



**2024**  
CORPORATE  
RESPONSIBILITY  
REPORT

**Clysar**<sup>®</sup>

**Full-Circle  
Shrink Packaging  
Solutions**

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# Clysar®

**Our commitment to operating sustainably is centered in Clysar vision and values:**

**PEOPLE** - the well-being of all our stakeholders



**PURPOSE** - the good we will help achieve as a leader in sustainable shrink packaging



**PERFORMANCE** - measurable progress in the sustainability of our products, our energy use and carbon footprint, and economic performance in the marketplace



## From Our President

Clysar is pleased to share our 2024 Corporate Responsibility update. Since our last report, we have made significant progress in our understanding of the circular plastics economy. Clysar is uniquely poised to contribute to shrink film sustainability—the specific area of circularity where we can best create value and reduce climate impact.



**Vicki A. Larson**  
President

Our vision statement—Discover Full-Circle Shrink Packaging Solutions—captures the core of our commitment. For more than 60 years, polyolefin shrink film has been Clysar's only business. Our deep competency provides the expertise and experience to help our customers lower their carbon footprint and improve circularity in this narrow but important lane.

We've made great strides in designing for recyclability. All of Clysar's commercially available shrink films are prequalified for Store Drop-off by How2Recycle®. Later in the life cycle, these films create contaminate-free, high-quality recycled content for the next generation of products. We also innovated a high-performance, low-shrink recyclable film that enables brand owners to replace problematic PVC.

One of our most pivotal accomplishments is the launch of EV-HPG™ film, an all-purpose recyclable\* shrink film that provides fail-safe features and performance of our customers' favorite long-time standard, Clysar® HPG film. A true drop-in replacement, the film is ideal for companies seeking a sustainable alternative to conventional shrink films.

We are also reducing the use of virgin plastics as much as 30% with Clysar's own ReClaim™ resin, our certified pre-consumer recycled (PCR) material.

Source reduction is another Clysar strength. Recent accomplishments include the gauge optimization of our EV-HPG™ and ULTRA LEG™ films, now aligned with industry standards. We also offer corrugate replacement solutions that eliminate unnecessary packaging components and replace bulky materials with higher carbon footprints.

\*Prequalified by How2Recycle® for the Store Drop-off Label





Collaborating with our customers, we are achieving great success in helping brands and retailers work toward environmental goals with these more sustainable films. Looking to the future, we are also prepared for the coming impacts of Extended Producer Responsibility (EPR) policy.

We are proud of the transformation of our product portfolio, but that is only part of the Clysar story. We remain committed to being a responsible employer and community partner. We provide transparent measurement and reporting of our impacts and commitments, knowing that for many, this information can impact the decision to engage with our company.

As we move forward, there are challenges ahead. As a plastics manufacturer, we are heavily energy dependent, demanding robust energy management and operational improvements. Part of the flexible packaging community, we are connected and invested in improving recycling infrastructures, post-consumer recovery and overall knowledge of circularity.

We invite you to share our progress as we work toward our vision. Clysar has much to bring to the table—and much to accomplish—in defining tomorrow's sustainable shrink film.

Thank you.

*Vicci Harrison*

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***“ We are proud of the transformation of our product portfolio, but that is only part of the Clysar story. We remain committed to being a responsible employer and community partner. ”***

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# Clysar®

## Who We Are



60+ years in the shrink film business



Only shrink film packaging manufacturer 100% focused on sustainable, future-ready polyolefin shrink films



100% U.S.-manufactured, eliminating "offshoring" of increased emissions and lower labor standards



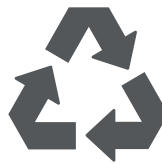
Offers an extensive portfolio of recyclable\*, right-gauged and responsibly produced shrink films, nearly 90% of which are produced with certified Clysar® ReClaim™ pre-consumer recycled resin



Utilizes 100% North American-supplied resin, production and packaging materials for full traceability; improved supply chain security/reliability and a lower supply chain carbon footprint



Intertek certified to the FSSC 22200 and ISO 9001:2015 standard



Provides sustainability-oriented R&D/innovation, 24/7 technical service and commercial sales with extensive packaging application and market expertise



Engages multi-function sustainability team and direct resources to assist in lowering carbon impacts in shrink materials, packaging operations and supply chain logistics



Provides integrated system solutions through strategic independent packaging distributors across North America



Delivers enhanced value through integration with sustainability and certifying organizations, shrink equipment manufacturers, film printers, automation specialists and other expert resources

\*Prequalified by How2Recycle® for the Store Drop-off Label

# Commitments and Strategy

Clysar’s broad-reaching commitments demonstrate how we incorporate sustainable business practices, manage our operations, pursue improvements and drive value for stakeholders.

