

Greenhouse film



Hyplast NV offers a wide range of co-extruded films (up to 7 layers) for various applications in agri- and horticulture. Thanks to the process of co-extrusion, it is possible to combine the optical, thermic, mechanical and chemical properties of different raw materials in the best possible way in one single film. This results in a film giving your crop the optimal protection against negative external influences and creating an ideal microclimate for your crop to grow.

Next to a number of elements that are important for every greenhouse film, like a high light transmission, a long lifetime and good mechanical properties, Hyplast NV can influence a number of specific film properties. In this way, we are able to develop the perfect film for every climate and every culture.

Properties

Important properties of greenhouse films are:

- **Thermicity**

The addition of mineral fillers or copolymers like EVA reduce longwave infra-red radiation (heat) leaving the greenhouse. Slower cooling under thermic films keeps heating costs down.

- **Diffusion**

Light transmission is an important property of greenhouse film. It is however of equal importance to make a difference between direct and indirect or diffused light. Too much direct light can have a harmful influence on plant growth, especially in regions with intense sunlight. Addition of mineral fillers results in a broader and more equal light dispersion. This diffused light reduces the stress and has a positive influence on the plant growth.



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Properties

- **Anti-fogging**

Condensation drops are blocking a part of the (PAR) light (up to 15%) and can also damage the plants. By adding special additives, the condensation on the film will form a thin water layer that is drained off to the side of the greenhouse/tunnel. Result: more light in the greenhouse.

- **UV-blocking / Anti-Petal Blackening**

Ultraviolet radiation doesn't always contribute to plant growth, but can in some cases cause damage to the crop. By adding special additives that block the UV-light, this radiation cannot enter the greenhouse. Thanks to UV-blocking, the so-called 'petal blackening' of roses is avoided.

- **Cooling effect**

Plants don't need all frequencies of solar energy. Some radiation frequencies like the Near Infra-red (NIR) only provide heat. Especially in hot climates it can be very useful to block this irradiation heat as much as possible in order to avoid overheating and evaporation in the greenhouse. By

using special interference pigments (Hyplast patent), Hyplast is able to present films that selectively reflect certain wavelengths: blocking irradiation heat as much as possible and transmitting the PAR-light. Thanks to this technology, it is often no longer necessary to 'whiten' the greenhouse or to use screens.

- **Anti-dust action**

Extra smooth film avoids dust sticking too much to the film. Result: higher light transmission. A smooth film surface also facilitates cleaning.

- **Resistance against pesticides**

Pesticides, especially sulphur and chlorine, containing 'reacting agents' can have a very negative influence on the lifetime of a film. The use of specific protective additives help to control these influences. Nevertheless, the use of pesticides in combination with PE films has to be avoided as much as possible, as pesticides will accelerate aging of the film when used in high concentrations.

The table below gives a brief overview of the most important Hyplast greenhouse films and their properties. Under certain conditions, Hyplast NV can of course develop and produce custom-made films. For detailed information about our range of greenhouse films, please contact our sales department (tel. +32 3 340 25 50).

	Thermicity	Diffusion	Anti-Fogging	UV-blocking	Cooling effect	Anti-dust	Mechanical strength	Resistance against pesticides
Hyticlear	no	no	no	no	no	yes	+	+
Hyticlear Nickel	no	no	no	no	no	yes	+	++
Hytithermic	yes	no	no	no	no	yes	+	+
Hytithermic Nickel	yes	no	no	no	no	yes	+	++
Hytibox	yes	no	yes	no	no	no	++	+
Hytirose	yes	yes	yes*	yes	no	no	++	+
Kool lite plus	yes	yes	yes*	yes*	yes	no	++	+
Hytitunnel	no	no	no	no	no	yes	+	+

* These films can also be delivered without this property