



Luminance THB

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This new generation plastic film combines great thermic and light transmission properties. Its high diffusion characteristics help control the temperature and, thanks to its special formulation, it can reduce infra-red radiation.

Infra-red radiation accounts for around half of the amount of radiation that enters the greenhouse. It serves no other biological purpose other than providing heat which, in excess, can prove to be a limiting factor in healthy plant growth and production.

Conventional shading films can reduce infra-red radiation but also remove a significant amount of the beneficial light in the PAR range essential to healthy plant growth. In contrast, the thermal barrier of Luminance THB works to prevent the problem of heat build-up by reducing the amount of short wavelength infra-red light entering the tunnel, as well as allowing high levels of useful PAR light through so it goes deeper in to the plant canopy. This way, the plants continue to receive all the sunlight they need to grow but unwanted heat build-up and consequent plant scorching is significantly reduced.

In addition, Luminance THB assists in maintaining overnight temperatures by minimising heat loss from the tunnel during the night. This helps to prevent severe fluctuations and subsequent plant stress and encourages higher production during colder periods.

All of the above mentioned properties combined have been shown to increase crop yield and quality of ornamental plants, roses, salads, soft fruit and some vegetable crops.

Luminance THB AF (Anti-Fog)

Luminance THB AF is especially formulated to reduce infra-red radiation and enhance useful light in the PAR range. It offers excellent diffusion, light transmission and superb thermic control qualities, as well as built-in anti-condensation properties which help reduce the risk of fungal diseases such as downy mildew and botrytis cinerara.

Thanks to its unique additive, Luminance THB AF is able to control the condensation of water on the film. Providing the film is properly installed, water will condense uniformly on the plastic sheet rather as droplets. This reduces the risk of water falling on to the plants below and prevents the loss of light caused by these droplets, which can account for as much as 25%.

Crop Responses to Luminance THB

Tests conducted in the UK and overseas show that the total solar heat load was reduced by over 20% in greenhouses covered by Luminance THB without any significant decrease in PAR (although it's important to remember that greenhouse temperatures depend on a number of factors, including ventilation levels).

Tomato: Tony Dasyuva, a grower from the Perieres region of France, insists that planting tomatoes under the film increased "his yield by over ten per cent". He added that compared to fruit cultivated under traditional films, his

Getting light, right.

test samples were larger and had thicker stems. Field workers noted that Luminance THB ensured a much cooler working environment during the harvesting season and also observed that plants had very strong root systems.



Strawberry and soft fruit: The Soft Fruit Technology Group determined that productivity of protected long-season crops is primarily limited by physiological stresses experienced during high-temperature events. Approximately 30% of strawberry production can be lost to heat stress while shelf-life and quality are negatively affected in strawberry and other soft fruit.

Luminance THB is now widely used by UK and European growers to reduce soft fruit crop heat stress where it has aided yield increases in strawberries, blueberries and raspberries under normal commercial conditions. There may also be further benefits in terms of increasing shelf-life, taste, vitamin content and colour by increasing the fruits exposure to broad spectrum UVA and UVB light.



Cut flowers: Given that growers usually sell their crop on a stem weight basis we have concentrated on identifying filters that produce cut flowers with increased fresh weight while improving the visual appearance, shelf-life and colour of these high value crops.

In experiments carried out over four years by Lancaster University and evaluated by internationally renowned cut flower producers and consultants, Luminance THB and Visqueen's UV-blocking filter have consistently produced crops with up to 18% increased fresh weight yield and improved visual quality in all varieties tested. Work is now under way to determine if combining the properties of Luminance and UV-blocking filters can deliver even more benefits to the grower.

Luminance THB KR

Luminance THB KR is based on the formulation of Luminance THB and was specifically developed for rose production in Kenya. It offers increased heat control and improves light transmission by up to 85%. In addition, it contains an additive to help control colour development in roses.

Property	Luminance THB (field cover)	Luminance THB	Luminance THB	Luminance THB AF
Thickness (µm)	150	180	200	200
Light Transmission (%)	87	87	87	87
Diffusion (%)	>90	>90	>90	>90
Thermicity (%)	85	88	90	90
Elongation MD (%)	700	500	550	550
Impact Strength (g)	>550	>550	>550	>550
Yield Strength (Mpa)	8.5	7	7	7
UV Level	3 Season	5 Season	5 Season	5 Season
Manufacture Guarantee*	3 Season	5 Season	5 Season	5 Season

*Manufacture guarantee is region dependent. Enquire with technical team for details.