OUR COMMITMENT	OUR STRATEGIES/FOCUS	OUR ACTIONS
<b>Provide Timely &amp; Transparent Sustainability Reporting</b>	Measure and report information relating to our impacts: <ul style="list-style-type: none"> <li>• Environmental</li> <li>• Social</li> <li>• Corporate</li> </ul>	<ul style="list-style-type: none"> <li>• Publish Corporate Responsibility Reports and updates, made publicly available to stakeholders on our website</li> </ul>
<b>Minimize the Impact of Our Shrink Films with Sustainability-Oriented Innovation (SOI)</b>	Develop polyolefin shrink films designed for the circular plastics economy: <ul style="list-style-type: none"> <li>• Recyclable Films</li> <li>• PVC Replacement</li> <li>• Source-Reduction Solutions</li> </ul>	<ul style="list-style-type: none"> <li>• Provide significant capital allocation and resources to material innovation and improvements</li> <li>• Expand the Clysar® recyclable portfolio to include all of Clysar’s commercially available shrink films. Recent introductions prequalified by How2Recycle® for Store Drop-off include:               <ul style="list-style-type: none"> <li>- EV-HPG™ all-purpose film, a sustainable drop-in alternative to traditional HP Gold film</li> <li>- EVO™ ShrinkBox® clear corrugate replacement film</li> <li>- ULTRA LEG™ low shrink force film to replace PVC</li> <li>- EV-HPG AF™ anti-fog performance film</li> </ul> </li> </ul>
<b>Reduce Use of Virgin Plastic</b>	<ul style="list-style-type: none"> <li>• Reduce the carbon intensity of raw virgin materials used in our shrink films by incorporating recycled content</li> <li>• Support the supply of high-quality, recycled post-consumer content</li> </ul>	<ul style="list-style-type: none"> <li>• Incorporate Clysar® ReClaim™ pre-consumer resins—certified by SCS Global Services, currently used in over 80% of Clysar® films with no compromise to film clarity, quality, functionality or recyclability</li> <li>• Explore and implement post-consumer content shrink films</li> <li>• Work with customers to attain How2Recycle authorization of recycling label—offering the clear communication to consumers that supports recycling</li> </ul>
<b>Drive Source Reduction &amp; Right-Sizing</b>	<ul style="list-style-type: none"> <li>• Continue to right-gauge the Clysar® product line for lighter, stronger shrink films</li> <li>• Provide solutions to reduce packaging weight and volume</li> </ul>	<ul style="list-style-type: none"> <li>• Achieve 7%-9% source reduction with EV-HPG™ and ULTRA LEG™ film as compared to standard shrink film</li> <li>• Eliminate unnecessary packaging material through corrugate reduction solutions like EVO™ ShrinkBox® and EVOC™ films</li> </ul>
<b>Reduce Carbon Impact of Our Manufacturing Operations &amp; Supply Logistics</b>	<ul style="list-style-type: none"> <li>• Monitor and report carbon emissions and other environmental metrics</li> <li>• Reduce our energy use and water consumption</li> <li>• Help reduce greenhouse gas emissions in the overall supply chain</li> <li>• Reduce/divert operational waste</li> </ul>	<ul style="list-style-type: none"> <li>• Employ energy management programs and measurements</li> <li>• Identify, resource and manage sustainability initiatives with C-level Green Team</li> <li>• Purchase North American produce resin, packaging materials and other supplies</li> <li>• Recover polymer waste as pre-consumer recycled resin</li> <li>• Divert non-recoverable waste to other outlets for recycling and reuse</li> <li>• Offer industrial packaging recycling program for customers to upcycle and reuse such as endplates and core plugs</li> </ul>

