Sustainability Key Terms

Advanced Recycling

(also called chemical recycling) refers to several different technologies that convert post-use/ hard-to-recycle plastics, that would otherwise end up in landfills, into their original building blocks, specialty polymers, or feedstocks for new plastics, fuels, waxes, and other valuable products.

Biodegradable Polymers

Biodegradation is a chemical process during which microorganisms in the environment convert materials into natural substances such as water, carbon dioxide, and compost, without using artificial additives. This process depends on the surrounding environmental conditions such as location and temperature.

Bio-Based Polymers

A polymer that is partly or fully derived from biomass (plants). Biomass used to make bioplastics can be sourced from corn, sugarcane, cellulose or starch. Not all biobased plastics are biodegradable, although some are biodegradable as well. Bio-based only refers to what is used to make the material and does not imply what happens at the end of its life.

Bio-Composite Polymers

Polymers reinforced with natural fibers such as wood fiber, hemp, rice hulls, etc., instead of synthesized fibers such as glass or carbon.

Bioplastics

Bioplastics represent a large, diverse family of products with different properties. According to European Bioplastics, a plastic is considered a bioplastic if it is either bio-based, biodegradable, or features both properties. The three main group of bioplastics are 1) bio-based or partially biobased, non-biodegradable plastics such as bio-based PE, PP, PET 2) plastics that are both bio-based and biodegradable including PHA, PLA, cellulose acetate, and 3) plastics that are based on fossil resources and are biodegradable such as PBAT.

Carbon Emissions

Polluting carbon substances released into atmosphere: carbon dioxide and carbon monoxide produced by motor vehicles and industrial processes and forming pollutants in the atmosphere.

Carbon Footprint

A carbon footprint is an estimate of how much carbon dioxide is produced to support your lifestyle. Essentially, it measures your impact on the climate based on how much carbon dioxide you produce. Factors that contribute to your carbon footprint include your travel methods and general home energy usage. Carbon footprints can also be applied on a larger scale, to companies, businesses, even countries.

Circular Economy

A circular economy is a systemic approach to economic development designed to benefit businesses, society, and the environment. In contrast to the 'take-make- waste' linear model, a circular economy is regenerative by design and aims to gradually decouple growth from the consumption of finite resources.

Climate Change

Climate change refers to any significant change in measures of climate (such as temperature, precipitation, or wind) lasting for an extended period (decades or longer).

Composting/Compostability

A process that breaks down organic matter through the use of fungi, bacteria, insects, worms and other organisms to create a nutrient-dense 'compost'. This compost can then be used as a powerful fertiliser and soil conditioner. Note that biodegradable does not equal compostable. Criteria for determining if a product is compostable are defined by ASTM D6400 & D6868 standards in the United States, EN 13432 for the European marketplace, and AS 4736-2006 in Australia.

Information Technology Equipment (ITE)

Post-consumer recycled content sourced from information technology equipment.

Linear Economy

A linear economy traditionally follows the "take-make-dispose" step-by-step plan. This means that raw materials are collected, then transformed into products that are used until they are finally discarded as waste. Value is created in this economic system by producing and selling as many products as possible.

Life Cycle Analysis (LCA)

A method used to evaluate the environmental impact of a product through its life cycle encompassing extraction and processing of the raw materials, manufacturing, distribution, use, recycling, and final disposal.

Mass Balance

An accepted and certified protocol that documents and tracks recycled content through complex manufacturing systems. It's used when sustainable inputs like recycled plastic are mixed with traditional inputs like fossil-fuel-based feedstock.

Materials Recovery Facility (MRF)

Line of business where recyclable material is processed, separated, and sold. This is a facility where recyclable materials are sorted and processed for sale. This process includes separating recyclable materials (manually or by machine) according to type, and baling or otherwise preparing the separated material for sale.

Mechanical Recycling

Mechanical recycling of plastics refers to the processing of plastics waste into secondary raw materials or products, by grinding, washing, separating, drying, re-pelletizing, and compounding recyclate, without significantly changing the chemical structure of the material.

Ocean Bound Plastics

Defined by UL and OceanCycle as post-consumer plastic waste that has not yet reached the ocean but is at risk of entering waterways due to a lack of formal waste management and proximity to oceans.

Post-Consumer Recycled (PCR) Content

Reclaimed material from homes and businesses.

Post-Industrial Recycled (PIR) Content

Imperfect products, scraps, and leftovers recovered from a factory.

Recycled Content

Products containing a percentage of reclaimed materials; recycled can include post-industrial as well as post-consumer feed streams at various percentage levels.

Specialty Products

Defined as products that enable enhanced performance; materials can help in light-weighting or down-gauging material usage, thinning required layers without sacrificing performance, as well as allowing for the introduction of recycled material streams.

Sustainability

Creating and maintaining the conditions under which humans & nature can exist, in productive harmony, to support present & future generations.

Zero Net Waste

Achieving Net Zero Waste means reducing, reusing, and recovering waste streams to convert them to valuable resources with zero solid waste sent to landfills over the course of the year.