Summary of Properties

Clysar EZ

Description

Clysar® EZ is a strong, clear, biaxially oriented, heat-shrinkable polyolefin-based film.

Uses

Clysar® EZ is used to shrink-wrap products that require a premium appearance. Clysar EZ is an excellent choice for high-speed applications and static sealing. Excellent optics, clean shrink appearance, and strong, durable seals are obtained on shadow boxes, irregular shapes and general purposes overwrapping under a wide range of operating conditions.

Significant Features

Sealing

- Provides very consistent, strong, durable impulse wire seals.
- Makes good electrostatic seals that will hold up through distribution.
- Has a wide heat-sealing range.
- Does not give off harmful gases or corrode sealing wires or equipment.
- Does not leave a carbon deposit on sealing wires, thus eliminating the need for an additional expensive Teflon® tape over top of the sealing wire to get clean seals.
- Pinhole-free seals.

Shrinking

- Delivers a clean shrink appearance with minimum dog ears, chatter marks, and crow's feet.
- Has a wide shrink temperature range and a high available shrinkage.
- Good burn-through resistance.
- Shrinkage is balanced.

General

- Excellent film durability, even at freezer temperatures.
- Good sheet stiffness.
- Will not embrittle with age.
- High gloss, clarity, and sparkle.
- Outstanding performance on high-speed automatic shrink equipment.
- Uniform package appearance due to more consistent air evacuation.

Standard Put-Ups

- Clysar EZ is available in four gauges: 45, 50, 60, and 75 as either flat or folded film.
- Flat film is available as Clysar EZ in widths from 5-68 inches in ¼ inch increments
- Folded film is available as Clysar EZF in widths from 5-35 inches in ½ inch increments.
- Folded film has half the linear footage of flat film in the same gauge and roll dimensions.
- Print treated film is available as Clysar EZT. This treatment is available only on 60 and 75 gauge flat film.
- Surface treated film for improved hot slip is offered as Clysar EZS.
- Film is wound on 3" and 6" cores to the standard roll sizes shown in Table 1.

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Table 1
Clysar® EZ
Linear Footage, Flat Film

Core I.D., in.	Roll O.D., in.	Gauge			
		45	50	60	75
3	9 ½	11,660	10,500	8,750	7,000
3	13	23,320	21,000	17,500	14,000
6	11	11,660	10,500	8,750	7,000
6	14	23,320	21,000	17,500	14,000
6	18 ¾	-	-	35,000	28,000

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 in contact with all types of foods. This FDA compliance and a continuing guarantee from Bemis Clysar will meet USDA 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 a Material Safety Information Sheet can be obtained from your Clysar representative.

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Table 2
Typical Properties of Clysar® EZ

Property	ASTM Test Method	Units	Gauge			
			45	50	60	75
Haze (avg)	D1003	%	1.9	2.0	2.1	2.3
Gloss at 20° (min)	D2457	–	145	145	145	140
COF, Kinetic	D1894	–	0.21	0.21	0.23	0.23
Shrinkage, 136°C (277°F) 10 min	D1204	% (area)	65	65	65	65
Shrink Force, 110°C (230°F) Based on shrink stress 330 psi	D2838	g	65	77	90	110
Stiffness Modulus (avg)	D882	kpsi	77	77	77	77
Tensile Strength (avg)	D882	kpsi	10	10	10	10
Elongation (avg)	D882	%	90	90	90	90
Tear Strength (avg.) (Elmendorf)	D1922	g	11	11	11	11
Spencer Impact	D3420	in-lbs	5	5	5	5
WVTR	F1249	g/100 in^2/24 h	2.0	1.9	1.8	1.6
Oxygen Transmission	D3985	cc/100 in^2/24 h	850	790	680	640

Bemis Worldwide **Toll-free (U.S.A.) 888 4-CLYSAR**

Internet/World Wide Web:
http://www.clysar.com E-Mail: clysar.marketing@bemis.com

CAUTION: Do not use in medical applications involving permanent implantation in the human body. For other medical applications, see Bemis Medical Caution Statement, MCS_02.

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