# Commitments and Strategy (cont.)

OUR COMMITMENT	OUR STRATEGIES/FOCUS	OUR ACTIONS
<b>Reduce Packaging System Waste &amp; Cost</b>	<ul style="list-style-type: none"> <li>• Optimize efficiencies in packaging operations and film use</li> <li>• Lower package volume, weight and cost throughout the life cycle</li> <li>• Reduce shipping damage and leakage for customer products</li> <li>• Reduce energy use and waste in customer packaging operations</li> </ul>	<ul style="list-style-type: none"> <li>• Deliver supply efficiencies through optimized configurations and packaging, JIT stocking services</li> <li>• Innovate recyclable shipping films that can reduce DIM weight, shipping volume by nearly 90%</li> <li>• Provide SKU optimization to lower supply impacts</li> <li>• Assist customers to maximize packages per roll of shrink film</li> <li>• Deliver right-gauged protection for retail and e-commerce applications</li> <li>• Offer free onsite evaluations, training and maintenance to reduce shrink packaging waste and energy use in customer operations</li> </ul>
<b>Minimize Food Waste</b>	<ul style="list-style-type: none"> <li>• Understand challenges of food waste and where shrink film can reduce waste</li> <li>• Deploy shrink films to manage respiration, protect against cross-contamination and extend shelf life</li> </ul>	<ul style="list-style-type: none"> <li>• Offer targeted solutions such as Clysar® EV-HPG AF™ to protect products and extend shelf life for fresh produce, bakery, frozen and fresh case-ready foods</li> </ul>
<b>Help Customers Meet Sustainability &amp; Responsible Sourcing Goals</b>	<ul style="list-style-type: none"> <li>• Work with brand owners, distributors and retailers to identify sustainability goals</li> <li>• Collaborate with distributors to drive end-to-end solutions for individual applications</li> <li>• Deliver sourcing verification through third-party certifications</li> <li>• Address customer sustainability business/cost impacts</li> </ul>	<ul style="list-style-type: none"> <li>• Support stakeholders with Sustainability Manager and Clysar sales team</li> <li>• Collaborate to understand where Clysar can assist in meeting customers' sustainability goals/commitments</li> <li>• Share case studies on how brand owners and retailers have met substantive goals using Clysar® films</li> <li>• Continue to invest in third-party certifications and validations for supply transparency</li> <li>• Provide packaging Life Cycle Analysis (LCA) capabilities to help customers evaluate and compare packaging impacts</li> </ul>
<b>Understand &amp; Respond to Extended Producer Responsibility (EPR) Laws</b>	<ul style="list-style-type: none"> <li>• Provide a clear path forward for future packaging needs relating to recyclability, source reduction, printed film options, e-commerce and other impacts</li> </ul>	<ul style="list-style-type: none"> <li>• Pursue ongoing education and training to follow state laws and policy, understand our impacts, and educate brands and distributor partners</li> </ul>
<b>Extend Knowledge &amp; Educate Stakeholders</b>	<ul style="list-style-type: none"> <li>• Attend and participate in key educational and industry events</li> <li>• Advocate for the role of "good" plastics in circular economy</li> <li>• Provide shrink-specific sustainability training to our distributors</li> <li>• Educate and engage Clysar employees, consumers, suppliers and other partners</li> </ul>	<ul style="list-style-type: none"> <li>• Participate and invest in industry and association ESG education and conferences</li> <li>• Work with customers and distributors on plastics economy and the role of shrink film vs. other packaging mediums</li> <li>• Incorporate sustainability into our core distributor training curriculum</li> <li>• Create live and online content on sustainable shrink packaging</li> </ul>



# Commitments and Strategy (cont.)

OUR COMMITMENT	OUR STRATEGIES/FOCUS	OUR ACTIONS
<b>Collaborate with Partners to Amplify Solutions</b>	<ul style="list-style-type: none"> <li>Identify and collaborate with partners on shared goals and current industry issues</li> <li>Understand needs and the reality of recycling infrastructure and our role</li> </ul>	<p>Engage in partnerships with:</p> <ul style="list-style-type: none"> <li>The Association of Plastic Recyclers (APR)</li> <li>Sustainable Packaging Coalition (SPC) and How2Recycle</li> <li>U.S. Plastics Pact</li> <li>SCS Global</li> <li>Trayak COMPASS® LCA tool</li> </ul>
<b>Improve Workplace Safety &amp; Wellness</b>	<ul style="list-style-type: none"> <li>Foster safety culture with goal of zero-harm incidents</li> <li>Incorporate wellness as key part of ESG offerings</li> </ul>	<ul style="list-style-type: none"> <li>Leverage Safety Management System</li> <li>Reduce Total Recordable Incident Rate (TRIR) with safety audits, risk assessments and environmental controls</li> <li>Monitor and follow safety training programs</li> </ul>
<b>Employee Commitment: Diversity &amp; Inclusion</b>	<ul style="list-style-type: none"> <li>Foster an environment of equity and inclusion</li> <li>Maintain respectful work environment</li> <li>Demonstrate compliance to U.S. employment and child labor law</li> </ul>	<ul style="list-style-type: none"> <li>Follow U.S. employment policies</li> <li>Reflect diversity aligned with regional demographics</li> <li>Provide compliance training on inclusion, anti-harassment and other programs</li> </ul>
<b>Engage with Our Community</b>	<ul style="list-style-type: none"> <li>Participate, support and collaborate with organizations and individuals in our extended community, Clinton, Iowa</li> </ul>	<ul style="list-style-type: none"> <li>Support social welfare, community health, environmental and education initiatives and organizations</li> <li>Operate as an ethical and connected corporate neighbor</li> <li>Manage risk and preparedness</li> </ul>





# Clysar Sustainability Goals & Progress

Clysar has established five primary sustainability goals material to our business, with measurable metrics that are managed, resourced and shared in this report.



- **By 2025, 100% of Clysar's commercially available film solutions will be prequalified as recyclable through the Store Drop-off program**

#### Progress

As of July 2024, 100% of our commercially available portfolio is designed for recycling and has been prequalified for Store Drop-off by How2Recycle®.

