Clysar®

Downgauging for the Best Bottom Line

Tips for Achieving Sustainable Shrink Film Savings...Without Sacrificing Packaging Quality, Throughput and Protection

The big buzz in the shrink packaging community is downgauging, no matter who you talk to.

Retailers and consumers are demanding more sustainable packages, made from fewer resources.

Consumer Product Companies and their contract packaging partners are looking for cost-out opportunities achieved through thinner materials. They're also hotly pursuing magical words like "source reduction" and "lower package-to-product ratio" to create a sustainable advantage in a competitive marketplace.

Yet skinnying up shrinkwrapped packages can quickly become a game of diminishing returns. Bottom line, if a downgauged package rips, bursts, causes problems on the packaging line or doesn't meet the consumer expectations, cost and sustainability gains become moot.

One leading frozen pizza brand recently downgauged from 60-gauge film to lightweight LTC film, saving more than 40% annually on materials—while maintaining excellent productivity and freshness.

So how...and how much...can you downgauge shrink materials? And how much of a true environmental impact can you make when you do? These are the bottom-line questions this paper addresses.

WHERE WE'VE BEEN, WHERE WE'RE GOING

"Back in the day," 75- and even 100-gauge shrink films were common in many shrinkwrap packaging operations. Packagers often settled for the first film that worked with their equipment. And once operations were running, there was seldom time to reevaluate film choices.

Then came unprecedented pressure to deliver cost and material savings.

Fortunately, advances in material technology—from resin blends to manufacturing processes—have made thinner, stronger shrink films a viable solution for more applications than ever. These next-generation thin films are not just light in weight—they're engineered for targeted performance attributes, like Clysar's LTC (Lowest Total Cost) family of films.

Besides general-purpose thin films, products like DVDs now have stiff thin films that perform flawlessly in high-speed wrap operations, while fragile or bendable products can be wrapped by films with ultra-light shrink force.

If you are running the same gauge film you've run for the last five years, chances are it's worth evaluating possible alternatives with your packaging distributor. As a rule of thumb, Clysar end-users typically find that they can downgauge their package anywhere from 10%-25%—some, reducing materials as much as 50% when replacing materials like PE.

Think your shrink package may be over-spec'd? Try these eight tips to achieve YOUR best bottom line:

1. BRING IN THE EXPERTS—EARLY!

If you want to take a serious look at source reduction, bring in your packaging distributor right from the start. These shrink experts will be able to help you consider the total cost and sustainability implications throughout the package's life cycle, not just the upfront roll price savings.

Most distributors have helped customers downgauge packaging for a wide range of products and equipment. They have the expertise to guide you through the many "unseen" considerations and avoid common mishaps. If done incorrectly, the sweetness of initial price can quickly become forgotten due to packaging headaches downstream.

SOME OF THE IMPORTANT QUESTIONS YOUR DISTRIBUTOR WILL HELP YOU ADDRESS:

- ✓ What shrink film gauges and formulations should you consider and test?
- ✓ Will the package still protect your product adequately—resisting rips and bursts during transit and on shelf?
- ✓ Does the package still look good, offering sparkling clarity and strong shelf appeal?
- ✓ Does the film still "clean up," shrinking uniformly to create a beautiful display package?
- ✓ Does the package meet your targeted processing requirements for speed, throughput?

2. THINK APPLICATION, APPLICATION, APPLICATION

Successful downgauging solutions begin with the needs of your shrink application.

Your packaging distributor will not only look at your current film, but also consider every stage of the packaging life cycle. They'll evaluate the product you are wrapping; the equipment you're wrapping it on; distribution challenges; and how your package needs to perform on shelf.

A multi-pack application with voids such as toilet cleaner, for example, will demand downgauged films that still deliver memory and puncture resistance—quite different needs than a multi-pack of breakfast cereal, which has four flat supported sides.

Your shrinkwrapping operation and type of equipment will also impact your best film options, depending on if you have multiple lines running 24/7 or rely on hand operations with multiple changeouts.

Distribution and merchandising concerns complete the considerations. Are your products exposed to extremes of hot or cold during warehousing or transport? Are they pre-boxed in retail-ready tray systems or do they stand alone on the shelf?

Using these considerations, your distributor will recommend a number of options to test that address your unique packaging drivers.

