CAN LINERS 101



HB-0017-0912



Can Liners 101

There are 2 steps to choosing a bag:

1. Understanding the 2 Plastic Types and Gauge

2. Matching Bag Sizes to cans



Linear Low Density Bags (LLD)

Used for rough or sharp objects under tough transport conditions. These bags are very strong and are more resistant to tearing,

but handle lower load capacities than Hi–D bags.

Suggested LLD applications:

- Sticks, rough yard trimmings, glass
- Metal w/sharp edges
- Plastic eating utensils, food with rough edges

Hi Density Bags (Hi-D)

Used for paper and non-rough objects under moderate transport conditions.

These bags are very strong and handle higher load capacities than LLD bags, but tear easier once punctured.

Suggested Hi-D applications:

- Paper-plates, cups, towels, office
- Grass, rags, smooth heavy objects
- Cans w/out sharp edges, food with out sharp edges

Step 1– Gauge (film thickness)

Film thickness is no longer the standard for judging bag strength. Advanced polymer blend formulations and unique additives have allowed Heritage to produce thinner, lighter trash bags that are stronger than thicker bags made from inferior polymer blends. Below are basic gauge recommendations for Heritage bags:

LLD Gauge Equivalents and Recommendations

Light Medium	.3049 .5060	Mil } For small cans
Heavy	.6174	Mil
Extra Heavy	.7580	Mil
Super Tuf	.81 - 1.0	Mil } For midsize cans
Super Hvy	1.1 - 1.2	Mil
XXH	1.3 - 1.9	Mil
XXXH	2.0 - 3.0	Mil } For larger cans

Hi-D Gauge Equivalents and Recommendations

Light	6 - 9	Mic	For small cans
Medium	10 - 12	Mic	For midsize cans
Hvy	13 - 14	Mic	
Extra Hvy	15 - 17	Mic	For larger cans
XXH	18 - 22	Mic	

Step 2-AccuFit & The Top 4 Cans

Bags with AccuFit® dimensions are designed to match the top 4 most common cans in the industry. These bags provide greater ease of use and cost savings due to their accurate fit vs. standard industry bag sizes.



The Heritage Sizing Guide has a complete list of the most common cans and matching bag sizes in both Hi-D and LLD. (Recommended LLD bag sizes may differ from the Hi-D sizes because of their ability to stretch.) The guide shows standard bag sizes and the AccuFit[®] sizes where applicable.



Custom Brochure

Heritage creates a "QuickPick" customized sales brochure for all customers. The brochure matches your specific liners to the most common cans in the industry – eliminating guesswork in the field.



Bottom Seals

Almost all Heritage liners are manufactured with Star Seals

because they provide the strongest seal. A Star Seal is not possible with the thickest-gauge material, so a Flat Seal is used to create the strongest possible seal for these heavy-weight bags.

High Performance Star Seal

- Most common type of seal
- Designed without gussets
- Eliminates gaps where leaks can occur
- · Conforms to the shape of the container
- Distributes weight evenly
- Maximizes carrying capacity
- Sized in two dimensions, EX: 40 x 46



Other Seals

Flat Seal

- Two-dimensional bag (much like a pillow case)
- Strong, but has the potential to leak wet trash from the corners
- Do not conform as well to the shape of can
- Sized in two dimensions, EX: 40 x 46

Gusset Seal

- Rarely used in the industry
- Flat-style bag design
- Both sides tucked in to form gussets
- Sealed through four layers of film (the middle of the bag has only two sealed layers)
- A potentially weak bottom seal
- Sized in three dimensions, EX: 23 x 17 x 46





The Topside Dual-Dispensing Packaging is designed for end-user convenience. Our topside dual-dispensing cartons were developed in response to customer needs. Now, cartons may be stacked to save space while still dispensing liners with greater ease.

H7658TW

IN FILM

LINERS

All cases are clearly labeled to meet NIST* **standards**: Code, Size, Gauge, Color, Capacity, Case Pack, Performance Specs, Case Weight, and Bar Code.



NIST* (National Institute of Standards and Technology NIST requirements:

- 1. Size
- 2. Gauge
- 3. Capacity
- 4. Case Pack
- 5. Case Weight

Sales Tool #1 – Can Liner Guide

Match bags and cans in two easy steps. This can matching guide will provide you with quick answers for the most common can liner questions.



Sales Tool #2 – Site Survey

Most end-users buy trash bags based on what they have bought in the past,

not necessarily based on their true trash disposal needs. There is money to be saved when you are able to offer the right bag for the right application! Use the Heritage Site Survey Tool to identify down-gauging and down-sizing opportunities.



Sales Tool #3 – Competitive Evaluation Kit

Don't sell bags against what's on the competitor's label, sell against what's actually in the box (the true performance specifications of the bag) by utilizing the Heritage Competitive Evaluation Kit. Heritage Bag's Laboratories are ready to thoroughly test any competitor's samples. The results can be amazing, and the savings potential can be substantial.