- **Purchase 100% of all resins and packaging supplies from North American suppliers**

#### Progress

As of 2023, Clysar met our sourcing mandate of purchasing all resins and packaging supplies from North American suppliers, a commitment that will be continued moving forward.

- **Reduce Scopes 1 and 2 emissions 10% by 2030**

#### Progress

We have monitored and reported our Scopes 1 and 2 emissions since 2021. We continue to work toward reductions in our greenhouse gases through energy management programs and efficiencies. As a manufacturer, we are constrained by baseline energy consumption but continue to pursue improvements. We are exploring carbon offsets and energy credits to help achieve reduction goals and lower our overall carbon footprint.

- **Calculate Scope 3 emissions by early 2025**

We are in the process of gathering our Scope 3 emissions data, which are calculated based on our upstream and downstream supply chain. We have a goal of having initial calculations complete in early 2025.

- **Achieve Platinum status with Green Business Benchmark—a verified, staged third-party sustainability certification—by 2026**

#### Progress

Clysar has achieved Gold status to verify environmental progress in seven areas of our business operations and is working to achieve the Platinum Certification. The benchmarking process includes independent authentication and auditing of our activities in addressing impacts in community society, energy/emissions, transportation, workplace/culture, governance, water use and consumption/waste.

## Greenhouse Gas Emissions in Metric Tons

**SCOPE 1 EMISSIONS -**  
1,158 MTCO<sub>2</sub>e equivalent

**SCOPE 2 EMISSIONS -**  
location-based  
25.273 MTCO<sub>2</sub>d equivalent;  
market-based 24.227 MTCO<sub>2</sub>e

*For location-based EFs in the United States, e-Grid emissions factors (<https://www.epa.gov/egrid>) are used. For market-based EFs in the United States, Green-e residual grid mix factors are used (<https://www.green-e.org/2022-residual-mix>).*

# Our Achievements

**Clysar pursues a circular model where shrink film contributes to the economy and packaging does not become waste. Over the last 18 months, we have made great strides in product innovation, reduction in virgin plastics, source reduction solutions, education and more.**

## Sustainable Shrink Films

**Recyclable shrink film is an innovation platform Clysar does extremely well.**

Over the last two years, we have led the industry in forwarding solutions that make it easy and economically sound to transition out of conventional non-recyclable shrink packaging.

Our product innovation team has developed a stream of new shrink films—prequalified for Store Drop-off by How2Recycle®—which helps reduce, minimize and optimize packaging. Most impactful is Clysar® EV-HPG™ film—our next-generation recyclable film that helps brand owners reach critical sustainability milestones without compromising economic value, runnability or shelf appeal.

We have reduced the use of virgin plastic by up to 30% in nearly 90% of all Clysar® products sold by incorporating Clysar® ReClaim™ resin, a certified pre-consumer recycled-content material.

We've made progress in source reduction: closing the gauge gap in our product portfolio starting with our EV-HPG™ and ULTRA LEG™ film, which provide 7%-9% source reduction over our standard HPG and LEG films.

Food waste is a large concern from an emissions standpoint as well as when it comes to food insecurity. Clysar now has a recyclable film option, Clysar® EV-HPG AF™, which is an anti-fog performance film used in many produce applications. Utilizing this film in food application will increase shelf life and reduce food waste overall.

Product line simplification is another way we are lowering our impact. Recently we conducted a detailed analysis of our portfolio. We have tightly focused our manufacturing and marketing resources, and are identifying unnecessary films that create complexity for our distributors and customers.

## Expanded Sustainability Resources

Sustainability has become a core performance metric for our distributors and brand owners. We are accelerating their success with increased resources, research, reporting and education around sustainable shrink packaging.

Our cross-functional manufacturing team supports the sustainable production of our films using processes that reduce the overall environmental impact of our operations, eliminate waste, and optimize energy and water use. We have improved our ability to understand, measure and report our carbon footprint, and we are well-positioned to respond with information on our responsible manufacturing practices.

Our market-focused sustainability team leads collaborations with industry partners and customers, and conducts environmental awareness programs within the Clysar organization. We have greatly expanded our ability to drive innovation, support new packaging applications, assist with label approval for recyclable films, provide LCA analysis, address EPR laws, provide sustainability education, and respond to stakeholder inquiries and requests.

*Exceptionally clear, versatile and easy to run, Clysar® EV-HPG™ film delivers the popular features that have made Clysar® HPG film an industry standard in a recyclable film with a reduced carbon footprint.*



## Benchmarks and Reporting

**We continue to evaluate and quantify our environmental performance, providing verified benchmarks of improvements.**

As of 2023, we achieved the Gold level with Green Business Benchmark—formerly the Green Business Bureau. Green Business Benchmark is a sustainability-based auditing and software organization that assists companies to establish baselines and measure improved levels of sustainability.

