



LIMITED WARRANTY FOR PLASTIC FILMS

The manufacturer guarantees the products listed below in USA – Canada against premature UV degradation for the following period: 3 years/36 months, measured from the date of distributor's invoice to the user for the specific film.

This warranty only covers premature UV – degradation and does not warranty film that has absorbed more than the following limited usage of chemicals.

- Limited usage of chemicals:
 - Up to 100 ppm of Chlorine (Cl)
 - Up to 500 ppm of sulfur (S)

In case of premature failure due to UV-degradation before the end of the guaranteed period, the manufacturer will offer a discount on the purchase price for replacement of the damaged quantity of film, with the same terms & conditions as those offered by the manufacturer at the time of the sale of the failed film, according to the formula below:

- $D\% = (GL - AL) / GL \times 100$

Where:

- D% = discount percentage
- GL = guaranteed period of film, in months
- AL = actual life of film at time of failure, in months

The guaranteed period, and the life of the film, is measured from the date of distributor's invoice to the user for the specific film however, if the invoice date is later than 12 months after production date, the guaranteed period and the life of the film will be measured from the date of production.

The manufacturer's guarantee hereunder is subject to the Conditions and Exclusions.

Conditions and Exclusions:

1. A film is considered as having been subject to premature UV-degradation when its tensile strength at break has fallen 10 N/mm² (according to ASTM D882) due to the effect of UV radiation.
 2. Failures due to: mechanical damage by puncture, impact, tear or contact with plants, steel or popper clamps, strong wind, storm, hail or other extreme weather conditions or Act of God, effect of pesticides or Sulfur (as shown by presence of S, Cu, As, Hg, Ti and hydrogen rings at a cumulative level exceeding 500 ppm in the film and/or F, Cl, Br, I at a cumulative level exceeding 100 ppm in the film) improper handling, storage or installation of the film, installation on a wood structure, use as a single layer, improper condition of the greenhouse structure such as rust or sharp points, resin exudation from wood, greases, petroleum, ether, tar etc., use of PVC protective tapes or coating paints which are not vinyl or acrylic based, are expressly excluded from this warranty.
 3. The whole surface of film which is in contact with the greenhouse frame, including gutters, must be painted from the outside with a white vinyl or acrylic based paint, or covered with suitable protective tape, no later than 2 weeks from its installation (USA and Mexico only).
 4. Films must have been installed according to recognized best practices and properly maintained as required.
 5. The supplied instructions of installation and usage of the film must have been followed.
 6. When installed as a double layer, films must remain inflated at all times, with a static air pressure comprised between 0.15 and 0.25 inches of water column.
 7. In case of any failure, user is responsible to act to prevent and/or minimize any damages that could occur.
 8. This warranty covers only the replacement value of the damaged film according to the discount formula outlined above. No further warranty is offered and no liability is undertaken whatsoever neither for replacement costs or other direct expenses (including labor, etc...) nor for potential damages to the crops, loss of profit or special, indirect or consequential damages and any such further warranty and/or liability is hereby expressly disclaimed.
 9. This warranty is in lieu of all other warranties or conditions, express or implied, statutory or otherwise, including but not limited to merchantability or fitness for any particular purpose. It is the responsibility of the user to verify the suitability of the specific type of film for his/its particular application.
 10. Seller's general terms & conditions of supply and delivery apply.
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Procedures for verification of claims:

1. A sample of at least 0.5 m² from the damaged area of film must be sent for analysis and identification of the causes of failure to the manufacturer within 1 week from noticing a failure, including the following information: type of film, dimensions, production code, date purchased, date installed, kind and condition of structure, crop, pesticides used and their frequency, place where film failed, quantity of film that failed as well as any other information reasonably requested by the manufacturer.
2. The manufacturer and his representative must be permitted to inspect the site.
3. In case the inspection and/or analysis performed by the manufacturer's lab reveal that failure is due to the quality of the film, the above conditions of warranty will apply.

4. In any other case, the user has the right to submit the film to an independent laboratory mutually accepted by both parties, which will perform the necessary tests and whose opinion regarding the causes of failure will be acceptable to both parties. The cost of such independent analysis will be covered by the manufacturer, if the report indicates failure of the film due to its quality, or by the user if the failure was not due to the quality of the film or it is shown that one of the exclusions applies or that one of the conditions had not been followed.

UVA – Clear

Physical property characteristics

Dart Impact (gms/mil)	Value	Optical properties	Value
ASTM D1709 (Resistance to puncture or tearing when impacted by an object)	150	Light transmission U.S. Testing Co.	91.60%
Tear (grams/mil)	(MD) 200	Unobstructed Solar Radiation Transmitted	74.6
ASTM D1922 (Resistance to continued tearing once a tear or hole has been initiated)	(TD) 275	Photosynthetically Active Radiation (PAR)	77.60%
Tensile (psi)	(MD) 4000		
ASTM D882 (Resistance to tears or "running" when pulling film over a frame or stretching to engage locks)	(TD) 3000		
Break Strength (lbs/mil)	(MD) 4.0		
ASTM D882	(TD) 3.6		
Elongation (psi)	(MD) 700		
ASTM D882	(TD) 675		
Yield Strength (psi)	(MD) 1650		
	(TD) 1450		

Thermal Anti-drip

Physical property characteristics

Dart Impact (gms/mil)	Value	Optical properties	Value
ASTM D1709 (Resistance to puncture or tearing when impacted by an object)	150	Light transmission	90.90%
Tear (grams/mil)	(MD) 200	Haze	45.90%
ASTM D1922 (Resistance to continued tearing once a tear or hole has been initiated)	(TD) 275	Thermicity	21.00%
Tensile (psi)	(MD) 4000	Diffused Light	41.80%
ASTM D882 (Resistance to tears or "running" when pulling film over a frame or stretching to engage locks)	(TD) 3000	Clarity	65.50%
Break Strength (lbs/mil)	(MD) 4.0	Opacity	13.30%
ASTM D882	(TD) 3.6		
Elongation (psi)	(MD) 700		
ASTM D882	(TD) 675		
Yield Strength (psi)	(MD) 1650		
	(TD) 1450		