Know Your Plastics









PET or PETE

Polyethylene Terephthalate

Moderate Hazard

PET plastic breaks down and after recycling it seeps into liquid and food

Plastics And Sustainability?

Can Plastics And Sustainability go hand in hand?

What Is Plastic?

A plastic is a synthetic or man-made polymer which is similar to resins found in trees and other plants in many ways.

Gas



Petrochemistry

Gasoline

Kerosene

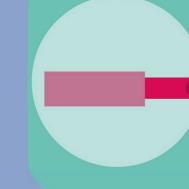
Heavy Fuel oils

Diesel

Bitumen

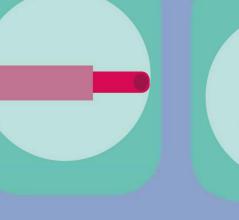


Milk Containers





Cosmetics



Plastic Bags Shampoo Bottles



HDPE High Density Polyethylene

Low Hazard









Endocrine Disruption

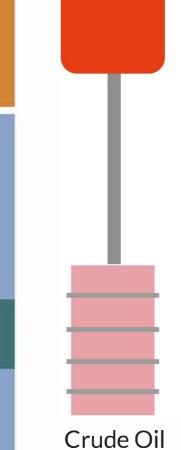






LDPE Low Density Polyethylene

Low Hazard



Furnace

380℃

How are Plastics made?

Crude Oil & natural gases

Chemical 'plasticizers' are added to harden and softern

Other additives inc. bacteria, heat, light, color friction





Bottle Caps



Straws



Yogurt Tub



Polypropylene

Low Hazard



Pills Bottles









Polystyrene

Hazard

Styrene can leach from polystyrene. This can lead to nervous system damage and cancer









Other

Hazard

Leaches BPA which Causes endocrine disruption and reproductive Toxicity

Raw Materials

Oil and natural gas are the major raw materials used in manufacturing plastics. The plastic production process often begins by treating components of crude oil or natural gas in a "cracking process."this process results in the conversion of these components into hydrocarbon monomers such as ethylene and propylene.

Further processing leads to a wider range of monomers such as styrene vinyl chloride, ethylene glycol, terephthalic acid and many others. These monomers are then chemically bonded into chains called polymers. The different combinations of monomers yield plastics with a wide range of properties and characteristics.

Plastics are divided into two distinct groups: Thermoplastics, these can be heated and reformed repeatedly. The second are Thermosets, these are decomposed on reheating rather than melting.

SUSTAIN BY DESIGN

Sustain by Design was a studio on investigating the Sustainable Development Goals in creative and critical ways. Art and Design students engaged with specific issues on the ground in Bangalore, India.

SDGs Project Lead: Forum for Law, Environment, Development and Governance (FLEDGE).

Poster created in collaboration with: Graduate students at the Srishti Institute of Art, Design and Technology: Ampika Gupta, Pranjal Jain, Shreyas Dhuliya and Tejasvi Srinivas Babu.