Can Linger Evaluation Let Us Show You How to Save Thickness doesn't matter; strength matters. Although trash bags may look and sometimes feel alike, they don't act alike. Thickness doesn't mean anything anymore! There are new resin additives and processes that effect trash bag strength more than anything! Heritage liners combine the highest quality resins and addi- tives with state of the art equipment to make the strongest trash bags available. But don't take our word for it! If you would like an	HERITAGE Professional Lab Money on Your Can Liners! "apples-to-apples" comparison of your current bag, just fill out this form and send us 2 samples. We will have it lab tested for important trash carrying qualities like puncture resistance, tear resistance, and lifting strength. We can then recommend a Heritage bag that will perform better than your current product. So put your can liners to the test. This is an opportunity to gain purchasing strength with your trash bag dollars.	
Instructions (3 Easy steps) (1) Complete end user information. (2) Comp for each product to be tested. Be sure to stic bag with the box (label information) it was put Image: Company	Distributor Information. (3) Send two bags k the "A, B, C or D" labels (provided) on each bag to identify the ulled from. (See "Sample Specifications" below.) Heritage Rep. Name Distributor Information (fill in or staple bus. card here) Distribution Company Name and Location Distributor Rep Name	Evaluation Form
Sample A Specifications [As Appears on Box Label] Product # Product # Size Capacity HERITAGE WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWW	Sample C Specifications [As Appears on Box Label] Sample D Spec [As Appears on [as Appears on [as appear] Product # Product # Capacity Product # Gauge Product # Color Color Case/Pack B. Manufacturer Gauge Location/Trash Type Color Catation B. Manufacturer D. Location/Trash Type D. Test Sample Stickers (placed on bag samples) Lat	A contraction of the second of

Identifying Common Can Sizes



The Sizing Tape Measure is an excellent tool used to identify the gallon size of all cans in the industry.



INSTRUCTIONS:

1. Starting at the beginning of the tape, wrap the tape measure around the top of the waste receptacle just below the lip of the receptacle.

2. Extend the rest of the tape measure straight down the side of the receptacle.

3. The bottom of the receptacle will fall within markers on the tape measure that specify the size of the receptacle.

4. Use your QuickPick brochure to select the liner size accordingly!

Sales Support

800-555-1234

w.olsen-paper.com

ads and the internet

Custom advertising through print



Consistent manufacturing and customer service levels throughout the country

sh

^{'our} Logo

Here

Your Logo Here

Customized POS material for specialty products



Direct sales force to help you every step of the way

Multi media training tools and web support for your sales force

HERITAGE APP

Ask your sales representative for more information on our specialty products including:

Healthcare Bags

- Red, Yellow, and Blue Liners
- Specimen Transport Bags
- Chemotherapy Bags
- Autoclave Bags
- Trash Can Liners

Earth Friendly Bags

- BioTuf Compostable Trash Bags
- AccuFit Sizing Bags (Competes with repro)

Convenient Closure Bags

- Tie-Tie
- Blue Collar

✓ Food Bags

- Reclosable Food Bags
- Storage Bags

• Linear Low Density Case Weight Formula

Length x Width x Gauge (in mils) ÷ 15 ÷ 1000 x bags per case = net lbs. per case (approximate)

• High Density Case Weight Formula

Length x Width x Gauge (in microns) ÷ 14.5 ÷ 25.4 ÷ 1000 x bags per case = net lbs. per case (approximate)

Microns to Mils Formula

Divide the microns by 25.4 to arrive at mil thickness. *Example:* 10 Microns \div 25.4 = .39 Mil 24 Microns \div 25.4 = .94 Mil

Mils to Microns Formula

Multiply the mils by 25.4 to arrive at mic thickness. (1 Mil = 25.4 Microns) *Example:* .30 Mil x 25.4 = 7.6 Microns .65 Mil x 25.4 = 16.5 Microns

Converted Microns to Mils

Mic Mil 16 = 0.62 17 = 0.66 18 = 0.70 19 = 0.74 20 = 0.78 21 = 0.82 22 = 0.86 23 = 0.90 24 = 0.9425 = 0.98



Source Reduction Engineering– At the heart of all our products

Did you know? Source reduction is the EPA's preferred method of waste management.

> Meeting present needs without compromising the earth's future.

Source Reduction through Technology



- Improved performance at thinner gauges
- High quality prime resin
- Star-Seal the strongest seal available

Savings Why buy more plastic than you need? Better performance at thinner gauges means purchasing less plastic for the same job.

Source reduction facts

- Less plastic is needed for the same job
- Reduces greenhouse gas emissions
- Double bagging not required

Environmental Solutions – Research

Source Reduction through Research

The "Right-Size" Product Line



- 1. We identified the most common cans in the market place.
- 2. Each bag was handtested for the right size with proper overhang.
- 3. A "Right-Size" product line was designed that eliminates guess work, and saves you money
- Ensures the correct match between liner and can
- No more guess work the Right-Size product line
- Prevents the bag from falling into can

Savings Eliminates the purchasing of oversized bags, and promotes product consolidation and SKU reduction.

