

## PRODUCT DATA SHEET : ATOPLAN CRISTALL FR

The Cristall FR thermal films are made with particular polymers which confer the film a high crystallinity and a visible light transmittance, higher than 90%. Cristall FR is especially suitable for covering vegetables and flower cultivations which require high luminosity conditions. The main characters of Cristall FR are:

- 1) Very high greenhouse effect. The optimal thermal capacity of this film allows to maintain inside the greenhouse, so you have higher nightly temperatures (up to 5°C) than the ones under Polyethylene film.
- 2) Transmittance to visible radiations: Among the highest of the commercial films!
- 3) The Cristall FR thermal films contain Anti-drip.
- 4) crystal is resistant against Sulvar and other chemicals used in greenhouses

Property	Unit	Value	Test method
<b>Dimensional properties</b>			
Nominal thickness tolerance:			
- average thickness	μ	± 5 %	ISO 4591
- point to point thickness	μ	± 15 %	ISO 4593
Width tolerance	mm	0%+2%	ISO 4592
<b>Mechanical properties</b>			
Tensile strength at break	N / mm	≥ 25	EN ISO 527-3
Elongation at break	%	≥ 250	EN ISO 527-3
Tear resistance	N	≥ 18	ISO 6383-2
Dart drop test			
- zone flat	gr.	≥ 900	ISO 7765-1 A
- zone fold	gr.	≥ 850	ISO 7765-1 A
<b>Thermic and optical properties</b>			
Total visible light emission	%	≥ 90	EN 2155-5
Diffused light	%	≤ 15	EN 2155-9
IR effectiveness	%	≥ 90	
<b>Other properties</b>			
Elongation at break after exposition	%	≥ 50 %	ISO 4829-2
<b>Duration</b>			
UV	KLY	800	5 years
Thickness		0,08 - 1,0 mm	
Width (standard)		2 - 6,0 mtr	
Width (welded)		6 - 24m	

Note : We believe this information is the best currently available. It is subject to revision once additional know-how is gained. We make no guarantee of results and assume no obligation and/or liability whatsoever in connection with this information.