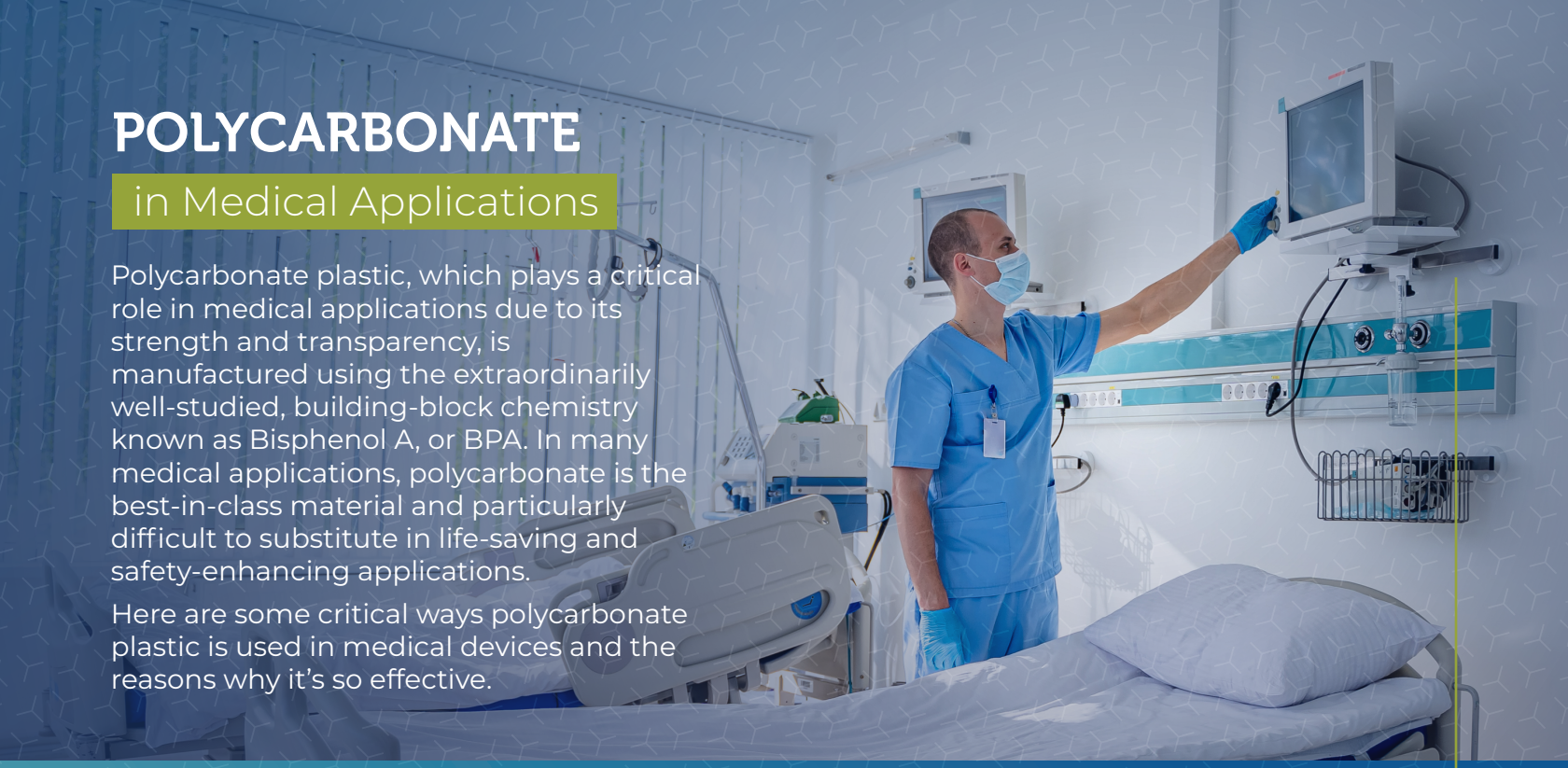
POLYCARBONATE

in Medical Applications



Polycarbonate plastic, which plays a critical role in medical applications due to its strength and transparency, is manufactured using the extraordinarily well-studied, building-block chemistry known as Bisphenol A, or BPA. In many medical applications, polycarbonate is the best-in-class material and particularly difficult to substitute in life-saving and safety-enhancing applications.

Here are some critical ways polycarbonate plastic is used in medical devices and the reasons why it's so effective.

Why Polycarbonate?

- High Durability
- Impact Resistance
- Transparency
- High Heat Resistance
- Easy Sterilization
- Lightweight
- Shatter-Resistant
- Sturdy Structure
- Design Flexibility

Where is Polycarbonate Used?

Surgical and Examination Rooms

- Medical Housings
- Blood Oxygenators
- Blood Reservoirs
- Blood Filters
- Trocars
- Tube-like Instruments
- IV Connectors

Medical Devices

- Nebulizers
- Medical Injection Pumps
- Dialysis Machines
- Y-injection Sites
- Check-valves
- Filters Housings

Neonatal Care

- Incubators
- Housing for Heating Lamps
- Supporting Structure

American® Chemistry Council

Is Polycarbonate Manufactured with BPA Safe?

In September 2018, the U.S. National Toxicology Program (NTP) released the final report on the CLARITY Core Study[1] . The scope and magnitude of this study are unprecedented for BPA and the results clearly show that BPA has little potential to cause health effects, even when people are exposed to BPA at typical exposure levels throughout their lifetime.

The CLARITY study results are consistent with the results of previous studies from U.S. federal government researchers[2], which collectively indicate that BPA is unlikely to cause health effects at the current levels to which people are exposed. Typical consumer exposure to BPA is 1,000 times below the safe limit established by government scientists, BPA is rapidly eliminated from the human body within 24 hours, and no risk of health effects exists at typical exposure levels.[3]

How Can I Learn More About BPA?

The American Chemistry Council promotes the business interests and general welfare of the polycarbonate and bisphenol A (BPA) industry through relevant technical, communications, and public policy activities. The membership consists of major manufacturers of polycarbonate plastic and BPA worldwide. For more information about BPA, please visit https://www.factsaboutbpa.org/.

Sources:

[1] https://www.factsaboutbpa.org/safety-assessments/fda-clarity-study/

[2] https://www.factsaboutbpa.org/government-studies/

[3] https://www.chemicalsafetyfacts.org/wp-content/uploads/ACC_BPA-Infographic_One-PagerFINAL-11-21-14.pdf

202408-082