

Clysar LEG

Description

Clysar® LEG (LE Gold) is a new thin heat-shrinkable polyolefin film that incorporates Bemis proprietary technology to deliver unsurpassed performance in applications that demand minimum shrink force while the film is shrinking to avoid deforming or collapsing the product. Clysar LEG combines very high available shrinkage at low temperatures and the lowest shrink force in the Clysar family of shrink films. This combination makes it not only the ideal film for those “low-energy” applications but also extremely easy to use on all shrink-wrap equipment, eliminating the need for major fine tuning to achieve great looking packages with excellent clean up and minimum reject rates. This exceptional performance is achieved without sacrificing the properties that have made Clysar the leader in the industry, such as high percent of shrinkage, strength, clarity and gloss.

Uses

Clysar LEG is recommended to wrap soft products like air filters, stationary and thin pads of paper. A high-energy shrink film would bend these types of products out of shape. Clysar LEG makes use of its high available shrinkage at low temperatures and low shrink force to shrink completely around the product before generating excessive shrink force. The end result is taut and clean packages with the shape of the original product preserved. Other typical applications of Clysar LEG are open-sided chipboard boxes and low-profile products like thin magazines and stickers. These retail applications also require the high product protection and tamper evidence that Clysar LEG with its high strength and very strong seals can provide.

Significant Features

Sealing

- Provides strong, durable seals over a wide temperature range.
- Compatible with all sealing mechanisms, even PVC systems, in a very wide range of equipment, including poorly maintained machines.
- Sealing temperature for hot knives starts at approximately 300 °F.
- Does not corrode sealing wires or equipment.
- Does not leave a carbon deposit on sealing wires.

Shrinking

- Provides the lowest shrink force in the Clysar product line.
- Has very high available shrinkage and consistently delivers a clean shrink appearance.
- Tunnel temperature for clean shrink starts at approximately 280 °F.
- Forgiving under less than optimum tunnel conditions.
- Compatible with all air evacuation systems.
- Balanced shrinkage.

General

- Excellent film durability, even at freezer temperatures.
- Superior cold and hot slip
- Good tear resistance.
- Will not embrittle with age.
- High gloss, clarity and sparkle.

Standard Put-Ups

- Clysar LEG is available in 50,60 and 75 gauge as either flat or folded film.
- Flat film is available as ClysarLEG in widths between 4” and 68” in ¼ inch increments.
- Folded film is available as ClysarLEGF in widths between 5” and 47” in ½ inch increments.
- Folded film has half the linear footage of flat film for same gauge and roll dimensions.
- Folded film is available pre-perforated as LEGF-P. Flat film is not offered pre-perforated.
- Film is wound on 3-in. and 6-in. cores to the standard roll sizes as shown in Table 1. Double length rolls are available on 3-in. and 6-in. cores. Quad length rolls are available on 6-in. cores.

Table 1
Clysar® LE
Linear Footage, Flat Film

Core I.D., in.	Roll O.D., in.	50 Gauge	60 Gauge	75 Gauge
3	9½	10500	8,750	7,000
3	13	21000	17,500	14,000
6	11	10500	8,750	7,000
6	14	21000	17,500	14,000
6	18 ¾	-	35,000	28,000

