is planning to use CYROLITE® CG-97 again for the next generation of filters**

Bacteria, microparticles and trapped air can all lead to complications during infusion therapy. Infusion filters, such as the MediPure™ Adult IV filters from ITW Medical, reduce the risk of contamination and thus increase patient safety. And the CYROLITE® medical plastic from Röhm contributes to this improvement of patient outcome.

Effectively filtering out risks

Infusions allow a fast-acting and precisely dosed administration of medication in intensive care, either directly via the blood stream or via fluids that stabilize the circulatory system. However, sometimes bacteria or minuscule foreign objects are introduced to the patient's blood circulation in the process, for example, when infusion solutions are contaminated or material particles detach when puncturing the rubber plug. In these cases, myriad micro- and nanoparticles can circulate during a 24-hour infusion therapy. Another risk of intravenous (IV) infusions comes from air entering the vein, which, in the worst-case, could cause an air embolism. Inline infusion filters that are connected to the infusion tube significantly lower these risks.

One such filter is the MediPure™ Adult IV filter from ITW Medical. The American company is a leading manufacturer of fluid management components for medical applications. Its portfolio includes self-priming infusion filters that both block bacteria and particles and divert air. Inside the filters are parallel chambers with a polyethersulfone filter membrane with a pore diameter of 0.2 or 1.20 micrometers, depending on the product type. “The construction combines a hydrophobic membrane for venting air that supports self-priming and a hydrophilic filter membrane for bacterial retention” explains Rutuja Joshi, product developer at ITW Medical.

Röhm's specialties for daily hospital routine

ITW Medical manufactures robust, transparent filter housings from CYROLITE® CG-97. CYROLITE® special molding compounds from Röhm are acrylic-based copolymers. They are specifically developed for medical devices and compliant with the USP Class IV and ISO 10993-1 regulatory requirements. “CYROLITE® products are contact-compatible with medical fluids, medications as well as a wide range of oncology drugs and carriers. In addition, our CYROLITE® CG-97 grade is highly resistant to disinfectants and lipids” explains Maurice Biagini, Commercial Director Medical at Röhm. “While the disinfectants resistance prevents stress cracking from contact with disinfectants, such as isopropyl alcohol, the lipid resistance ensures the retention of the housing’s mechanical performance . The excellent optical clarity of the material is maintained even after gamma sterilization.”

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Its good processing properties mean that components made from CYROLITE® are customizable, for example with different filter connections for the MediPure™ Adult IV filter.

CYROLITE® is reliable – even under pressure

Properties that have also impressed ITW: “The three decisive criteria for us were the sterilization ability, alcohol resistance and extraordinary transparency,” says Joshi, explaining why ITW Medical decided on CYROLITE® CG-97. “We also place great importance on the material's pressure resistance. After all, an infusion filter should not rip or burst under any circumstances, even if liquid accumulates in the system.”

Unique selling proposition of the next generation of MediPure™ filters

“CYROLITE® is one of the reasons why our filters can withstand pressure for such a long time,” emphasizes the product developer from ITW. An increase in pressure resistance is a quality with which the medical technology company aims to stand out from the competition even more by introducing the next product generation. ITW Medical is relying on the proven CYROLITE® CG-97 material from Röhm for the new MediPure™ Adult IV filters that are scheduled to be launched in 2021.

MediPure™ infusion filters from ITW Medical are incredibly pressure-resistant due to the robust housing made from Röhm’s CYROLITE® CG-97.

MediPure™ Adult IV filters from ITW Medical protect patients from bacteria, microparticles and trapped air.
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About Röhm
With 3,500 employees and 15 production sites worldwide, Röhm is one of the world's leading manufacturers in the methacrylate business. The medium-sized company with branches in Germany, China, the USA, Russia, and South Africa has more than 80 years of experience in methacrylate chemistry and a strong technology platform. Our best-known brands include PLEXIGLAS®, ACRYLITE®, MERACRYL™, DEGALAN®, DEGAROUTE® and CYROLITE®.

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