3. EVALUATE MULTIPLE OPTIONS AND GAUGES

Now's the time to put a variety of shrink films to the test. Experiment with alternative gauges and film properties, pushing the envelope to find the tipping point of cost/performance.

Many packagers are interested in trying new 30-gauge range films, like the Clysar® LTC platform. Yet true "thin film" is not always the answer, and indeed is suited for only a certain percent of applications.

Often savings can be found in your current film family. Customers using a 60-gauge all-purpose film like HP Gold have found switching to 45-gauge shrink film has achieved significant savings at a consistently superior level of performance. Others requiring a high level of protection using 100-gauge film have found that a 75-gauge will achieve the performance they need.

POLYOLEFIN SHRINK FILMS ARE AVAILABLE IN GAUGES FROM 30 TO 300 MIL. EVALUATE WHAT IS RIGHT FOR YOUR APPLICATION.

You may also find by switching shrink products that you are able to improve physical characteristics for your application, as well as lightening up your film.

Your distributor can provide a statistical testing process and "scorecard" that will help you document your findings in pursuing the lowest total cost alternative.

4. TEST SHELF APPEAL AND PROTECTION WITH PACKAGING MOCKUPS

To judge the critical combination of eye appeal and protection on shelf, start by evaluating your products wrapped in actual film. Ask your packaging distributor to provide packaging mockups, wrapping your products in different gauges or shrink film products.

It's a great way to evaluate the feel, look and shelf appeal of various shrink films, as well as the appropriate level of protection for your products.

You'll discover shrink film's display properties can vary widely, even films of same gauge made by different manufacturers. Look for:

- ***SUPERIOR FILM STRENGTH.*** Film must provide sufficient impact resistance and tear strength for product protection. It should not tear, rip or create a shopworn appearance after handling. Test through packout, shipping or transport when looking at lower gauges. Not all film strength is equal, especially in approaching lower gauges.
- ***BEST CLARITY/SHINE.*** Look for superior haze, sparkling clarity and gloss for dazzling shelf appeal. While shelf appeal can often be viewed with the naked eye, your distributor can provide a summary of properties that documents and compares each film's clarity.

- ***CRISP CLEANUP.*** Does the film wrap cleanly and evenly around the product for a taut, crisp fit? Some thin films do not have the true balanced shrink characteristics in low gauges to create the cleanup and fit you require.

Once you've narrowed down the films to test, your distributor can provide actual trial rolls to test your candidates on the line.

5. PUT FILM ON THE LINE TO DETERMINE OPERATING IMPLICATIONS

The shrink line is often where the cost of quality reveals itself.

Downgauged films must run flawlessly on your equipment so you get greater productivity, less waste and the lowest cost across your entire operation—not just on your roll of film.

To determine savings, first document the performance parameters of your current shrink film as a baseline. Then test the various candidates.

As you evaluate new lower-gauge films, you will find you may need to adjust your processing parameters to maximum throughput and savings, including heat, time, temperature and air velocity in the shrink tunnel.

Rely on Clysar field technicians for support during your field trials. They can quickly establish the best operating window for the film you are trialing, based on your equipment and application. They will also help you optimize the true attributes of each test film, under reproducible parameters.

HERE ARE SOME OF THE CONSIDERATIONS YOUR DISTRIBUTOR WILL HELP YOU LOOK FOR:

