

Mirra – Design for the Environment (DfE) Influences

The Mirra chair was the first Herman Miller chair to fully utilize the McDonough Braungart Design Chemistry Protocol. This holistic approach looks at three key product aspects: material chemistry, disassembly and recyclability. The Design for the Environment team was involved from the very early design stages and was able to influence the design of the chair. Thus, in the very earliest stages of design, before the product is introduced, Herman Miller is already thinking about the end of life of the product.

DfE Influences

- Redesigned the tilt structure to facilitate the removal of plastic components.
- Modified the design of the rear limit of the seat mechanism to avoid permanently swaging a plastic component onto the structure.
- Changed the cable jacket on the seat controls from PVC to nylon.
- Designed the chair for ergonomic manufacturability which, in this case, also led to a simple disassembly process.
- The structural “Y” spine was originally conceived to be an insert-molded, plastic and steel part. This would not have met the disassembly criteria for DfE. The engineer, challenged by this new design constraint, developed a less costly and more elegant design solution that has been patented.
- The chair effectively utilizes steel, a 100% recyclable material, throughout the design.
- The DfE team worked with stamping supplier and supply management to maximize the recycled content in the steel.
- Mirra is 96% recyclable following the end of its useful life