

SUSTAINABLE
PACKAGING



ENVIRONMENTAL IMPACT OF PACKAGING: THE COMPLETE PICTURE

Packaging plays an important role in protecting and safely transporting the products we buy and in many cases, we couldn't do without it. In determining the "environmental impact" of any packaging it is essential to evaluate the complete set of factors relating to the entire life cycle of that packaging. The factors include the environmental impacts in making the package, using the package and recycling the package.



In making the packaging, HOW MUCH:

- Water is consumed?
- Greenhouse gas is emitted?
- Energy is consumed?
- Natural resources are consumed?

REDUCE REUSE RECYCLE REDUCE REUSE RECYCLE

After it is made, HOW MUCH:

- Fuel is required to move it, given the weight?
- Waste is generated from it?
- Energy is required to recycle it?



To ensure the least amount of environmental impact in packaging, we need be able to provide the best combination of protection for handling products and minimized overall resource use, pollution and waste generation.

WHY IS MINIMAL PACKAGING GOOD FOR THE ENVIRONMENT?

There is strong correlation between system weight and energy requirements, greenhouse gas and solid waste. The heavier the packaging is, the more material it consumes, the more energy it takes to make, the more fuel is required to move it, the more waste is created, and the more energy is required to recycle it.

When packaging is subjected to an environmental test, the determinant of potential benefit or harm is mass. This is why the Hi-Cone carrier is highly sustainable packaging. Because the Hi-Cone ring carrier is so light in weight, there are lower overall environmental burdens for production and there are less pounds of post consumer packaging waste to manage at its end of life.



HOW DOES THE RING CARRIER COMPARE?

Ring carriers, compared with plastic shrink film and paperboard that are used in similar packaging applications, almost always generate the least amount of solid and water-born waste, use less energy and release the fewest emissions into the environment.

THINK LIFE CYCLE

Hi-Cone recognizes that we all share a responsibility to sustain our environment. Minimizing the amount of packaging sent to waste landfills is important. Studies show that nothing breaks down quickly in our landfills, including paper. Entombed in landfills, “biodegradable” materials are slow to decompose because they are sealed away from air and water. Of the three major packaging types used for beverage multipacks (plastic shrink film, paperboard and ring carriers), ring carriers offer the greatest opportunity to reduce volume in landfills. Less material going into landfills is better for everyone.

REDUCE REUSE RECYCLE REDUCE REUSE RECYCLE REDUCE

Manufacturers and consumers must take a hard look at the choices of packaging on products we buy and sell. We need to see what can be done to address some of the deficiencies in the end-of-life options for packaging. Packaging, at the end-of-life, is perceived as waste. It is actually unutilized materials and energy. When recycled as waste to energy, photodegradable carriers offer a high energy source when incinerated, producing non-toxic residue. When recycled, they can be used in a wide variety of products.



RECYCLING

Recycling is the best way to preserve our environment and our natural resources. Recycling packaging reduces waste in our landfills, reduces water pollution, protects wildlife and is for good for the environment.

While ring carriers are only a very small portion of the total litter problem, they too represent unutilized resources and energy that ends up as waste. Reclaiming these in your local recycling programs, wherever #4 LDPE or mixed plastics are collected, is the best way to recycle your rings. Here are two good sources to check to see if #4 LDPE is collected in your area:

— **Earth911** (www.earth911.com)

— **1800recycling** (www.1800recycling.com)

If, however, recycling of #4 LDPE does not exist in your area, you can join our Ring Leader Recycling Program.

RING LEADER RECYCLING

Hi-Cone collects used ring carriers through its award-winning, Ring Leader Recycling Program. The program, designed for both formal and informal educational venues, implements the “Three R’s” process of Reduce, Reuse, & Recycle with the use of Hi-Cone carriers. Participants in the program collect ring carriers and ship them back to Hi-Cone. The ring carriers are used in open loop recycling to make a variety of industrial products.



More than 12,000 schools, business and groups around the world have participated in the Ring Leader Recycling Program and helped to save the environment. For more information, visit www.ringleader.com

REUSE RECYCLE REDUCE REUSE RECYCLE REDUCE

HOW HAS THE PHOTODEGRADABLE CARRIER REDUCED THE THREAT TO WILDLIFE?

Unfortunately, we cannot stop careless littering. To help minimize the problem, Hi-Cone developed a photodegradable ring carrier, which breaks down naturally in the environment. Since 1988 every ring carrier we sold in North America (globally since 1992) has been photodegradable.

