

What Are Microplastics?

Microplastics

Microplastics are generally defined as small plastic particles less than 5 mm in diameter. Some microplastics are intentionally manufactured, such as cosmetic beads, glitter, seed coatings, and pellets. Others form when solid plastics, synthetic fibers, or tires break down through abrasion, degradation, or chemical processes such as exposure to heat.

Microplastics and smaller nanoplastics can be found throughout the ecosystem, including soil, water, sediment, air, and biota. Human exposure to microplastics can occur through ingestion, inhalation, and contact with skin. Microplastics may be consumed through the ingestion of particles in drinking water or food or from accidental ingestion from soil. Both aquatic and land animals may ingest microplastics, which can transfer up the food chain to humans.

Potential health and environmental effects of microplastics are still being evaluated. The effect of a plastic particle is thought to be dependent on its size, shape, composition, and ability to bind with other chemicals present in the ecosystem. Microplastics may contain or form biofilms with pathogens and other chemical substances, such as BPA (bisphenol A), PCBs, and mercury.

Federal programs such as the Federal Microbead-Free Waters Act of 2015, Save Our Seas 2.0 Act, and Clean Water Act all take steps toward reducing plastic waste in waters. An increasing number of states are implementing laws and regulations aimed at further reducing plastic pollution.

Related Capabilities

Environmental