We have leveraged the GBB incentives framework to review and create initiatives that improve our sustainability. Through the work of our internal team, we have progressed from bronze to silver to gold levels in a four-year span. We are pursuing the goal of achieving platinum status for the year 2026.

Clysar has achieved the Gold level of the Green Business Benchmark, offering verified certification of our environmental progress. Participation in GBB allows us to align our initiatives to global frameworks and standards.



*Clysar has achieved the Gold level of the Green Business Benchmark, offering verified certification of our environmental progress. Participation in GBB allows us to align our initiatives to global frameworks and standards.*

## Collaborative Action

We are active members of the Sustainable Packaging Coalition, the Association of Plastic Recyclers and the U.S. Plastics Pact. Through these memberships, we attend conferences, collaborating with key personnel in the recycling industry, government agencies and brand owners who are all invested in improving the overall circular economy.



*Sustainability has become deeply embedded into Clysar distributor training and support. We engage and educate distributors with monthly touchpoints, webinars, white papers and more.*

# Shrink-Focused Education

## Stakeholder education is a Clysar priority

We are expanding the ways we share our deep knowledge of sustainable shrink films and the recycling landscape, empowering brand owners to deal with environmental policy and make more informed purchase decisions; helping consumers build better habits; and arming informed distributors with tools and training on Clysar shrink solutions.

We also work to deepen our organizational knowledge, from general employee environmental awareness to the technical demands of future-ready, circular shrink technologies.





# Future-Ready Shrink Packaging Solutions

Recyclability, recycled content and source reduction are strategic priorities for our end-users, retailers and consumers.

We are pleased to report growing success in helping our customers transition to new, next-generation shrink films that meet their goals, reduce carbon impact and address Extended Producer Responsibility (EPR) laws.

*Clysar's commercially available shrink films are prequalified by How2Recycle® for Store Drop-off, which are found at more than 22,000 locations in North America.*



## Sustainable Shrink Films

**We have significantly expanded our recyclable\* shrink film portfolio, which offers equivalent, sometimes even improved, performance and value over traditional films. Each Clysar shrink technology has been developed with end-user challenges and environmental concerns in mind—solving targeted market and application needs.**

**EV-HPG™ Film** – EV-HPG™ shrink film, a game-changing multi-purpose recyclable\* film that can improve the sustainability of almost any shrink packaging application.



Offered in industry-standard gauges, the film can wrap nearly any kind of product, on any shrink equipment, at virtually any speed. Based on early results, we anticipate it will become a popular new standard for brands seeking a recyclable,\* sustainable alternative to conventional films.

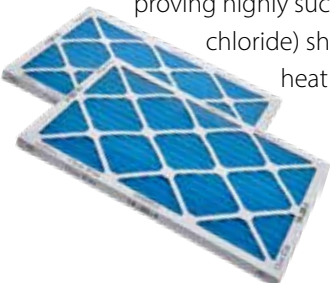
**EV-HPG AF™ Film** – EV-HPG AF™ is the first-ever recyclable\* anti-fog film that reduces condensation and spoilage for refrigerated produce and other respiring food.

**EVOX™ Film** –

Developed for demanding automated high-speed applications, EVOX™ film delivers new levels of efficiency with optimum strength, protection and throughput.



**ULTRA LEG™ Film** – This recyclable\* low shrink force film is proving highly successful in replacing PVC (polyvinyl chloride) shrink film, typically used for delicate, low-heat or bendable product applications such as candy and flexible filters. The film has been pivotal in helping brands respond



agilely to the deadlines of large retailers, who have mandated the elimination of PVC packaging.

**EVO™ ShrinkBox® Film** – Driving meaningful source reduction at retail, EVO™ ShrinkBox® film is the sustainable answer to Clysar's traditional ShrinkBox® corrugate replacement film. Unlike corrugate, the film delivers a clear product view for consumers and conforms to irregular shapes, while providing exceptional puncture, tear and abrasion resistance. We are also seeing increased use of EVO™ ShrinkBox® film for packaging of industrial and aftermarket parts and components.



**EVOC™ Confidential Film** –

Featuring up to 25% post-consumer content, this durable opaque shipping and privacy film offers up to 80% source reduction when replacing bulky corrugate outer boxes. It is especially effective in e-commerce applications, reducing cube utilization along with tare and DIM weight cost. EVOC™ film is also great to use in multi-pack applications where the concealment of bar codes is needed.



Another sustainable shrink option that helps reduce overall packaging is printed shrink. Popular with leading CPG companies for multi-packs and seasonal promotions, printed shrink film eliminates extra packaging components like inserts and labels, for source reduction with significant marketing power.

