

## Description

Clysar® ULTRA LEG™ shrink film is a gentle “low-energy” polyolefin that can improve shelf appeal and reduce packaging materials. It offers approximately 40% less force than competitive low-energy films—and the ability to process at lower temperatures—making it ideal for delicate, collapsible or heat-sensitive products.

Clysar® ULTRA LEG™ is easy to use, provides material reduction opportunities and creates consistent, attractive packages without major fine-tuning, rejects or waste.

# Clysar® ULTRA LEG™ Film

DATA SHEET

## Uses

Recyclable Clysar® ULTRA LEG™ shrink film is an advanced new low-energy polyolefin shrink film prequalified for Store Drop-off by **How2Recycle**®. It offers approximately 40% less shrink force than competitive films and seals and shrinks at much lower temperatures than traditional shrink films.

Clysar® ULTRA LEG™ film’s gentle balanced shrink makes it ideal for packaging thin, soft, fragile or heat-sensitive products like:

- Filters (air filters, appliance filters, filter papers, etc.)
- Protective apparel like face masks
- Stationery, stickers and thin paper products

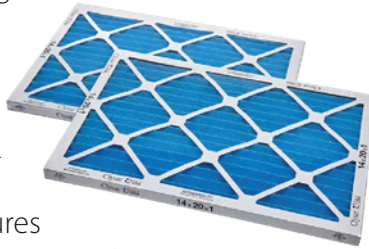


- Open-sided chipboard boxes
- Magazines, calendars and other low-profile items
- Craft, hobby and collectible products
- Bundled printed materials
- Candy and confectionery products

## Significant Features

### Sustainability

- Prequalified for the Store Drop-off label by **How2Recycle**®.
- Non-toxic replacement for chloride-based PVC film.
- Ideal for right-gauging packages.
- Low seal and shrink tunnel temperatures reduce energy use in packaging operations. (Tunnel temperature for clean shrink typically starts 25° cooler than traditional polyolefin shrink films.)



- Sealing temperature for hot knives starts at approximately 300°F.

### Shrink Performance

- Exerts approximately 40% less force on products during shrinking than competitive films.
- High available shrink for crisp, tight shrink packages.
- Balanced, all-around shrink to eliminate dog-ears and other flaws.
- Forgiving under less-than-optimum tunnel conditions.
- Compatible with all air evacuation systems.

### General

- High-performance thin-gauge film.
- Exceptional gloss, clarity and sparkle.
- Excellent film durability, even at freezer temperature.
- Superior cold and hot slip.
- Good tear resistance.
- Will not become brittle with age.

### Sealing

- Provides strong, durable seals over a wide temperature range.
- Compatible with all sealing mechanisms, even PVC systems.
- Does not emit toxic fumes or corrode sealing wires or equipment.
- Will not leave a carbon deposit on sealing wires.

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# Clysar®

## FDA/USDA Status

Clysar® films sold by Clysar, LLC, 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.

## Use

Clysar, LLC, does not recommend using traditional heating or cooking methods for foods wrapped in Clysar® shrink films. For conditions specific to microwave cooking, please request documentation that is specific for your application through your Clysar representative.

## Disposal

Preferred options for disposal are: (1) Store Drop-off recycling; and (2) incineration with energy recovery.

## 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 can be obtained from your Clysar representative.

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**Clysar**®

## Standard Put-Ups

- Clysar® ULTRA LEG™ is available in 40-gauge flat or folded film.
- Flat film is available in custom widths from 3” to 56” in ¼” increments.\*
- Folded film is available in custom widths from 3” to 37” in ½” increments.\*
- Folded film has half the linear footage of flat film for same gauge and roll dimensions.
- Film is available in a special pre-perforated pattern.
- Film is wound on 3” and 6” cores to the standard roll sizes as shown in Table 1.
- Double-length rolls are available on 3” and 6” cores. Quad-length rolls are available on 6” cores.

\*Contact your Clysar representative for width-specific information.



## Summary of Properties

### Clysar® ULTRA LEG™ Linear Footage Flat Film (Table 1)

Core I.D., in.	Roll O.D., in.	40 Gauge	55 Gauge	70 Gauge
3	9 1/2	6,560	9,540	7,500
3	13	13,120	19,080	15,000
6	11	6,560	9,540	7,500
6	14	13,120	19,080	15,000
6	18 3/4	26,240	38,160	30,000

### Typical Properties of Clysar® ULTRA LEG™ (Table 2)

*Delivers 40% less shrink force than competitive films, with higher available shrink.*

Property	ASTM Test Method	Unit	40 Gauge	55 Gauge	70 Gauge
Haze	D1003	%	2.5	2.5	2.5
Gloss at 20°	D2457	GU	125	125	125
COF, Kinetic	D1894		0.1	0.1	0.1
Shrinkage, 102°C (216°F), 10 min	D1204	% (area)	65	65	65
Shrink Force	D2838	g/in @ 100°C	35	50	60
Stiffness Modulus (avg)	D882	kpsi	25	25	25
Tensile Strength (avg)	D882	kpsi	5	7	8
Elongation (avg)	D882	%	90	125	140
Tear Strength (avg) (Elmendorf)	D1922	g	15	25	30
Spencer Impact	D3420	lbf	2.0	2.3	2.5
WVTR	E-96	g/100 in <sup>2</sup> /24 h	3.5	3.3	3.0
Oxygen Transmission	D3985	cc/100 in <sup>2</sup> /24 h	900	860	820
CO <sub>2</sub> Transmission	D1434	cc/100 in <sup>2</sup> /24 h	2,700	2,550	2,450

The technical data contained herein are guides to the use of 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. 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 Clysar Medical Caution Statement, MCS\_02.