



# NW Bumper Company

## Recovery and Reuse of Thermoplastic Resins in Automobile Bumpers

**Problem:** Reduce NW Bumper costs (2008 est. \$7,000 per year) associated with disposal of unusable bumpers at Oregon landfills.

**Approach:** Identify sustainable options for the reuse of resins from unusable bumpers.

1. Identify types of bumpers which can be recycled.
2. Identify Portland area businesses involved with bumper recycling.
3. Provide NW Bumper with current market information for bumper derived resins.

**Results:** Opportunities exist for bumper recycling at local polymeric resins businesses.

1. The majority of plastic automobile bumpers are polypropylene containing resins known as thermoplastic olefins (TPO).
2. Resins recyclers in the Portland metropolitan area will accept these TPO containing bumpers in lots of ~100+ bumpers (i.e., min. 1000 lbs). Pricing is dependent on market demand for these resins and is highly variable. Current pricing for TPO bumpers is ~ 4 cents per pound - only about \$40 for a 1000 lb. load. TPO regrind currently sells for ~20 cents per pound.
3. Two ways to increase the value of unusable bumpers is to segregate them by type of resin and to convert them to regrind material.
4. A coordinated approach to the recycling of these resins is needed in the Portland metropolitan area to divert them from landfills and to allow reuse of the material resources.

### Comments

- Current (2009) prices for TPO resins are less than half of what was being offered before the recession.