Source reduction facts

- Reduces plastic going into landfills
- Ensures plastic is not wasted due to over-sizing
- Improves supply chain efficiencies packaging and transportation, etc.

Environmental Solutions – Mineral Strength

Source Reduction through Minerals



Specialty Environmental Can Liners

Compostable Can Liners



Specialty Environmental Can Liners

Source Reduction Through AccuFit Sizing



Terms

Can Liner Term used for garbage, trash or waste bags. Used in industrial, institutional and medical applications.

Colors Can liners come in standard colors: clear, black, white, gray, red, blue and yellow. (Other colors available.)

Food and Utility Bags Small clear bags designed to hold a variety of small objects (e.g., bread, poultry, vegetables, etc.)

Film Strength Refers to the physical strength of the can liner. Some resins have a higher film strength than others. Our can liners are made from highest quality resins, giving them the highest quality film in the market place.

Dart Drop Test ASTM test used to determine the resistance of a bag to local failure or puncturing of the film.

Elmendorf Tear Test ASTM test used to measure the resistance to tearing.

Wet Load Capacity Measurement of how much wet weight a can liner will hold.

Dry Load Capacity Measurement of how much dry weight a can liner will hold.

Gauge Term used to describe thickness. LDPE and LLDPE can liners are measured by mil thickness and HMW-HDPE can liners are measured by micron thickness.

Mil (One thousandths of an inch) Term used in the measurement of LDPE and LLDPE can liners. One mil is .001". Can liners range between .35 to 4.0 mil.

Micron Term used in the measurement of HMW-HD can liners. 25.4 microns equals .001". 1,000 microns (M) = 1mm. HMW-HDPE can liners are 6 to 24 microns.

Resin Short term for Polyethylene resin. The three types of PE resin are LDPE, LLDPE and HMW-HDPE (see below). Other plastic resins include vinyl, polypropylene, styrene and nylon.

LDPE (Low Density Polyethylene) This resin was used with older can liner technology. Resin has good clarity but weak film strength. Today it is used primarily for Food and Utility Bags that don't require heavy loads.

LLDPE (Linear Low Density Polyethylene) This is the primary type of resin used in modern can liner manufacturing technology. Bags made from LLDPE film provide excellent combination of film strength, puncture resistance and tear resistance.

HMW-HDPE (High Molecular Weight–High Density Polyethylene) Bags made from HMW-HDPE resin provide excellent film strength and puncture resistance, but less tear resistance than LLDPE.

HAO (Higher Alpha Olefin resin) A high-grade hexene-oroctene-based resin used in all our LLD liners. The properties of this resin allow for a higher-quality can liner. **Butene** One of three types of LLDPE resin. Butene has weaker film-strength properties than hexene or octene.

Hexene One of three types of LLDPE resin. We use Higher Alpha Olefin (High Grade Hexene) in the manufacturing of can liners. Properties include high film strength and increased tear resistance.

Octene One of three types of LLDPE resin. We use Higher Alpha Olefin (High Grade Octene) in the manufacturing of can liners. Used in other applications because of its excellent physical properties.

Prime Resin Refers to the usage of high-quality, "fresh from the reactor," resin. We use only prime resins in all of the products we produce, unless specified otherwise.

Blended Resin Refers to the combination of two or more types of resin.

Regrind Resin (Repro) Refers to resin that has been used at least once before. Can be post-industrial (scrap) or post-consumer (recycling). Strength properties of resin is decreased each time it is reused.

Seal Term used to describe bottom of a can liner. The three types of seals are flat, gusseted and star. (See Bottom Seal section.)

Flat Seal Straight seal along bottom of a can liner (looks like a pillow case). Though Flat Seals are strong, they may have a tendency to leak wet trash from the corners.

Gusset Seals A flat-style bag manufactured with both sides tucked in to form gussets. Has a tendency to leak wet trash from the center at gusset points where four layers of film meet two.

Star Seal Designed without gussets, the Star Seal eliminates gaps along the seal where leaks can occur. The bottom of the bag is folded over several times and sealed. Trash rests on the material instead of the seals. This leak-resistant seal holds wet trash better than the other two types of seals.

Individually Folded Can liners are separately folded, then stacked on top of one another. This allows the end-user to pull liners out of the box with much more ease vs. bulk-folded bags.

Cored Rolls Can liners are rolled together on cardboard cylinders (looks similar to a roll of paper towels). Can liners come inside a special box that dispenses with ease.

Coreless Rolls Can liners are rolled in groups of 25 or 50 per roll. There are 4 to 10 rolls per case. Rolls are perforated or interleaved.

The Heritage App

THE HERITAGE APP

Everything at your fingertips!







www.heritage-bag.com

