

Resources

More information on plastic and other related topics can be found online at:

Center for Health & Hygiene in the Home and Community
www.simmons.edu/hygieneandhealth

The Green Guide
www.thegreenguide.com

PlasticsInfo
www.plasticsinfo.org

U.S. Food and Drug Administration
www.fda.gov

American Chemistry Council
www.biosphenol-a.-org

Environmental Protection Agency
www.epa.gov/endocrine/about.html

American Council on Science and Health
www.acsh.org

Products:
www.kleankanteen.com
www.mysiggs.com
www.rubbermaid.com



*Center for
Health & Hygiene
in the Home & Community*

The Center for Health and Hygiene in the Home and Community serves as a national and international resource for information and education, applied research, professional training and conferences. The Center focuses on issues relating to hygiene and infection control in areas such as:

- consumer food safety
- home hygiene
- daycare
- preschool
- homecare
- sports and leisure activity
- travel and hospitality

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Decoding Plastic



May 2008

Plastics are classified according to the different resin used to make them. Each different resin is given a number that is identified, within a triangle, on the bottom of the item. These numbers are provided primarily for recycle purposes although can be used to inform consumers about the chemicals used to make the products. Plastic is the most abundant manmade material in the United States.

Plastic Resin Types

#1

SAFE*

PET (polyethylene terephthalate)

*"single use" items

Disposable water and soda bottles

#2

SAFE

HDPE (high density polyethylene)

Toys

Milk containers

Shampoo bottles

Liquid detergent bottles

#3

AVOID

PVC (polyvinyl chloride)

Cling wrap

Cooking oil bottles

Salad dressing bottles

Store packaged meat wrap

Baby teething rings



Polyvinyl chloride contains phthalates, a "plasticizers" used to soften plastic and make it more durable.

Phthalates can be found in anything made of vinyl, including many children's toys, food wrap, and disposable containers. Animal studies have shown phthalates to be carcinogenic and exposure to them is potentially dangerous to the development of the male reproductive tract.

The European Union (EU) requires manufacturers to provide public toxin data on all chemicals used in production before an item is allowed to go to market. Japan and Europe have banned the use of some all phthalates in toys and cosmetic products.

#4

SAFE

LDPE (low density polyethylene)

Produce bags

Grocery bags

Sandwich bags

#5

SAFE

PP (polypropylene)

Yogurt containers

Diapers

Drinking straws



#6

AVOID

PS (polystyrene)

Styrofoam

Take-out containers

Disposable coffee cups

Polystyrene can leach styrene, considered to be a human carcinogen, into food. Styrene is also thought to be interfering with human reproductive development

#7

SAFE

"Other"

PLA (polylactide)

*plant-based plastics

*made from renewable sources (sugar, potatoes, corn, starchy food)

*cannot recycle, can put in compost heap

AVOID

PC (polycarbonate)

Medical storage containers

Some reusable water containers

Reusable stain-resistant food containers

Baby bottles

Lining of canned goods

Lining of soda cans

Polycarbonate plastics are made with the chemical bisphenol A (BPA). Animal studies suggest BPA can cause breast cancer, thyroid cancer, prostate cancer, and reproductive problems. Individuals who are at the highest risk for detrimental BPA contamination are fetuses, infants and children because their organs are still developing. Research has shown that the older the plastic container, the more BPA is leached into food and water and that the rate of BPA leaching increases substantially when the PC plastic is heated. Cleaning PC plastics with harsh detergents, like bleach and dishwasher detergent, increases the amount of chemicals that leach out.

Legislation has been proposed in the United States to eliminate BPA from all children's products including baby bottles and toys. Proposed legislation also requires the US Centers for Disease Control and Prevention to thoroughly investigate the effects of BPA contamination to humans.

How to Safely Use Plastic

Four types of plastic are safer to use, they are not known to leach harmful chemicals:

- #1 PET (single use only)
- #2HDPE
- #4 LDPE
- #5 PP

Cooking

Only containers or plastic wrap labeled "microwave-safe". Without this label there is no assurance that an item was tested for safety. Most carryout containers, margarine tubs, and plastic grocery bags are not meant to be used in the microwave.

Water Bottles

- Wash new water bottles with warm soapy water, allow to air dry
- Replace water bottle every 6 months, or when it appears worn
- Do not leave water bottle in direct sunlight
- Do not wash in dishwasher or with harsh detergents
- Do not use bottles in the microwave
- Do not use for hot beverages

Recycling

The majority of plastics are recyclable, although PET (#1) and HDPE (#2) are the most commonly accepted numbers in the United States. Call your local recycling facility to find out what other types of plastic they recycle.

Alternatives to Plastic:

- Stainless steel - reusable, lightweight, but do not freeze or fill with hot liquids. Popular brands are Klean Kanteen water bottles and Rubbermaid's Chuggables
- Glass - use for baby bottles and food preparation
- Enamel coated aluminum - Sigg is a popular brand
- Corn-based - reusable bottles use no plastic or petroleum based materials