

Description

Improved Clysar® AFG is a strong, clear, biaxially oriented, heat-shrinkable, anti-fog, polyolefin-based film. The film provides superior, fast-acting, anti-fog properties, achieving clear, condensation-free retail packages within one hour. The film has excellent stretch, recovery, toughness and tear resistance, and will not brittle with age. AFG film is FSSC 2200 approved and microwavable per Clysar guidelines.

Clysar® AFG Films

DATA SHEET

Uses

Clysar® AFG film is commonly used for fresh produce applications where ambient temperature variation creates problems with package condensation and fogging. Clysar® AFG film now provides the industry's fastest-acting anti-fog performance, creating clear, retail-ready packages in one hour.

Clysar® AFG film is suited to overwrap a wide variety of fresh vegetables and fruit, including individually packaged produce, pre-cut or unitized items and multi-packs. The film offers excellent strength and a tight protective barrier to protect products, manage moisture and maintain good-looking packages through distribution and retail.

Clysar® AFG is designed for packages that will be refrigerated in the case or displayed at room temperature. Treated film can be printed for colorful brand graphics and consumer information.

Significant Features

Sealing

- Compatible with all shrink sealing systems.
- Sealing temperature range is wide.
- Seals easily even under less-than-optimum conditions.
- Seals at higher speeds than many other cross-linked shrink films.
- Seals are thin and less likely to leak than ordinary polyolefin films.

Shrinking

- Allows lower tunnel temperatures that can result in utility cost savings.
- Runs on wide variety of tunnels and shrinks under less-than-optimum conditions. It is not dependent on high air velocity to get good shrink.
- Produces medium shrink force.
- Requires sufficient air evacuation for optimal package appearance.

Standard Put-Ups

- Clysar® AFG is available in 45 and 60 gauge.
- Flat film is available in custom widths from 3" to 100" in ¼" increments.*
- Folded film is available as AFGF or folded film is available in custom widths from 3" to 50" in ½" increments.*
- Folded film will have half the linear footage of flat film in the same gauge and roll dimensions.
- Film is wound on 3" and 6" cores to the standard roll sizes shown in Table 1.
- Clysar® AFG can be used for printed applications by adding a primer with our print partners.

*Contact your Clysar representative for width-specific information.



With improved Clysar® AFG film, produce packages are clear and retail-ready in 1 hour, delivering superior performance in the least amount of time.

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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) recycling, SPI Code 4; (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 can be obtained from your Clysar representative.

Summary of Properties

Clysar® AFG - Linear Footage Flat Film (Table 1)

Core I.D., in.	Roll O.D., in.	Gauge	
		45	60
6	11	11,660	8,750
6	14	23,320	17,500
6	18 ¾	-	35,000

Typical Properties of Clysar® AFG (Table 2)

Property	ASTM Test Method	Unit	Gauge	
			45	60
Haze	D1003	%	6.5	7.0
Gloss	D2457	GU	85	85
COF, Kinetic	D1894	gf	0.30	0.30
Shrinkage	D1204	% (area)	45	45
Shrink Force (100°C)	D2838	g/in	60	70
Stiffness Modulus	D882	kpsi	55	55
Tensile Strength	D882	kpsi	14	14
Elongation	D882	%	130	140
WVTR	F1249	g/100 in ² /24 hr (37.8°C, 100% RH)	2.3	1.6
Oxygen Transmission	D3985	cc/100 in ² /24 hr (23°C, 50% RH)	1,000	600
CO ₂ Transmission	-	cc/100 in ² /24 hr (23°C, 0% RH)	2,500	2,500

Note: These values are typical data for Clysar® AFG shrink film and are not product release specifications, warranties or limiting specifications. Values are based on initial production and test runs during development of this film.

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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.