

The **GPO Cartridge** thoroughly cleans and refurbishes used antifreeze for recycling by removing **all** contaminants in the liquid. This includes suspended solids as well as other compounds formed from additives in the antifreeze. This sturdy cartridge is made of high-density plastics with a leak proof housing. This disposable cartridge has ½" npt ports with "top in - top out" design that reduces the chances of spills. The GPO Cartridge will routinely process and refurbish 500 gallons of used antifreeze, but as a result of its revolutionary design, its overall dimensions are only 8.5" in diameter by 22.5" tall. A specially designed compact metering system, which can be provided with the system, pumps the antifreeze at a rate of six gallons an hour, maximizing the unit performance.

The **GPO Cartridge** consists of two primary components that work in unison to clean the glycol. First the **Bonifibers®**, a patented polypropylene microfiber, adsorb all hydrocarbons including oil and gasoline that have found their way into the antifreeze within your cooling system. These hydrocarbons reduce the heat transfer effectiveness of the antifreeze. The highly active **Bonifibers** are densely compacted to create an extremely small diameter mesh filter, which additionally traps all suspended solids within the antifreeze. This first step removal of the hydrocarbons also improves the reactivity of the **Environresin** in the second step.

**Environresin** is a phenolic resin impregnated with a highly reactive iron powder. This proprietary designed resin creates an exceptionally large surface area of highly reactive material that binds up all contaminants. Heavy metals, along with sulfate and chloride salts, are removed from solution via ion exchange and captured in the resin. The contaminants are permanently removed from the antifreeze, with only pure glycol passing through the cartridge for reuse in customer vehicles.

The **GPO Cartridge** truly capitalizes on the best components of current technology. While polypropylene has been used to remove hydrocarbons in various applications, the large size of the fibers makes it impractical in this application. The combined adsorption capacity of the **Bonifibers**, along with their compaction capability for filtering, makes these microfibers irreplaceable in the **GPO Cartridge**. Use of conventional polypropylene would have required a cartridge triple the size of the **GPO** with less efficiency. The case is the same with the **Environresin**. Iron readily replaces certain compounds from soluble solutions. Simple wire mesh and steel wool have been utilized in metallic replacement cartridges in the past. These media are plagued with systematic problems such as channeling, clogging, and low reactivity. **Environresin** eliminates these problems with its advanced design and its capacity to utilize only highly reactive iron powders, which are unavailable through steel wool or iron mesh manufacturing.