



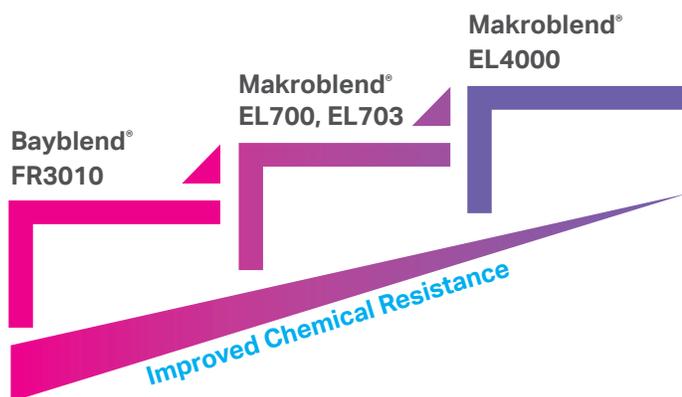
Resilient Materials for Medical Equipment Housings

Our materials are manufactured in Europe, Asia and North America for a reliable, Global Medical Portfolio.

- Experience – Over 60 years of Makrolon®, 40 years in medical applications, produced at 5 worldwide sites
- Trust – Covestro technical expertise and regulatory support
- Benefit – Properties that you can leverage to maximize performance and minimize cost

The Need for Improved Chemical Resistance

- According to the CDC, on any given day 1 in 25 hospital patients has at least one healthcare-associated infection (HAI)¹
- Aggressive disinfectants are often used by hospitals and clinics to reduce the risk of HAI's



¹ <http://www.cdc.gov/HAI/surveillance/>

² For further details consult the product yellow card at UL.com

Range of Solutions

- Covestro offers a range of materials for medical equipment housing applications
- These materials have superior rigidity and impact strength and higher heat resistance than FR ABS and FR Copolyesters
- Makroblend® and Bayblend® meet more stringent UL requirements than other FR resins



PROPERTY	BAYBLEND® FR3010	MAKROBLEND® EL700	MAKROBLEND® EL703	MAKROBLEND® EL4000
	FR PC+ABS	FR PC+Polyester	FR PC+Polyester	FR PC+Polyester
MVR(cm ³ /10 min)	15 (240°C/5 kg)	15 (270°C/5 kg)	26 (270°C/5 kg)	20 (260°C/5kg)
Tensile Modulus (MPa)	2700	2300	2300	2300
Chemical Resistance	+	++	+++	++++
UL Rating ²	V-0 @ 1.5mm 5VA @ 3.0mm	V-0 @ 1.5mm 5VA @ 3.0mm	V-0 @ 1.5mm 5VA @ 3.0mm	V-0 @ 2.0mm 5VA @ 3.0mm

Materials for Medical Equipment Housings

Resistance to Disinfectants

MEDIA	FR PC+ABS*	MAKROBLEND® EL700	MAKROBLEND® EL4000
Skin Lotion	▲	■	■
Isopropyl alcohol (70%)	▲	▲	■
Betadine®	■	■	■
10% Bleach	▲	▲	■
Bleach, full strenght	▲	▲	■
2% Glutaraledyde	●	■	■
3% Hydrogen Peroxide	▲	▲	■
Cavicide®	▲	▲	■
Virex® 256	▲	▲	■

Betadine® is a registered trademark of Purdue Products L.P. **Cavicide®** is a registered trademark of Metrex Research, LLC. **Virex®** is a registered trademark of Diversey, Inc. * Based on historic data and/or experience with Bayblend® FR3010 HF and others, measured at 1% strain for 24 hours.

■ = Resistant; ▲ = Limited Resistance; ● = Poor Resistance

Resilient materials help resist more frequent cleaning and more aggressive disinfectants on medical housings



Manufacturers of medical equipment for patient monitoring, imaging, diagnostic, fluid and medication delivery need materials that offer improved resistance to the more aggressive disinfectants used today in healthcare settings. Makroblend® EL700, EL703 and EL4000 polycarbonate resin blends from Covestro are just what the doctor ordered.

Other routinely used housing materials can result in blemished or cracked housings. Use of Makroblend® materials from Covestro can improve the customer experience, translating in up to a 65% reduction in costs associated with customer complaints. That's a prescription for a healthier bottom line.



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The manner in which you use, and the purpose to which you put and utilize our products, technical assistance and information (whether verbal, written or by way of product evaluations), including any suggested formulations and recommendations, are beyond our control. Therefore, it is imperative that you test our products, technical assistance and information to determine, to your own satisfaction and requirements, whether our products, technical assistance and information are suitable for your intended uses and applications. This application-specific analysis must at least include testing to determine suitability from a technical as well as health, safety, and environmental standpoints. Such testing has not necessarily been done by us. Unless we otherwise agree in writing, all products are sold strictly pursuant to the terms of our standard conditions of sale which are available upon request. All information and technical assistance is given without warranty or guarantee and is subject to change without notice. It is expressly understood and agreed that you assume and hereby expressly release us from all liability, in tort, contract or otherwise, incurred in connection with the use of our products, technical assistance, and information. Any statement or recommendation not contained herein is unauthorized and shall not bind us. Nothing herein shall be construed as a recommendation to use any product in conflict with any claim of any patent relative to any material or its use. No license is implied or in fact granted under the claims of any patent.