\*Prequalified for Store Drop-off by How2Recycle®





# Clysar® ReClaim™ Certified Pre-Consumer Recycled Resins

Reducing the use of virgin plastic is a leading concern for our stakeholders. We address this challenge with Clysar® Pre-Consumer ReClaim™ Resin. This high-performance resin is produced from Clysar production material and certified by SCS Global Services as pre-consumer recycled material.

Currently Clysar utilizes up to 30% recycled material in many of our products.



## Benefits include:

- Reduced carbon impact and fossil fuel use from replacement of virgin raw material
- Elimination of manufacturing disruptions, visual defects, gels and cloudy material typically seen in products produced with post-consumer material
- High-quality, contamination-free recycled material with a verified chain of custody, highly controlled within the Clysar process
- Reduced supply chain footprint
- FDA-compliant for food and other applications or bendable product applications such as candy and flexible filters



# How Clysar Optimizes Films for Recycling

“Recyclable\*” shrink films are not all equally circular. Clysar’s recycle-friendly technology is structurally unique and specially developed for ease and reliability of processing in the Store Drop-off recycling infrastructure.

We are confident Clysar® recycle-friendly films eliminate any questions of potential problems in the recycling stream and will deliver marketable, high-quality recycled content for downstream products.

\*Prequalified for Store Drop-off by How2Recycle®

# Carbon Reduction Successes in Recent Shrink Packaging

The following Life Cycle Analysis (LCA) examples—drawn from actual brand packaging applications—show the benefits of transitioning from less environmentally friendly materials to Clysar® recyclable\* shrink films.

These environmental impact metrics have been developed using the Trayak COMPASS® LCA tool. Numbers are for directional guidance only and do not include transportation information.



## LCA Case Studies

### COMPARISON:

#### RETAIL DISPLAY PACKAGE – Transition from Conventional to Recyclable Shrink Film

**Baseline Material:** Standard Non-Recyclable 60-Gauge HP Gold All-Purpose Shrink Film

**Replacement:** Recyclable\* EV-HPG™ 55-Gauge All-Purpose Shrink Film

**Measurement:** 1,000,000 packages per year

#### Relative Impacts:

##### Less Fossil Fuel Use

- 52.75 GJ deprived
- Equivalent to 8.62 barrels of oil
- Equivalent to 1.41 average homes powered yearly

##### Global Warming Potential: Less Greenhouse Gas Emissions

- 3.62 ton CO<sub>2</sub> eq
- Equivalent to 0.77 passenger vehicles driven yearly
- Equivalent to 8,868 miles driven by passenger vehicles yearly
- Equivalent to 407 gallons of gasoline consumed
- Equivalent to 93.76 tree seedlings grown for 10 years
- Equivalent to 1.72 hectares of forests yearly

##### Less Water Consumption

- 2,495,28.43 m<sup>3</sup> world-eq
- Equivalent to 659,254 gallons of water or 38,329.95 average showers
- Equivalent to 105 people showering daily for a year
- Equivalent to 1 Olympic-sized swimming pool

##### Less Freshwater Eutrophication (the buildup of excess nutrients in a body of water, such as nitrogen and phosphorus)

- 0.0165 kg PO<sub>4</sub> eq

### COMPARISON:

#### INDUSTRIAL FLUID MULTI-PACK – Corrugate Replacement

**Baseline Material:** Corrugated Over-Box

**Replacement:** Recyclable\* EVO™ ShrinkBox® 1525-Grade Film

**Measurement:** 500,000 packages per year

#### Relative Impacts:

##### Less Fossil Fuel Use

- 1027.2 GJ deprived
- Equivalent to 167 barrels of oil or 27.44 average homes powered yearly

##### Global Warming Potential: Less Greenhouse Gas Emissions

- 142 ton CO<sub>2</sub> eq
- Equivalent to 30.57 passenger vehicles driven yearly

##### Less Water Consumption

- 799,371.32 m<sup>3</sup> world-eq
- Equivalent to 211,194,535.76 gallons of water or 12,279,129.31 average showers

##### Less Freshwater Eutrophication

- 12.29 kg PO<sub>4</sub> eq







# LCA Case Studies (cont.)

## COMPARISON:

### FURNACE FILTER PACKAGE – PVC Replacement

**Baseline Material:** Polyvinyl Chloride (PVC) Shrink Film

**Replacement:** Recyclable\* ULTRA LEG™ Low Shrink Force Film

**Measurement:** 37 million filter packages per year

#### Relative Impacts:

##### Source Reduction

- 50% reduction in packaging materials
- Requires half the number of film rolls to package same quantity of products

##### Less Fossil Fuel Use

- 6,965.45 GJ deprived
- Equivalent to 1,138.54 barrels of oil
- Equivalent to 186.06 average homes powered yearly

