green calgary Greening Life Together resources

Fact Sheet: Plastic Waste

Types of Plastics

Plastics are identified based on their Resin Identification Code, which ranges most commonly from 1-7[1]. The resin number is imprinted on all plastic products.

Polyethylene Terephthalate (PET, PETE). Commonly found in food, beverage and cleaning product containers. One of the most common and most widely recycled plastics.

High Density Polyethylene (HDPE). HDPE is found in containers such as milk jugs and is also used for many industrial chemicals such as detergents, antifreeze, motor oil, and other hazardous waste.

Vinyl (Polyvinyl Chloride or PVC). PVC is for rigid and flexible products. It is found in cleaner containers, packaging sheet, pipes, siding, carpet backing and windows, as well as wire and cable insulation, and floor coverings.

Low Density Polyethylene (LDPE). Found in applications where heat sealing is necessary. It is usually in the form of a film, such as garbage and grocery bags, shrink or stretch wrap, and foam or bubble wrap.

Polypropylene (PP). PP is found in food containers, molded parts for automotive and consumer products, as well as heavy gauge woven bags and tarps.

Polystyrene (PS). Generally your styrofoam products. Found in items ranging from egg cartons to disposable cutlery. It is also used for packaging in foam 'peanuts.' This plastic is difficult to recycle.

Other plastics include polyurethane and polyethylene foams, acrylics and other miscellaneous plastics.

Types of Plastic Waste

- Packaging
- Reels
- Containers/ bottles
- Strapping
- Shrink wrap
- Polystyrene (styrofoam)
- Pipe
- Bags
- Foam (polyethylene/ polyurethane)

Plastics as Waste

In 2004, Calgary's ICI (Industrial, Commercial and Institutional) and C & D (Construction and Demolition) market sectors were estimated to produce 831,500 tonnes of waste. As of 2004, 73,743 tonnes of plastic (14.1%) was put into Calgary's landfills by the ICI sector alone.[2] This is unfortunate because plastic is also one of the easiest waste materials to divert from the landfill, along with wood, metal, paper/cardboard, drywall, and concrete & asphalt.

Alternatives to dealing with Waste Plastic

- Buy from suppliers that use limited packaging
- Get manufacturers to take back their product for reuse where possible
- Look for areas in your operations where you could reuse your plastic waste
- Replace polystyrene products where possible with packaging material that is easier to recycle

- Reuse polystyrene foam packing "peanuts" and "popcorn" for your own products or by donating or selling them to businesses listed under "Packaging Services" in your yellow pages
- Sort and recycle your plastic with local recyclers

Did you know...

- Packaging is the largest single use of plastics.[3]
- Plastics can take up to 400 years to break down in a landfill. Recycled pop bottles can be used in carpets, fiberfill for pillows, sleeping bags and ski jackets, and can also be made into T-shirts, sweaters, automotive parts, and floor tiles.[4]
- Recycling just one plastic bottle can save the same amount of energy needed to power a 60-watt light bulb for 6 hours![5]

Recycled Plastics Journey

The various types of plastics are compacted and baled then shipped to a plastic processing facility. Here, the bales are either accepted or rejected based on their 'contamination' level. Plastic is contaminated if it is unclean, or contains bottle tops, wrong colours or types of plastics. If the plastic is accepted it is unbaled and shredded, sometimes palletized, and shipped to manufacturers of plastic goods. The manufacturer then melts these shreds or pellets for molding into new products. These new products can include anything from containers and shrink-wrap to carpet and clothing.

Success Stories

Green Calgary's Commercial Environmental Services program has assisted hundreds of companies to recycle everything from lumber tarps to plastic oil containers. To date, more than 280,000 kilograms of plastic has been diverted from the landfill, saving companies $14,000 in saved disposal costs.

For a list of plastic recyclers please visit our online recycling directory. For further questions please email Green Calgary's Commercial Environmental Services program or visit our website.

References

1 Source: American Chemistry Council

http://www.americanchemistry.com/s_plastics/doc.asp?CID=1102&DID=4644 (Last accessed Aug 3, 2009)

2 EBA Engineering Consultants Ltd. 2006. Executive Summary: The City of Calgary ICI/C&D Waste Characterization Study Prepared for: The City of Calgary, Waste and Recycling Services.

3 Source: http://portal.citysoup.ca/NR/exeres/444FF708-8632-4016-BDA6-0B08137557FC.htm (Last accessed Aug 3, 2009)

4 Source: Environment and Plastics Industry Council

http://www.cpia.ca/epic/media/default.php?ID=1552. (Last accessed Aug 3, 2009)

5 Source: http://www.ollierecycles.com/uk/html/plastic_facts.html (Last accessed Aug 3, 2009)