



Greenhouse cover warranty

#GOCIRCULARPLASTICS

WE PROMOTE PLASTIC CIRCULARITY



I. INTRODUCTION.

SOLPLAST, S.A. has a Quality Assurance system that has been certified in accordance with the EN ISO 9001 standard, which ensures quality in each of the production phases of our products. SOLPLAST manufactures and sells plastic films to cover greenhouses with guaranteed minimum service lives depending on the type and thickness of the film. These products comply with the EN 13206 standard.

SOLPLAST, S.A. provides a voluntary manufacturer's warranty for the products, described in section 2, for the product's warranty period that is specified in Section 4. The content and scope of the warranty statement provided by SOLPLAST, S.A. are determined solely by this warranty document and the general terms of sale of SOLPLAST, S.A.

II. PRODUCTS INCLUDED.

The products to which this warranty relates are the plastic films used to cover greenhouses and tunnels.

III. INSTRUCTIONS FOR USE OF THE PRODUCTS.

TRANSPORT AND STORAGE

- During transportation and storage, the rolls should be supported on a smooth surface with no sharp points or protrusions that could damage them.
- Heavy and sharp objects (rolls of wire, posts, etc.) should not be placed on top of the rolls.
- Do not drag the rolls during transportation and/or installation or scrape their edges.
- Surplus rolls should be stored in a dark, dry place; even better, wrap them in opaque plastic.

INSTALLATION

- Regularly check the greenhouse structure (fabric and wire), making sure that it is not rusted and there are no loose ends or wires.
- Do not scrape the spools during installation.
- The sheet must have adequate tension. If it is too loose, there will be a high level of friction against the structure. If it is too tight, it may accelerate premature degradation. Do not install the sheets during the

hottest hours of the day, due to the fact that the softening of the plastic in these conditions causes excessive placement stress and leads to severe shrinkage once temperatures drop.

- Never tighten after fastening.
- Avoid direct contact between the sheet and the structure (when the structure is wooden, this should be protected to prevent any contact with the film; avoid any contact between the film and PVC accessories). In these areas, reflective adhesive tape or a light-coloured water-based paint should be used on the plastic to prevent damage from high temperatures.
- The above recommendation is essential for tunnel and multi-tunnel greenhouses, due to the large contact surface between the tubes and the plastic.
- If you whitewash the plastic during the period of highest radiation, use suitable products that do not affect the service life of the plastic. Water-based non-acidic products should be used to wash off the whitewash.
- Products containing chlorine should not be applied to plastic.
- In macro-tunnel structures, it is recommended to use door closures on end walls, with their own separate frame and plastic, or use curtains that extend along the entire length of the set of tunnels. The tunnels can also be left open at both ends. Avoid zipper style closures.
- In the case of film removal during certain seasons, such as summer, the film must be stored in opaque cover, closed off and in a cool, dry place protected from light and heat.

USE OF AGROCHEMICALS

According to the EN 13206 standard, the use of phytosanitary products (pesticides, insecticides, nematicides) can release compounds that reduce the effectiveness of the UV radiation stabilisers. It is vitally important to follow certain recommendations:

- Adhere to the recommended dosages and treatment frequencies, keeping the use of pesticides to a minimum, particularly those that contain sulphur and/or chlorine.
- Apply them to the crops and not the plastic. Do not allow pesticides to accumulate in areas where the plastic comes into contact with the structure.
- Ventilate the greenhouse as quickly as possible.
- If performing a chemical disinfection of the soil, it is vital to cover the soil with plastic sheets with barrier properties that prevent the disinfectant from damaging the covering plastic.
- When the plastic used for disinfection is removed, ventilate the greenhouse properly.

POLLINATORS

All recently installed plastic greenhouse covers (up to the 4th/5th month in the winter or up to the 2nd/3rd month in the summer) absorb a high amount of ultraviolet radiation to ensure their durability.

This can initially cause a certain amount of disorientation among pollinators, which resolves once the insects get used to the plastic and/or that initial period has passed.

The longer the lifetime of the plastics, the greater their absorption at the start of their service life, which means that the initial disorientation suffered by the insects may also be more pronounced and longer lasting.

Certain simple practices can help the pollinator to adapt as quickly as possible to the new environment when the film covering is new, for example:

- Lightly whitewash the cover if there is a large amount of direct sunlight (the cover is very transparent).
- Try using ventilation to lower the greenhouse temperature so that it is close to the optimal conditions for pollination: 70% relative humidity and temperatures of 15-30°C. If the temperature of the hive is too high, the pollinators will spend their time ventilating it, without performing any other functions (shading the hive may solve this problem).
- An increase in the population (larger number of hives per unit area) may rectify any initial pollination problems.