The photodegradable carrier starts to lose its strength very quickly after exposure to sunlight. Once a carrier has become brittle by exposure to sunlight, it poses minimal risk to wildlife. Since the carrier floats, photodegradation occurs on water as well as land.

Hi-Cone also introduced a ZIPPER® opening feature on some of its carriers. This facilitates container removal by breaking the rings and also mitigates potential for wildlife endangerment.

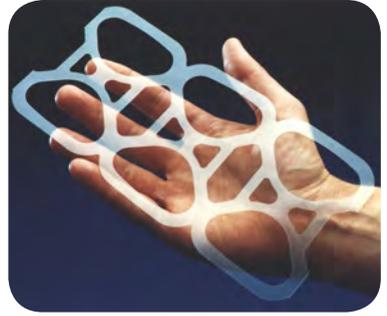


WHAT IS THE LEADING CAUSE OF WILDLIFE ENTRAPMENT?

Environmental myth has a solid hold on the perception that six pack rings are a leading cause of entrapment. While ring carriers are part of the environmental landscape, fact of the matter is fishing line, rope, miscellaneous debris, plastic bags and the like, are far greater risks based on data from The Ocean Conservancy, International Coastal Cleanup, conducted annually since 1988.

HOW DOES THE PHOTODEGRADABLE RING CARRIER BREAK DOWN?

The photodegradable carrier is sensitive to sunlight. The sun's ultraviolet rays cause the carrier to become brittle, so that it breaks down into even smaller and smaller pieces under the effects of wind, rain and other environmental forces.



HOW LONG DOES IT TAKE TO BREAK DOWN?

The ring carrier loses approximately 75% of its strength within days of direct exposure to sunlight. It can become completely brittle in a matter of weeks. The carrier must be exposed to direct or indirect sunlight. The speed at which it becomes brittle will vary with the time of year, temperature, latitude and any other factors, which limit the amount of ultraviolet (UV) light exposure to the carrier. The carrier will not degrade if behind a glass window or otherwise shielded from UV exposure.



WOULD IT BREAK DOWN IN WATER?

Yes. The ring carrier floats on the surface of water where it is exposed to sunlight, causing it to break down.



ARE PHOTODEGRADABLE RING CARRIERS TOXIC?

Independent testing laboratories found the photodegradable carrier to be nontoxic. It contains no heavy metals or toxic additives. As the carriers degrade, they breakdown into smaller and smaller pieces of inert, harmless material.



WE SHARE A COMMITMENT

The health of our environment is vital to all of us. Hi-Cone will continue our commitment to sustainability and environmental stewardship with:

Alliance for the Great Lakes: The mission of the Alliance for the Great Lakes is to conserve and restore the world's largest freshwater resource using policy, education and local efforts, ensuring a healthy Great Lakes and clean water for generations of people and wildlife.



Living Lands & Waters: Living Lands & Waters is an environmental organization established in 1998. Living Lands & Waters mission is to aid in the protection, preservation and restoration of the natural environment of the nation's major rivers and their watersheds.

Ocean Conservancy: Ocean Conservancy promotes healthy and diverse ocean ecosystems and opposes practices that threaten ocean life and human life. Through research, education, and science-based advocacy, Ocean Conservancy informs, inspires, and empowers people to speak and act on behalf of the oceans.



Keep Chicago Beautiful: Keep Chicago Beautiful believes in keeping Chicagoland clean and beautiful. The group works to promote optimal solid waste management practices, recycling, composting, reuse, litter prevention, neighborhood cleanup, and solution-finding efforts with educators, students, and the community.

Keep America Beautiful: Keep America Beautiful, Inc. is the nation's largest volunteer-based community action and education organization. KAB forms public-private partnerships and programs that engage individuals to take greater responsibility for improving their community's environment.

Leave No Trace: The Leave No Trace Center for Outdoor Ethics is an educational, nonprofit organization dedicated to the responsible enjoyment and active stewardship of the outdoors by all people, worldwide. More than 21,000 trainers spread its educational message and the organization is active in the U.S., Canada, New Zealand and Ireland.

Ring Leader Recycling Program: Recycling for ring carriers through Hi-Cone.



Hi-Cone is also a proud member of: **American Chemistry Council** and the **Sustainable Packaging Coalition**.

For more information contact:



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