



Product Description

Plastic products are used for a variety of purposes, and include consumer goods made of plastics such as thermoplastics (e.g., polyolefins, polyethylene terephthalate (PET), polyvinyl chloride (PVC), styrenics, polyamides, polycarbonates, and polyester), thermosets (polyurethane), and bioplastics (e.g., PLA).

Mission

The mission of The Sustainability Consortium (TSC) is to improve the sustainability of products when they are made, purchased, and used, with a focus on manufacturers and the retail buyers who decide what products to carry in stores. The information in this document is drawn from our detailed research on known and potential social and environmental impacts across product life cycles. TSC acknowledges that other issues exist, but we have included here those that are most relevant to the decision making of retail buying teams and manufacturers. The topics are listed alphabetically for ease of reading; the order does not represent prioritization or other criteria.

Sustainability Insights



Consumers

Consumer Health and Safety

Products with plastic can contain chemicals that, depending on use and exposure, may be harmful to humans if consumed. Product manufacturers should determine whether such chemicals are in their products and strive to reduce, eliminate, or restrict their use. Manufacturers should work with their supply chains to exclude hazardous materials from their products, understand what risks may be present in their raw materials, and assess alternatives.

Disposal and End-of-Life

Disposing of plastic improperly wastes materials and resources that might otherwise be used again, and plastic that becomes litter or is improperly burned can harm people and the environment. Manufacturers should educate consumers about proper disposal and participate in programs to recover end-of-life plastic for recycling into new products or use as a fuel source.



Managing the Supply Chain

Pollution

Plastic pellets used to make products can fall off transport carriers or spill during transfers along the supply chain, posing a threat to waterways and the land animals that consume them. Manufacturers should establish practices to prevent the loss of plastic pellets and engage in stewardship and clean-up programs to mitigate the problem.



Use of Resources

Climate and Energy

Processing and final product manufacturing of plastic products consume significant amounts of electricity and energy, leading to

greenhouse gas emissions. Manufacturers should procure from suppliers that help abate these impacts by measuring, tracking, and reporting energy use and greenhouse gas emissions, with a focus on reduction. They should also perform preventative maintenance on equipment, replace inefficient equipment, use renewable energy sources, and encourage efficient energy behaviors throughout their operations.

Material Efficiency

Production of plastics depletes both energy and material resources, and improper disposal can represent a loss of otherwise reusable material and the potential release of pollutants. Manufacturers should minimize these impacts by designing products that optimize durability while using the least possible amount of material overall, as well as more material that is recyclable and comes from recycled sources.

Packaging

Packaging design should be optimized to ensure that packaging performs its essential functions of containment and protection while minimizing use of materials, energy resources, and environmental impacts across the life cycle of the packaged product. Under-packaging and over-packaging can both lead to increased impacts. These impacts may be mitigated by using more energy-efficient manufacturing, creating packaging materials from renewable resources, designing packaging to be recyclable, and encouraging consumer recycling.



Workers and Communities

Workers

Workers may be exposed to chemicals, dust, noise, or other industrial hazards. To help ensure worker health and safety, manufacturers should have a documented health and safety management plan, including a chemical management plan where needed, and provide safety training and personal protective equipment to workers. Manufacturers should procure materials from suppliers that address worker health and safety transparently and should perform audits when needed.