How the EPEAT Ecolabel Helps You Address Plastics

The EPEAT ecolabel empowers purchasers to meet their organizational sustainability goals through their purchasing decisions. Products available through EPEAT include computers, monitors, copiers, mobile phones, televisions, and servers. EPEAT is just one of several sustainable purchasing resources freely available from the Green Electronics Council (GEC).

Why are Plastics a Sustainability Concern?

Many electronic products rely on plastic for their "housing" or "casing," the thing that holds the product together and impacts the look and feel of the device. Decisions on what plastic to use in a housing/casing are driven by considerations such as strength, scratch resistancy, aesthetics, and weight, as well as functional demands such as reducing radio frequency interference (RFI) and ensuring flame retardancy.

Plastic has an increasingly recognized environmental cost. The extraction of fossil fuels necessary to make plastics is the source of risks, including air and water pollution, soil contamination, risk of spills, and health threats to workers. Once fossil fuels are extracted, the plastics production process can release dangerous toxins into the air and water, such as acetone, styrene, benzene, and volatile organic compounds. This process is also hazardous to

plastic production workers, who face the risk of chemical spills, chemical fires, and exposure to toxic vapors. Once a plastic product has reached the end of its useful life, if it is not recycled, it can remain in the environment for more than 100 years, leaching microplastics and chemical additives that end up in our food, our water, and our bodies. Additionally, burning of the plastic can release highly toxic dioxins and furans, which are persistent organic pollutants that can accumulate in the environment and food chain.

Recycling of plastics is an excellent way to minimize the extraction and product impacts associated with plastics. But plastics used in electronics have a different polymer composition than recyclable items like soda bottles or milk jugs, which are made from single polymers. Plastics in cellphone cases, for example, are made from a more complex polymer blend, and there are fewer safe or efficient ways to recycle them. Industry has been working to find ways to recycle the abundant amount of mixed-plastic waste in electronics so those plastics could be reused and removed in a way that is environmentally safe and healthy.

Ecolabels such as EPEAT, and the increasing adoption of Circularity are drivers for electronic product designs that improve the quality of plastics recycling, including separability and labeling of plastic parts, and the exclusion of chemicals in plastics such as phthalates, cadmium, lead, and halogenated flame retardants. These design improvements reduce potential exposure to toxins and ensure higher quality and more valuable recycled plastics.

How EPEAT-Registered Products Address Plastics

The EPEAT ecolabel has both required and optional criteria. The required criteria ensure that the product is credibly sustainable, and a product must meet every required EPEAT criterion to be considered an "EPEAT-registered" product. Optional criteria are additional criteria that a manufacturer can choose to have their product meet. By choosing to go beyond the required criteria, manufacturers show their commitment to addressing additional environmental and social issues. The more purchasers prefer recycled, biobased, and recyclable materials, the faster we'll have a world with circular and renewable use of plastics.

Products from different EPEAT categories may address plastics differently because each product category has product-specific criteria.

EPEAT Required Criteria Address Plastics

Required EPEAT criteria address both plastics composition and recyclability. By requiring the use of post-consumer recycled and bio-based plastics, EPEAT criteria ease the extraction of fossil fuels and the production of virgin plastics. These criteria also provide an incentive for manufacturers to incorporate recycled materials into the design of products, creating a high-end market for recycled plastics. At the product's end of life, recyclers need to avoid cross-contamination of plastics with materials unfit for recycling. To address this, EPEAT criteria ensure plastic parts are labeled, separable, and that they do not contain chemicals or metals that are incompatible with recycling.

Using Optional EPEAT Criteria to Address Plastics

When manufacturers choose to meet the optional EPEAT criteria that address plastics, they provide purchasers access to products with higher levels of post-consumer recycled and bio-based content. Manufacturers that use Information Technology Equipment (ITE)-derived recycled plastics are supporting the principals of Circularity.

Examples of optional EPEAT criteria that address plastics include:

- Minimum 35% post-consumer recycled plastic, ITE-derived post-consumer recycled plastic, or bio-based plastic content for desktop computers
- Manufacturer recycles or reuses plastics collected through its cartridge and container take-back program
- Minimum 50% post-consumer recycled plastic, ITE-derived post-consumer recycled plastic, or bio-based plastic content for displays
- Minimum 10% ITE-derived post-consumer recycled plastic content

Finding the EPEAT-Registered Products That Address Plastics

To find products designed to address plastics, purchasers can search the EPEAT Registry at epeat.net. Optional criteria can be found at the bottom of the FILTERS box by clicking on "VIEW ADVANCED SEARCH OPTIONS." Search results will include products that meet all of the selected optional criteria.

Quantifying Your Positive Impact

The Green Electronics Council provides an EPEAT Benefits Calculator that can quantify specific environmental and cost savings associated with the purchase of EPEAT-registered products including energy savings, greenhouse gas emission reductions, non-hazardous solid waste reductions, avoided toxic substances, smog formation potential savings, acidification potential savings, cost savings for non-hazardous solid waste disposal, eutrophication potential savings, and energy cost savings. Additionally, the calculator measures material conservation and water consumption savings, which are direct benefits of both required and optional plastics criteria.

GEC developed the EPEAT Benefits Calculator with the support of the Eastern Research Group (ERG). ERG previously developed and maintained the US EPA Electronics Environmental Benefits Calculator. GEC established an external technical review panel comprised of representatives from government, academia, research institutes, industry, and organizations purchasing IT products to review the data, assumptions, and analysis underlying the benefits calculator.

Need assistance connecting your organization's sustainability priorities to EPEAT criteria?

Contact PurchaserResources@greenelectronicscouncil.org