

# Profiles in Garbage

BY CHAZ MILLER

## Plastic Film

Variety and unique characteristics make plastic film difficult to recycle.

**P**lastic film is a thin gauge packaging medium used as a bag or a wrap. Examples include grocery sacks, trash bags, drycleaning bags and plastic wrap. Plastic film is less than ten mils in thickness, with an average of 0.7 - 1.5 mils. A mil is 0.001 inch. Most plastic trash bags are less than 1.0 mil in thickness.

Plastic film provides 6 percent of all packaging, 33 percent of plastic packaging and 19 percent of all plastic in the waste stream. Flexible packaging includes plastic film, paper bags, aluminum foil and cellophane. More than half of flexible packaging is plastic. Paper packages make up most of the rest, with aluminum foil supplying a small percentage.

Different resins and colors make plastic film difficult to recycle. More than 60 percent of plastic film uses low density polyethylene (LDPE) or linear LDPE resin and approximately half of plastic film is pigmented.

Many films also blend or coextrude two or more resins. Also, individual product characteristics may create remanufacturing problems. For instance, stretch wrap requires a "tackifier" to make the wrap cling, yet this product quality is not desired in a bag. ■

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#### SOURCES:

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Flexible Packaging Association, [www.flexpack.org](http://www.flexpack.org)  
"Municipal Solid Waste Generation, Recycling, and Disposal in the United States: Facts and Figures for 2006," Office of Solid Waste, [www.epa.gov/osw](http://www.epa.gov/osw)  
Catalog Choice, [www.catalogchoice.org](http://www.catalogchoice.org)  
"Measurement Standards and Reporting Guidelines," National Recycling Coalition, [www.nrc-recycle.org](http://www.nrc-recycle.org)  
\*Data is from 2006 EPA estimates.

### PLASTIC FILM MUNICIPAL SOLID WASTE (MSW) FACTS

#### Generated:

- 5.71 million tons of plastic film, or 2.27% of MSW by weight.\*
- 1.08 million tons of trash bags, or 0.43% of MSW by weight.\*
- 1.83 million tons of bags and sacks, or 0.73% of MSW by weight.\*
- 2.80 million tons of wrap, or 1.1% of MSW by weight.\*
- 38.14 pounds of plastic film per person per year.\*

#### Recycled:

- 360,000 tons, or 6.3% plastic film recycling rate (includes trash bags, which are not recycled).\*
- 360,000 tons, or 7.8% plastic bag, sack and wrap recycling rate.\*

- 406,000 tons of plastic bags and sacks recycled in 2006 according to industry data.

#### Recycled Content:

- Little, if any, post-consumer recycled content.
- Pre-consumer recycled content is not unusual.
- Recycled content can increase a bag's thickness by 50%.

#### Composted:

- Plastic film does not compost.

#### Incinerated or Landfilled:

- 5.35 million tons, or 3.2% of discarded MSW by weight.\*
- Highly combustible resin averages more

than three times higher Btu value than MSW.

#### Landfill Volume:

- 13 million cubic yards of plastic film, or 3.1% of landfilled MSW.
- 2.4 million cubic yards of trash bags.
- 4.4 million cubic yards of bags and sacks.
- 6.2 million cubic yards of wrap.
- Density:
  - Landfilled plastic film weighs 670 pounds per cubic yard.
  - A 30-in. x 42-in. x 48-in. bale of plastic film in a horizontal baler, will weigh approximately 1,100 pounds.

#### Source Reduction:

- Plastic grocery bags are now .5 mils thick, down from 2 mils when they were first made.
- A laundry detergent flexible pouch weighs 85 percent less than a rigid plastic bottle.

#### Recycling Markets:

- Plastic lumber is the primary market.
- strict raw material Specifications:
- Sort by resin, color and printed versus non-printed bags for highest value.
- Labels, dirt, food are the main contaminants.
- Other contaminants include paper receipts, staples, and other non-plastics.

### Plastic Film MSW Percentage & Recycling