##### Global Warming Potential: Less Greenhouse Gas Emissions

- 667.28 ton CO<sub>2</sub> eq
- Equivalent to 142.89 passenger vehicles driven yearly
- Equivalent to 75,085 gallons of gasoline consumed
- Equivalent to 785.92 acres of forests yearly

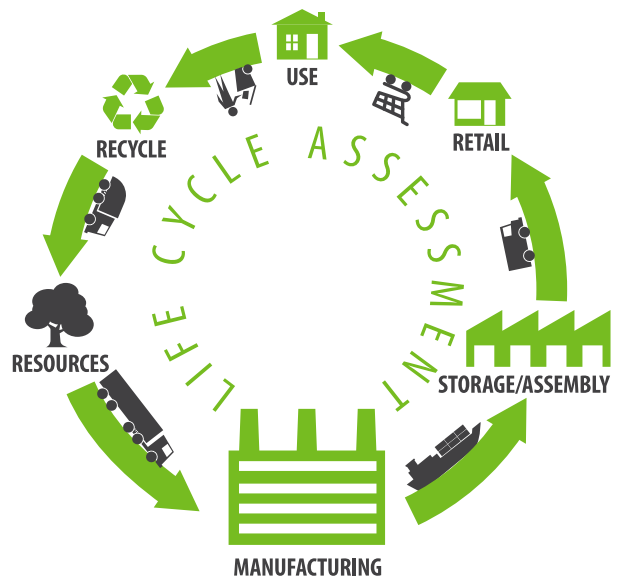
##### Less Water Consumption

- 814,653.37 m<sup>3</sup> world eq
- Equivalent to 215,232,065.81 gallons of water
- Equivalent to 12,513,876.64 average showers
- Equivalent to 325.86 Olympic-sized swimming pools

##### Less Freshwater Eutrophication

- 17.01 kg PO<sub>4</sub> eq

\*Prequalified for Store Drop-off by How2Recycle®



# Food Waste Solutions

Clysar is committed to addressing the rising food insecurity and waste concerns caused by conflict and climate change.

According to the U.S. Department of Agriculture, 40% of food in the U.S. is not consumed, and the annual amount of food waste is worth \$162 billion (with a B) dollars. Produce is particularly

problematic: the average American family throws out 44% of the fresh fruits and vegetables they purchase.

Here are examples of how Clysar® shrink film can help keep foods fresher, extend shelf life and prevent food waste.

## Shelf Life Increase/Food Waste Decrease:

### FLEXIBLE PACKAGING EXTENDS SHELF LIFE

SHELF LIFE INCREASES



FOOD WASTE DECREASES



6  
DAYS

14  
DAYS

CUCUMBERS



6  
DAYS

20  
DAYS

BROCCOLI



7  
DAYS

19  
DAYS

GREEN BEANS

● Blue denotes unwrapped shelf life

● Green denotes shelf life when wrapped in Clysar® Shrink Film

## Combating Packaging Waste and Food Insecurity

Protective plastic packaging like shrink film can play a vital role in reducing food waste and food insecurity.

- ✓ Food insecurity was expected to reach an unprecedented peak in 2023. Projections indicate that it will worsen at least until 2027, reversing progress on the UN sustainable development goal of eliminating poverty and hunger by 2030.
- ✓ By the end of 2020, over 80% of acutely food-insecure people lived in fragile or conflict-affected situations.

Source: Plastics Industry Association, NPE Show





# Responsible Manufacturing and Supply



Since our initial report, Clysar has made strides in assessing and managing our carbon impacts, in both our manufacturing footprint and our overall supply chain.

We have greatly expanded our ability to document and report our environmental performance. We are now in our 4th year of reporting Scopes 1 and 2 emissions, and are in the process of calculating our 2023 Scope 3 indirect emissions. Carbon reduction and other environmental goals are now tracked as part of our environmental performance.

As a manufacturer, our process is carbon-intensive: we are exploring strategies such as energy credits to lower our footprint. Clysar's greatest environmental gains come from our focus on zero-waste initiatives, supply chain efficiencies and the improved

sustainability of our shrink film products.

Our internal sustainability initiatives are led by a cross-functional "green" environmental team, which accelerates our efforts to reduce energy and other resource use, improve internal recycling, expand waste reduction and education efforts, and incorporate sustainability into Clysar's and our partners' continuous improvement programs.

Together with our distributors, we take a systems approach to logistics and supply management, helping our shared customers with solutions to do business more sustainably through improving shipping efficiencies; reducing cost, waste and energy use in packaging operations; and even recycling and reusing industrial packaging.

## Expanding Sustainability Resources

We have greatly expanded support and resources focused on circular shrink packaging since we debuted our customer-facing sustainability team in 2022.

Through Clysar, our customers can request Trayak COMPASS® Life Cycle Analysis to help compare and evaluate packaging formats; find assistance with applications to use the Store Drop-off label from How2Recycle®; obtain detailed supplier RFP and Scope 3 emission information; and get end-to-end assistance in transitioning from traditional standard shrink films to recyclable Clysar® shrink films.