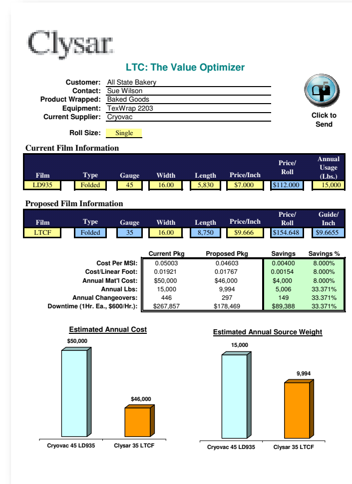
- ✓ ***SHRINK LINE SPEEDS.*** Make sure your material savings aren't sacrificed by slower line speeds—throughput can be affected by gauge! Remember, film brands all run differently. LTC film, for example, will run, on average, 15% faster than competitive thin-gauge products, which can add up quickly once you're in production.
- ✓ ***OPERATING WINDOWS.*** Choose products with the widest possible operating window to accelerate productivity and gain consistent quality packages. A finicky film is an expensive film in terms of machine and operator time.
- ✓ ***CHANGEOVERS.*** Evaluate how many times you need to change rolls of shrink film and the down time involved. Often thinner films provide more feet per roll, which means operational savings in labor, uptime and inventory space.
- ✓ ***SEAL STRENGTH.*** While thinner gauges do NOT mean thinner seals, you will still need to verify the integrity of the seal area. Check to make sure your film forms strong, clean seals for the product profile and weight. Once again, machine parameters (especially seal heat ranges) may need to be tweaked for optimal seals.
- ✓ ***REJECTS, REWRAPS AND WASTE.*** True film yield and actual cost depend on the amount of commercial packages you gain from every roll. A downgauged film should not require higher rewraps or rejects. Butt rolls also indicate unnecessary, unusable film waste.
- ✓ ***AVAILABLE SHRINK AND BETTER BALANCED SHRINK.*** Thinner films should still clean up beautifully in the shrink tunnel. Sometimes lower gauges exhibit poorer overall shrink performance in this heat-driven process. Watch for problems like dog ears, wrinkles, fish eyes or burn-through. If you can't address these issues by fine-tuning your parameters, the loss in appearance is most likely not worth the cost

6. RUN THE NUMBERS

Sustainable savings are not just about roll price. The Clysar team has developed a value calculator that allows your packaging distributor to perform cost calculations that consider all factors of the downgauged shrink material.

This methodical approach provides application-specific data that compares the cost impact of current and proposed films, including material cost, annual material savings, weight savings, and changeovers and downtime.

As you weigh your options, look at savings through the lens of annual, or even three-year, system savings. Even a 5% improvement may deliver a viable reason to downgauge over the course of a year.


Clysar

LTC: The Value Optimizer

Customer: All State Bakery
Contact: Sue Wilson
Product Wrapped: Baked Goods
Equipment: TexWrap 2203
Current Supplier: Cryovac

Click to Send

Roll Size: Single

Current Film Information

Film	Type	Gauge	Width	Length	Price/Inch	Price/ Roll	Annual Usage (Lbs.)
LD935	Folded	45	16.00	5,830	$7.000	$112.000	15,000

Proposed Film Information

Film	Type	Gauge	Width	Length	Price/Inch	Price/ Roll	Guide/ Inch
LTCF	Folded	35	16.00	8,750	$9.666	$154.648	$9.6655

	Current Pkg	Proposed Pkg	Savings	Savings %
Cost Per MSI:	0.05003	0.04603	0.00400	8.000%
Cost/Linear Foot:	0.01921	0.01767	0.00154	8.000%
Annual Mat'l Cost:	$50,000	$46,000	$4,000	8.000%
Annual Lbs:	15,000	9,994	5,006	33.371%
Annual Changeovers:	446	297	149	33.371%
Downtime (1Hr. Ea., $600/Hr.):	$267,857	$178,469	$89,388	33.371%

7. CONSIDER VALUE-ADDED SUSTAINABILITY AND COST OPTIONS

Congratulations! By now, you should have a strong downgauging solution that delivers the best bottom line, while delivering a great shrink package. But source reduction is the tip of the iceberg in terms of additional cost solutions your distributor can bring to the table.

Ask your distributor about other tactics you may not have considered, including items like double rolls for high-volume operations; sustainable roll packaging; changing from folded to flat film; printed film that eliminates labels and sleeves; or equipment modifications that save labor or enhance cleanup.

8. COMMUNICATE YOUR FINDINGS

Once you've successfully downgauged your package, share your knowledge by communicating your results to stakeholders from marketing to customers to even the consumer. As downgauging continues to gain momentum, your experience will help others learn about the system-wide packaging considerations, and what a viable initiative delivers.

Your distributor can help you provide compelling data, whether pounds of material saved, amount of packaging diverted from the waste stream, throughput gains or more.

HOW LOW CAN *YOU* GO?

As you can see, the lowest cost—and the lightest gauge—shrink film is not always the least expensive. If you're downgauging, achieve the best bottom line by demanding system-wide gains for YOUR application. And remember: you can always leverage the knowledge and technical support of your shrink film supplier and manufacturer to deliver the real low-down, for lowest total cost. Best of luck in the pursuit of savings, sustainability and superior shrink!

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