

# KELLERMEYER CAN LINER GUIDE

## TRASH CAN LINERS

### Linear Low Density Can Liners LLD

- 1 Superior tear resistance compared to HD liners
- 2 Multipurpose applications
- 3 Most prevalent type of film used in the industry
- 4 Manufactured in a wide variety of colors
- 5 Compared to traditional low density film, linear low density can be run at a lighter gauge with equal or greater strength.

### High Density Can Liners HD

- 1 HMW-HD liners are more puncture resistant than LLD liners of the same thickness
- 2 HMW-HD liners are made much thinner than LLD liners but can hold the same or greater weight.
- 3 Substantial cost savings on a per-liner basis

### Advantages of High Density Can Liners

1. HD liners are about 3 times stronger and more durable than ordinary polyethylene liners of the same thickness.
2. HD liners require two-thirds less petroleum based raw material to manufacture. accordingly, they can be made about one-third the thickness of ordinary low density polyethylene liners, so they require only about one-third the ordinary shipping, storage and warehousing cost.
3. Substantial cost savings per liner.
4. When they are properly made, HD liners will rarely "zipper" if punctured.
5. Extremely wide range of temperature resistance from -40 degrees F to +212 F.

**Star Seal** The star seal is the most common type of seal in the market. Designed without gussets, the star seal eliminates gaps along the seal where leaks can occur. This allows the bag to more easily conform to the shape of the container and distributes refuse weight evenly inside the bag. Star seal liners are designed in two dimensions, e.g., 40 x 46.



### Gusset Seal

A flat style bag manufactured with both sides tucked in to form gussets. Where indented, the bag is sealed through four layers of film while in the middle of the bag has only two. This leads to a potentially weak bottom seal. Gusseted seal liners are designed in three dimensions, e.g., 23 x 17 x 46.



### Flat Bottom Seal

A flat seal is a two-dimensional bag with a bottom seal, much like a pillow case. Flat seals are generally leak proof. Flat seal liners are designed in two dimensions, e.g., 40 x 46.



### Linear Low Density

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

### High Density

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

### Microns to Mils Formula

Divide the microns by 25.4 to arrive at mil thickness.

### Ex:

10 Microns ÷ 25.4 = .39 Mil  
24 Microns ÷ 25.4 = .94 Mil

### Mils to Microns Formula

Multiply the mils by 25.4 to arrive at mic thickness.

### Ex:

1 Mil = 25.4 Microns  
.30 Mil x 25.4 = 7.6 Microns  
.65 Mil x 25.4 = 16.5 Microns

### Conversion Table

microns	mils
6	= 0.23
7	= 0.27
8	= 0.31
9	= 0.35
10	= 0.39
11	= 0.43
12	= 0.47
13	= 0.51
14	= 0.55
15	= 0.59
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	= 0.94
25	= 0.98

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## GLOSSARY

**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, brown, white, gray, red, blue and yellow. (Other colors also 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 HAO (Hexene- and Octene- based) resins. This gives them the highest quality in the market place.

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

**Elmendorf Tear Test** Test used to measure the resistance to tearing or puncture.

**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 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.

**LLDPE** (Linear Low Density Polyethylene) This is the primary type of resin used in modern can liner manufacturing technology. Greater film strength allows for high puncture and tear resistance.

**HMW-HDPE** (High Molecular Weight – High Density Polyethylene) This relatively new resin has greater film strength, but weaker puncture and tear resistance than LLDPE.

**HAO** (Higher Alpha Olefin resin) This high grade hexene or octene based resin is used in many 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. Heritage uses Higher Alpha Olefin (High Grade Hexene) in the manufacturing of can liners. Properties include high film strength.

**Octene** One of three types of LLDPE resin. Heritage uses Higher

Alpha Olefin (High Grade Octene) in the manufacturing of your 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. Heritage uses 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** Refers to resin that has been used at least once before. Can be post-industrial (scrap) or post-consumer (recycling). Property of resin is deteriorated 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** (See Bottom Seal section.)

**Gusseted Seal** (See Bottom Seal section.)

**Star Seal** (See Bottom Seal section.)

**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.

**Cored Rolls** Can liners are rolled together on the top of a cardboard cylinder (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.