



Dura-Film Therman combines exceptional condensation control properties with outstanding thermal quality in one revolutionary bee-compatible greenhouse film. The modified outer layer of the film safeguards condensation control integrity by providing directionality.

► Dura-Film Therman is guaranteed to withstand 48 months or 4 years of UV exposure under normal circumstances.

- Directional condensation control ensures the additive migrates to the surface facing the crop. This not only controls drips but maintains light transmission and enhances thermal benefit.
- Outstanding thermal properties keep the heat in by reducing radiant heat loss. Heaters cycle less often and consume less energy to maintain a set temperature, a combination that offers potential energy savings of 15-20%.
- Bee compatibility feature allows more of the UV spectrum to pass through the film, making it easier for bees to navigate and achieve more efficient pollination than with mechanical means.
- Improved strength attributes: Increased Tear and Stiffness provide superior strength so Dura-Film Therman handles years worth of snow and wind loads.
- High strength at folds means higher resistance to development of punctures and tears. In any film, weaknesses can occur where the polymer strands are bent at a fold. Increased fold strength minimizes performance issues at these key areas.
- Increased film stiffness makes the film easier to install in greenhouse applications. It also helps maintain the installed film at the correct slope in use, so that condensation does not collect and fall at low points. Less drooping means less dripping and lower risk of developing hot spots for fungal disease flare-ups.

Industry-leading customer service

From advice on initial film choices and installation, right through to handling any performance concerns, AT Films Inc. provides satisfaction and peace of mind.

- Your work doesn't stop with the clock - neither does ours. Extended hours for customer service calls, so you can reach a representative after hours in case of an emergency.
- AT Films Inc. films are backed by the strongest non-prorated warranty in the industry. Product replacement warranties against defects provide peace of mind. You can concentrate on your growing business, confident that your choice of film won't expose you to extra film purchase costs in case of a problem.
- Our service looks to your future as well by creating technology to help you stay competitive. AT Films Inc. Technical Center implements continuous product monitoring, research, and development in order to continually develop better products for your needs.

Confidence in Quality.

AT Films Inc. endorses every foot of film with our logo and film type.

AT Films Inc.

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THERMAX



we've got you covered

Specifications

Property	Typical Value	Unit	Test Method
Gauge			
Specified	6.0	mil	AT Method
Optical			
Transmission	91	%	ASTM D 1003
Haze	35	%	ASTM D 1003
Clarity	78	%	ASTM D 1003
Tensile: MD			
Max. Stress	22	MPa	ASTM D 882
Max. Load	83	N	ASTM D 882
Elongation	600	%	ASTM D 882
Tensile: TD			
Max. Stress	21	MPa	ASTM D 882
Max. Load	82	N	ASTM D 882
Elongation	685	%	ASTM D 882
Tear			
MD	7.2	N	ASTM D 1922
TD	11.7	N	ASTM D 1922
Dart Impact			
F(50) Fold	650	g	ASTM D 1709

Note: Film properties above are based on a 6-mil film manufactured at a width of 48 foot layflat sheeting. All film properties may be significantly affected by production variables, most notably width and gauge.

Benefit of Thermal Films

Research shows that a properly inflated double poly-covered greenhouse can save the grower over 40% in heating costs compared to a single layer of glazing. What is less well known is that using a thermal film as one of the layers can result in an additional 15-20% heating cost saving.

During the day, the greenhouse structure, plants and soil heat up due to both visible and infrared light from the sun. At night, heat is released in the form of long-wavelength infrared radiation (IR) to the cooler outside air. Thermal films absorb significantly more IR so there is less transmission of radiant heat.

Thermicity is a measure of the transmission of IR through a film. The lower the thermicity, the lower the transmission of IR and the lower the heat loss. The table below provides comparative data for AT Films Inc. films of the same gauge:

Incorporation of an effective condensation control additive into Thermax leads condensing water to spread out into a uniform sheet on the interior

Film	Gauge (mil)	Thermal/AC?	Thermicity (%)
Super 4	6	No	60
Thermax	6	Yes	26

surface of the film. This thin sheet of water also absorbs in the long-wavelength IR region, meaning it acts as an additional barrier to radiant heat, i.e. enhances thermicity.