We have also increased our investment in training, tools and communications, from the basics of shrink film sustainability to deeper dives into specific issues such as Store Drop-off recycling or EPR policy.

To expand our own industry knowledge and our role in forwarding future solutions, we actively participate in organizations such as the Association of Plastic Recyclers, Sustainable Packaging Coalition and U.S. Plastics Pact.

## Assured North American Supply

Clysar integrates ethical and environmentally responsible practices into our supply chain, which is centered in a commitment to U.S. manufacturing and North American supply.

This strategy helps in many ways. It ensures the ethical production of the goods we purchase, lowers the carbon footprint of transport through the supply chain, improves traceability, and provides robust reliability and quality control. We are pleased that, through Clysar, distributors and customers support the North American economy while eliminating any concern over offshore safety, labor or environmental impacts.

Clysar® film is the only shrink film that is 100% manufactured in the U.S. from North American resin, which eliminates the upstream impact of maritime freight or air cargo emissions, a significant source of carbon.



**We share our sustainability expertise in many ways, as we seek to power the future of sustainable shrink film. Our popular "Sustainability Snippets" email series, for example, is one of the many educational resources that keep stakeholders up to date on important environmental information and topics.**

# Our Responsibility for Being a Good Employer and Community Partner



For more than 60 years, Clysar has been a packaging company known for our integrity and hardworking Midwestern values. Headquartered in Clinton, Iowa, we are an important employer and part of our community.

We provide our employees with support to perform to the fullest of their abilities in the workplace. We support positive, open labor relations and fair, competitive compensation and benefits, ongoing skill training and career development opportunities. We are diligent about keeping our employees safe and healthy on the job, and have a strong safety management program with a goal of a zero-harm workplace.

Giving and volunteering is second nature to our employees and our company. From United Way drives to community fundraisers to volunteering, Clysar is active in helping meet the needs of our community.



*We proudly support Clysar families by awarding annual scholarships for secondary education.*

*Big Brothers/Big Sisters believes "Every child deserves the opportunity to succeed." Clysar is proud to support this important organization and works to create employee matches.*



*We participate in regular "clean and green" highway cleanups through the Adopt-a-Highway program.*



*Clysar employees are active volunteers with Junior Achievement, extending school learning to life outside the classroom by providing lessons in financial literacy, work readiness and entrepreneurship.*

# Our Associations and Collaborative Partnerships

As part of our sustainability journey, we are working in collaboration with leading organizations and coalitions to address challenges, share knowledge, explore solutions and find ways to accomplish more, together.



The Association of Plastic Recyclers is an international association representing the plastics recycling industry. Members work together toward increasing supply, enhancing quality, expanding demand and communicating the value of recycled plastics.

The APR Design® Guide is widely recognized as the authority on how to design plastics packaging for recyclability in North America and has been instrumental in the development of Clysar® recyclable films.



The How2Recycle® label is a smart labeling system supported by a coalition of forward-thinking brands and suppliers who want their packaging to be recycled. The How2Recycle organization validates the recyclability of packaging materials and empowers consumers through standardized labeling that clearly communicates recycling instructions to the public.

All of Clysar's commercially available shrink films have been assessed by How2Recycle and are prequalified for the Store Drop-off label.



The Sustainable Packaging Coalition is the leading voice of packaging sustainability. It cultivates stewardship, connects and mobilizes the packaging industry, provides learning opportunities and works toward standard sustainability measurement methods.

Through participation with the SPC, Clysar collaborates with stakeholders and remains informed on important topics including public policy, circular packaging design and recycling systems.



The U.S. Plastics Pact brings together businesses, not-for-profit organizations, government agencies and research institutions that work together toward a common vision of a circular economy

for plastics, as outlined by the Ellen MacArthur Foundation's New Plastics Economy Initiative. This vision aims to ensure that plastics never become waste by eliminating the plastics we don't need, innovating to ensure that the plastics we do need are reusable, recyclable or compostable, and circulating all the plastic items we use to keep them in the economy and out of the environment.

## Certifications & Approvals

- ◆ SCS Global Services Certification for Clysar® ReClaim™ Pre-Consumer Resins
- ◆ Intertek FSSC 22000 certification for food safety management
- ◆ Intertek ISO-9001:2015 quality standard certification
- ◆ U.S. Postal approved
- ◆ FDA/USDA Compliant







# Clysar®

For Clysar sustainability information  
or requests, please contact:

Christine Grant  
Sustainability Manager  
[christine.grant@clysar.com](mailto:christine.grant@clysar.com)

888-4-CLYSAR

Highway 67 South  
Clinton, Iowa 52732

[www.clysar.com](http://www.clysar.com)

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