Eastar™ copolyester is at the heart of Cardian BCT's blood therapy system

A front-runner in the blood bank technology industry, Cardian BCT was intent on finding a way to dramatically increase the frequency with which donors could donate blood. Because donor deferrals are on the rise, blood banks need to maximize blood donations from a shrinking donor base.

James Ladtkow, a Cardian BCT senior engineer explains, "Our Trima Automated Blood Component Collection System separates blood into platelets, plasma, and red cells by a process known as aphaeresis. It automatically harvests only the needed components and reinfuses the unneeded ones back into the donor. Since it takes the body longer to replenish its supply of red cells than to regenerate platelets or plasma, returning the red cells to the donor shortens the time required between donations."

Increasing blood donations by lowering donor exposure

Compared to whole blood collections, the Trima system allows more patients to be helped by separating and supplying only the specific blood components they need. By optimizing component collections, patient risks are lowered by reducing donor exposure.

At the heart of the Trima device is a plastic cassette which is molded from Eastar™ copolyester and assembled in-house. The blood therapy system can be programmed to harvest any combination of blood components, allowing a blood center to fulfill its blood collection needs with 25% fewer donations, reducing its costs, and increasing its blood supply.

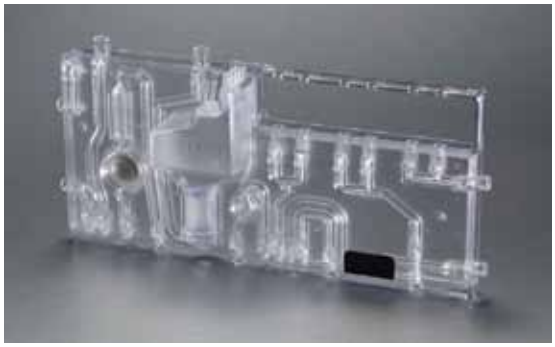
Approaching the challenge intuitively

Cardian BCT's challenge was to find a plastic solution that worked well with the cyclohexane that bonds the PVC tubing to the cassette. From the get-go, Eastman's design services team was committed to more than specifying the right plastic. Eastman took the intuitive approach to proper part design, mold design, and required processing parameters. "We evaluated both polycarbonate and Eastar™ copolyester for this application. We selected the copolyester for several reasons. One, of course, was cost. It also compares quite favorably in impact resistance. But more importantly, we selected the copolyester for its solvent compatibility," notes Ladtkow.

Making more than a Material Difference

Eastar™ copolyester is available in a variety of grades, each with a slightly different balance of properties designed to meet the needs of different applications. All offer superior ease of processing and chemical resistance compared with polycarbonate and, because of their low heat-deflection temperature, can be easily molded into complex shapes.

Choosing a supplier who can provide the right material for your medical application is critically important. Choosing a supplier who will take an intuitive approach to proper part design, mold design, and required processing parameters is transforming.



Trima plastic cassett

Find out more about Eastar™ copolyester and how our capabilities in injection molding design can help make the Material Difference™ in your medical application. Visit www.eastman.com/medical or call 1-800-EASTMAN (1-800-327-8626).

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