Clysar® LEG vs. Competition

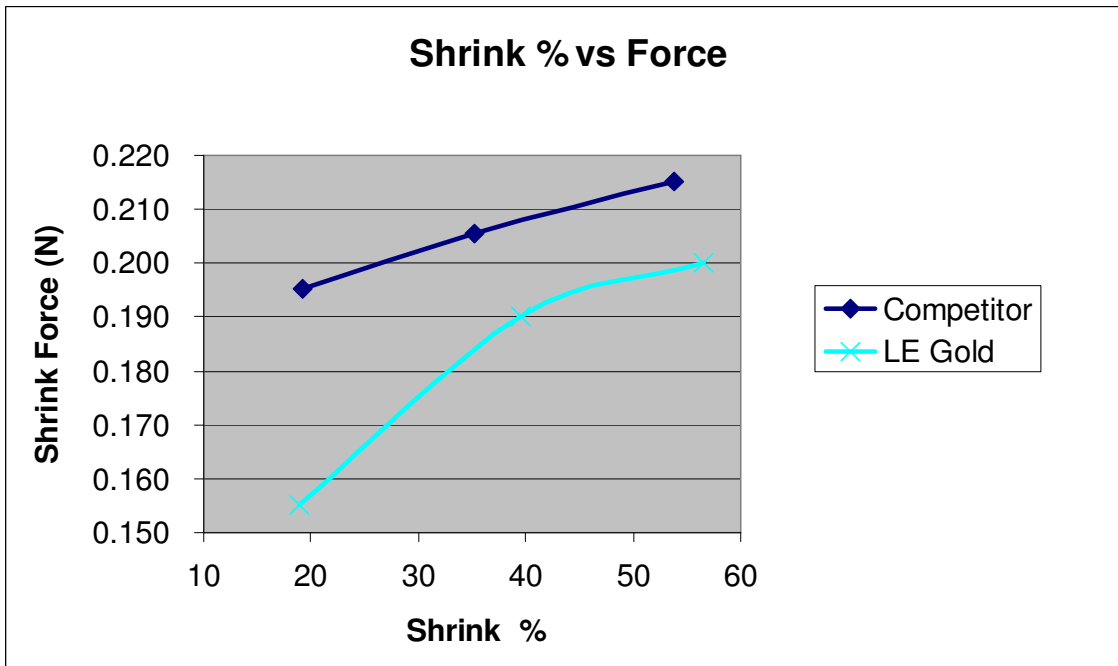


Table 2
Typical Properties of Bemis Clysar® LEG

Property	ASTM Test Method	Units	Gauge		
			50	60	75
Haze (avg)	D1003	%	2.5	2.5	2.7
Gloss at 20° (min)	D2457	(photocell)	130	130	130
COF (Kinetic)	D1894		0.1	0.1	0.1
Shrinkage, 102°C (216°F)* 10 min	D1204	%(area)	60	60	60
Shrink Force (100°C, 260 psi shrink stress)	D2838	g/in.	70	75	85
Stiffness Modulus (avg)	D882	kpsi	30	30	30
Tensile Strength (avg)	D882	kpsi	9	9	9
Elongation (avg.)	D882	%	125	130	130
Tear Strength (avg.) (Elmendorf)	D1922	g	15	18	24
Spencer Impact	D3420	in.-lbs	6	7	8
WVTR	F1249	g/100 in ² /24 hr	3.3	3.2	3.0
Oxygen Transmission	D3985	cc/100 in ² /24 hr	860	850	820
CO ₂ Transmission	D1434	cc/100 in ² /24 hr	2550	2500	2450

*Film Temperature Note:

These values are typical data for Clysar LE shrink film and are not intended for use as limiting specifications.

FDA/USDA Status

Clysar films sold for food packaging use comply with U.S. Food and Drug Administration (FDA) requirements under the Federal Food, Drug, and Cosmetic Act as amended. Clysar complies with FDA regulation 21 CFR 177.1520 -- Olefin polymers, allowing use for articles that contact food, except for articles used for packing or holding food during cooking. This FDA compliance and a continuing guarantee from Bemis Clysar will meet FDA requirements for packaging meat and poultry products.

Use

Bemis Clysar does not recommend heating or cooking foods in Clysar Shrink Film. High temperature and high speed sealing of Clysar will release small amounts of "smoke" which should be removed by adequate ventilation in normal commercial practice.

Disposal

Preferred options for disposal are (1) recycling SPI code-class 7, (2) incineration with energy recovery, and (3) landfill. The high fuel value of this product makes option (2) very desirable for material that cannot be recycled.

Storage

Storage below 32°C (90°F) is recommended. Prolonged exposure to temperatures moderately above 32°C (90°F) or brief exposure to temperatures well above 32°C (90°F) may cause difficulty in unwinding film.

For more detailed information on the safe handling of Clysar films a "Safety in Handling and Use" guide and OSHA Material Safety Data Sheets can be obtained from your Clysar representative.

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The technical data contained herein are guides to the use of Bemis Clysar films. The advice contained herein is based upon tests and information believed to be reliable, but users should not rely upon it absolutely for specific applications because performance properties will vary with processing conditions. It is given and accepted at user's risk and confirmation of its validity and suitability in particular cases should be obtained independently. Bemis Clysar makes no guarantees of results and assumes no obligations or liability in connection with its advice. This publication is not to be taken as a license to operate under, or recommendation to infringe, any patents.

CAUTION: Do not use in medical applications involving permanent implantation in the human body. For other medical applications, see Bemis Medical Caution Statement, MCS_01.