



photo credit: RPM Eco

## Recycling automotive plastic containers – from messy collection to useful products

When an empty oil or antifreeze container is tossed into a collection bin at a commercial garage in Ontario, it begins a winding journey to a new life.

The collection bin is one in a vast network of more than 12,000 bins, stretching from Sarnia in the southwest to Kapuskasing and Thunder Bay in the north. They're located at quick-service garages and auto dealerships, as well as industrial sites where fleets and big mining or logging machines are serviced.

The bin contents are emptied regularly into enclosed trucks operated by a number of collection companies in the province, including Pnewko Brothers Ltd. and RPM Eco.

When their trucks are loaded, raw material is transported to various facilities for processing. Pnewko's warehouse and processing plant is in Aurora, Ontario, and RPM Eco operates a depot in Burlington, Ontario. Material at RPM's Burlington facility is baled and then transported to Blainville, Quebec, for processing.

Contamination is a huge challenge with empty antifreeze and oil containers. They are often contaminated with residual fluids and garbage, particularly containers collected at MHSW depots operated by municipalities.

Traditional recycling processes cannot handle the residual oil associated with empty containers: the oil coats anything nearby, and would ruin any other paper and plastic in a materials recovery facility (MRF).

So empty antifreeze and oil containers must be separated and inspected for contamination before they're fed into an industrial chipper to break the containers into smaller pieces. Oil residue from the containers drains into a catch basin, where it is pumped away and refined into oil products.

RPM Eco uses a proprietary process to clean its material after shredding, leading to clean shredded plastic that can be made into products. The company's primary market, for now, are manufacturers of weeping tile and black plumbing pipe.

Pnewko's recycled plastic is used to make synthetic lumber for rail ties, deck boards, park benches and similar products.

**“We collect and recycle enough plastic to fill the Saddledome in one year - picture that in a landfill or your back yard.”**

**Pnewko Brothers Ltd. website**

AMS processors are eager to find new markets that will enable greater participation in the circular economy. A constant challenge is competing with typically low-priced “virgin” plastic.

In 2019, roughly 11 tonnes per day of empty antifreeze and oil containers – still containing traces of residual fluids – were diverted from Ontario landfills. The AMS program consistently collects and diverts volumes that are above its annual targets.

Steward fees are supporting a much cleaner and greener future, by reducing the impact of contaminated materials on human health and the environment. The next time your vehicle has an oil change, consider the empty container's next journey. You might not look at a park bench or plumbing pipe the same way again.