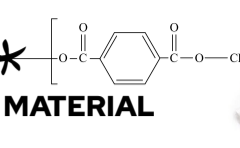


WHAT ARE PLASTICS?

PLASTICS ARE A POLYMERIC MATERIAL

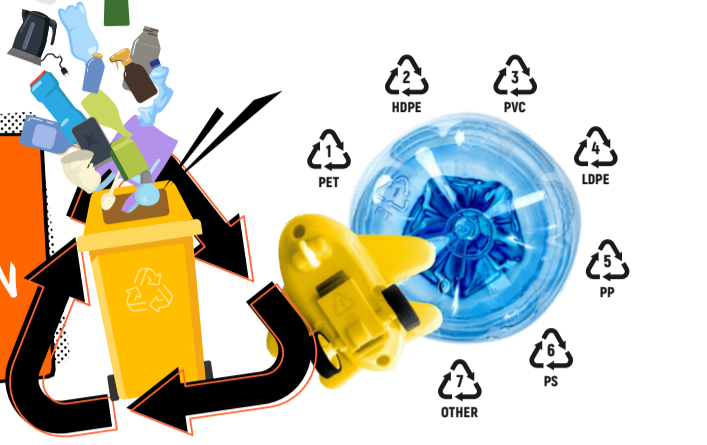


made primarily from fossil fuel-based chemicals like natural gas or petroleum; however, recent industrial methods use variants made from renewable materials, such as corn or cotton derivatives. Their plasticity makes it possible for plastics to be moulded, extruded or pressed into various shapes while soft, and then set into a rigid or slightly elastic form. Plasticity, combined with properties like low density, low electrical conductivity, transparency, and toughness allows plastics to be converted into a wide variety of products for multiple industries.

*Polymers are chemical compounds whose molecules are very large, often resembling long chains made up of a seemingly endless series of interconnected links.

TYPES OF PLASTICS

In 1988 the Society of the Plastics Industry introduced **THE RESIN IDENTIFICATION CODE**



The Society of the Plastics Industry introduced its Resin Identification Coding (RIC) system to classify different types of plastic. The intent was to provide a consistent system to facilitate recycling of post-consumer plastics. In its original form, the symbols used as part of the RIC consisted of arrows that cycle clockwise to form a triangle that encloses a number.

PET
POLYETHYLENE TEREPHTHALATE

Most commonly used plastic in the world. It has good gas and moisture barrier, keeping oxygen out and carbonation in, and is mainly used to package food and drinks. Higher temperatures can cause toxins to leach from PET.

- APPLICATIONS
- SODA AND WATER BOTTLES
 - ROPE
 - COMBS
 - POLYESTER T-SHIRTS AND CLOTHES
 - CARPET FIBER



EASY TO RECYCLE

TOXICITY HIGH

This plastic is relatively safer on account of its non-transmitting properties.

- APPLICATIONS
- GROCERY BAGS
 - MILK AND JUICE CONTAINERS
 - SHAMPOO AND SOAP BOTTLES
 - BUCKETS
 - PLANT POTS & GARDEN FURNITURE

HDPE
HIGH-DENSITY POLYETHYLENE

PVC
POLYVINYL CHLORIDE

Polyvinyl chloride is a hard plastic that is known for its long-term stability, good weathering ability, and chemical resistance. PVC is known to leach toxins throughout its entire life cycle, making it one of the most poisonous plastics.

- APPLICATIONS
- PLUMBING PIPES
 - CREDIT CARDS
 - FLOOR COVERING
 - WINDOW AND DOOR FRAMES
 - TOYS



DIFFICULT TO RECYCLE

TOXICITY HIGH

Low-density polyethylene is the softer, clearer and more flexible version of HDPE. LDPE is considered to be one of the less toxic plastics and can be reused for food products. However, it is tougher than HDPE to recycle.

- APPLICATIONS
- BUBBLE WRAP
 - SANDWICH & BREAD BAGS
 - SQUEEZABLE BOTTLES
 - GARBAGE BAGS
 - FOOD STORAGE CONTAINERS AND LIDS

LDPE
LOW-DENSITY POLYETHYLENE

PP
POLYPROPYLENE

Polypropylene is a hard but flexible plastic with a high melting point and excellent chemical resistance. It is very resistant to fatigue, and usually used for making living hinges - the thin piece of plastic that allows a part of a product to fold or bend.

- APPLICATIONS
- TAKEAWAY FOOD CONTAINERS
 - ICE CREAM TUBS AND YOGHURT CONTAINERS
 - HINGED LUNCH BOXES
 - THERMAL VESTS
 - DISPOSABLE DIAPERS & SANITARY PAD LINERS



MEDIUM EASE OF RECYCLING

TOXICITY LOW

Polystyrene is commonly known as Styrofoam. It is a highly toxic plastic that is affected by fats, solvents, and heat and should avoid being used for fatty or hot food and drinks.

- APPLICATIONS
- DISPOSABLE FOAM CUPS
 - TAKEAWAY FOOD CONTAINERS
 - PLASTIC CUTLERY
 - EGG CARTONS
 - FAST-FOOD TRAYS

PS
POLYSTYRENE

DIFFICULT TO RECYCLE

TOXICITY HIGH

OTHER
MISCELLANEOUS TYPES OF PLASTIC

All types of plastic resins that don't belong in any of the other six categories or a combination of these plastics fall under Type 7. Some of the plastics in this category include polycarbonate, acrylic, fiberglass, nylon, and acrylonitrile styrene. This category also includes a newer type of plastic, polylactic acid (PLA), a bioplastic that is non-recyclable but can be composted.

- APPLICATIONS
- BABY BOTTLES & SIPPY CUPS
 - WATER COOLER BOTTLES
 - EYEGLASSES & SAFETY GOGGLES
 - CAR BUMPER & SUNROOFS
 - BULLET-PROOF MATERIALS



VERY DIFFICULT TO RECYCLE

TOXICITY HIGH

SO, WHICH PLASTICS ARE TOXIC, AND WHICH ARE SAFE TO USE?