Avery Dennison Fastener Solutions White Paper

Global July 2024

Packaging White Paper Where & How to Reduce Plastic Waste

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In recent years, there has been growing concern over the environmental impact of single-use plastics, particularly in packaging. Clamshells and blister packs, commonly used in on-shelf packaging applications, contribute significantly to plastic waste. This white paper examines the environmental consequences of unnecessary clamshells and blister packs and advocates for their reduction, particularly in product categories where a sanitary barrier is unnecessary, such as housewares, tools, and pet toys. By eliminating these packaging types, businesses can reduce plastic waste, minimize environmental harm, and meet the growing consumer demand for sustainable products.



The environmental impacts of plastics in packaging result in landfill overflow as well as pollution and resource depletion.



Single-use plastics have become a significant environmental concern due to their persistence in the environment and adverse effects on ecosystems. Clamshells and blister packs, while serving as effective packaging solutions for certain products, often create unnecessary plastic waste, contributing to pollution and ecological damage. This paper aims to shed light on the environmental impact of these packaging types and explore alternatives for reducing their use, especially in product categories where their necessity is questionable.

The environmental impacts of clamshells and blister Packs include:

Plastic Pollution: Clamshells and blister packs contribute to the global plastic pollution crisis. These packaging types are typically made from non-biodegradable plastics such as polyethylene terephthalate (PET) or polyvinyl chloride (PVC), which can persist in the environment for hundreds of years.

Resource Depletion: The production of clamshells and blister packs requires significant amounts of fossil fuels and resources. This not only exacerbates the depletion of finite resources but also contributes to greenhouse gas emissions and climate change.

Marine Pollution: Improperly disposed of clamshells and blister packs often end up in waterways, where they pose a threat to marine life. Marine animals can mistake these plastic fragments for food, leading to ingestion, entanglement, and death.

Landfill Overflow: Despite efforts to recycle plastics, a considerable portion of clamshells and blister packs still end up in landfills. Over time, these landfills may overflow, contaminating soil and water sources and releasing harmful chemicals into the environment.



In many product categories, the use of clamshells and blister packs may be unnecessary, particularly when a sanitary barrier is not essential. Examples include:

Housewares: Items such as kitchen utensils, storage containers, and home decor often do not require a protective barrier against contamination. Packaging these products in clamshells or blister packs adds unnecessary plastic waste.

Tools: Hand tools, power tools, and hardware accessories typically do not need a sanitary barrier. Packaging these items in alternative, more sustainable materials can significantly reduce plastic waste.

Pet Toys: Toys for pets, such as chew toys and balls, do not require the same level of protection as food or medical supplies. Using eco-friendly packaging alternatives can help mitigate the environmental impact of pet toy packaging. Tools, housewares and pet toys are product categories where clamshell or blister packs may not be necessary.





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Below are some recommendations for plastic packaging reduction:

Explore Alternative Packaging Solutions: Businesses should explore alternative packaging solutions such as the Avery Dennison Industrial Elastic Staple System. This alternative offers as much as 99% reduction in single-use plastics.

Maximize The Implementation of Design Changes: Assessing your full product portfolio and redesigning product packaging to eliminate the need for clamshells and blister packs across as many items as possible will result in the greatest reduction of plastic waste.

Educate Consumers: Educating consumers about the environmental impact of clamshells and blister packs and the changes you're making can raise awareness and drive demand for sustainable packaging alternatives. Promoting eco-friendly packaging choices can encourage responsible consumer behavior.

The widespread use of clamshells and blister packs in on-shelf packaging applications contributes to plastic pollution and environmental degradation. By eliminating unnecessary clamshells and blister packs, particularly in product categories where a sanitary barrier is unnecessary, businesses can reduce plastic waste and minimize their environmental footprint. Adopting sustainable packaging alternatives and educating consumers about the importance of eco-friendly packaging choices are essential steps towards building a more sustainable future.

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