



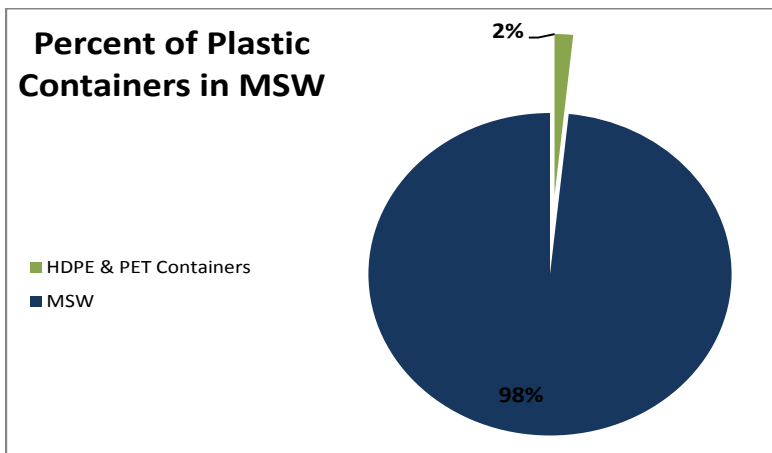
Plastics

What are Plastics? (1) One of many high-polymeric substances, including both natural and synthetic products, but excluding the rubbers. At some stage in its manufacture, every plastic is capable of flowing, under heat and pressure if necessary, into the desired final shape. (2) Made of plastic; capable of flow under pressure or tensile stress. (Plastics Engineering Handbook of the Society of the Plastics Industry, Inc., edited by Michael L. Berins, 1991).

What do the Numbers on the Bottom Mean? Plastics can be manufactured from a wide variety of materials and chemical compositions and are often hard to distinguish from other plastic types, in 1988 the Society of the Plastics Industry developed numbered codes to support their identification and recycling. These “resin codes”, typically found in concert with the recycling arrows, do not mean a material is recyclable, only what material they are made from. The chart on the next page identifies the code number, the corresponding material and types of products made from each type of plastic.



Can We Market Plastics? The greatest challenge to plastics recycling is volume. Small communities rarely generate enough volume of a specific type of plastic to be able to market it successfully. Accumulating over 40,000 pounds of #1 bottles might take several years for a small community. The only options are to sell these materials well below market value to a processor or broker, or to sell materials from several communities to the same buyer, or cooperative marketing.



Why are Only #1 and #2 Plastics Commonly Recycled? Probably not. “It’s safe to say that plastics with the resin code 3-7 are not recyclable and should be avoided by consumers,” says Mark Murray, executive director of Californians Against Waste. With the exception of a few model programs like that of Stonyfield Farms and Recycline—which turns used #5 yogurt cups into Recycline toothbrushes and razors—there is almost no domestic market for plastics #3–7. When municipalities do accept the higher numbered plastics, it’s often because they are under pressure from the public to take them. Some communities will accept #3-7 in an effort to simplify their program for consumers. The #3-7’s are then sorted out and frequently landfilled and not recycled as their are very limited markets for these types of plastics. This simpler sorting requirement, however, has proven to



generate significantly larger volumes of the very marketable #1 and #2 bottles. Until markets for these plastics develop it is best to avoid them and to seek out products in other readily recyclable packaging.

What About Tubs vs Bottles? Even though plastic bottles and tubs might have the same number inside their recycling symbols, they are not really made of identical material. Bottles are produced through one kind of molding process and tubs through another, and these two processes require different plastic mixtures that melt at different temperatures. If these plastic containers are recycled together, the result is a mixture of material that has little value in a second round of manufacturing. If separated, they each have greater value. Unfortunately, even when plastic tubs are collected separately, they have relatively little value as a material to manufacturers.

Resin Code	Abbreviation	Polymer Name	Uses once recycled
	PETE or PET	Polyethylene terephthalate	Polyester fibres, thermoformed sheet, strapping, soft drink bottles.
	HDPE	High Density Polyethylene	Bottles, grocery bags, recycling bins, agricultural pipe, base cups, car stops, playground equipment, and plastic lumber.
	PVC or V	Polyvinyl Chloride	Pipe, fencing, and non-food bottles.
	LDPE	Low Density Polyethylene	Plastic bags, various containers, dispensing bottles, wash bottles, tubing, and various molded laboratory equipment.
	PP	Polypropylene	Autoparts, industrial fibers, food containers.
	PS	Polystyrene	Desk accessories, cafeteria trays, toys, video cassettes and cases, insulation board and expanded polystyrene products (e.g. Styrofoam).
	Other	Other Plastics	Other plastics, including acrylonitrile butadiene styrene acrylic, polycarbonate, polylactic acid, nylon and fiberglass.