There are numerous factors that affect the pollination effectiveness of bees and bumblebees, including:

- The flowering stage of the crop. Poor flowering or inadequate and irregular flowering causes poor pollination.
- Weather. Non-optimal humidity and temperature conditions have a negative effect on pollination.
- Phytosanitary products. This is one of the most important factors limiting the use of pollinators. Many phytosanitary products acts as bee and bumblebee repellents and some of them can kill them.
- Pollen quality. Excess humidity will lead to pollen clumping, making it more difficult to extract.
- Location of hives: They should be in a place that is easy to access and at a comfortable height.

IV. COVERAGE, TERM AND SCOPE.

COVERAGE

SOLPLAST, S.A. only guarantees that the products comply with the quality level and characteristics described in the corresponding documentation. The client is solely responsible for choosing the Product to be purchased, as well as for the use or function for which it is intended.

The Product is covered by the warranty provided that:

- (i) it is used in accordance with the instructions for use detailed both in Section 6 of this document and in the corresponding technical documentation.
- (ii) The affected area of the defect is greater than 5% of the total plot area (EN 17219).

TERM

The Warranty Period will extend to the period specified in the service life section below.

The date stated on the latest delivery note for each fulfilled order, issued by SOLPLAST, its representatives, warehouses or distributors, will be the start date of the Warranty Period.

In the case of direct shipments by sea that are not through a distributor, the start date of the Warranty Period is considered to be one month from the date of arrival of the ship at its destination.

Service lives

The guaranteed service life of the various sheets sold by SOLPLAST will be specified in the name of the product, and it may be measured in years or seasons.

One (1) year is 12 months from the start date of the Warranty Period and one (1) season is 9 months from the start date of the Warranty Period.

SCOPE

Replacement calculation

The amount of plastic to be replaced in the event of premature degradation for all the above guaranteed service lives will be calculated as follows, applying a PRO RATA TEMPORIS formula.

$$\% \text{ OF PLASTIC TO BE REPLACED} = 100 - \left[\frac{\text{SERVICE LIFE OF THE FILM UP TO TEAR}}{\text{GUARANTEED SERVICE LIFE}} \times 100 \right]$$

In all events, SOLPLAST, S.A. will be solely responsible for replacing the corresponding defective plastic according to the quantities defined by sections **Service lives** and **Replacement calculation**. In no event will it be liable for any other form of compensation.

SOLPLAST, S.A. will not bear:

- (i) any costs related to the removal and replacement of the defective product
- (ii) the transportation and domestic shipping costs of the defective product or any replacement product.

SOLPLAST, S.A. will not accept any liabilities for loss or incidental, indirect or consequential damages, lost profit, production or revenue losses, or risks of development of the products.

V. CLAIM PROCESSING.

CLAIM NOTICE

All claims go through the commercial dept. and/or distributors of SOLPLAST, S.A., and must be submitted in writing (together with the documentation and information detailed below) as soon as premature degradation or a problem with the film is detected, whether this be on delivery, during installation or during use of the product.

If on delivery a weak or collapsed core, damaged rolls or poorly wound jumbo rolls are detected, this must be reported within seven days of opening the roll.

VISIT AND COLLECTION OF SAMPLES

Staff from SOLPLAST, S.A. or one of its distributors will travel to the place where the film is installed in order to examine the film and collect samples. In the case that this is not possible, the user of the product could perform the collection of the samples. At least two film samples around 50x50 cm in size will be taken, representative of the problem, one from the affected area and another one from the unexposed area.

Photos or videos will be taken showing the defect and the extent of it, including using drones.

DOCUMENTATION

The following documentation must be provided when filing the claim:

Distributor	Cliente	Copy of the delivery note
Product type	Width and thickness	Agrochemicals used
Supply date	Installation date	Date when the defect appeared

RESULTS OF ANALYSES

The client will be informed of the results of investigations as soon as possible. If there is any disagreement regarding the results, an analysis of the sample held by SOLPLAST can be requested, by an independent laboratory, in accordance with the existing counter-analysis protocol.

VI. EXCLUSIONES.

Claims that have not been made in accordance with the procedure established in point "5. CLAIM PROCESSING" will not be accepted.

Tears caused by the following are expressly excluded:

- Non-compliance with safety standards for the proper use of the product.
- Events due to circumstances that are beyond the control of SOLPLAST, S.A. or which are not attributable to normal operating conditions, e.g. fires, floods, exceptional weather conditions and/or epidemics.
- Tears due to improper storage, transportation, maintenance and/or installation, when the client has assumed responsibility for them, and they have been carried out by it or by workers or companies subcontracted by it.
- Any claim arising from a failure to follow the instructions for use – Section 3.
- Any use other than that specified for the product.
- Damage caused by acts of war, rioting, general strike, vandalism or animals.
- Degradation when the elongation value is greater than 50% of the value prior to installation (EN 13206).
- Damage caused by oxidation of the greenhouse structure and fastening clips.
- The use of acidic products or organic solvents to whitewash and clean the cover.
- Exceeding the maximum sulphur and chlorine content specified for the material in question. In the absence of any exact specification for the material, claims where the sulphur content is greater than 500 ppm and the chlorine content is greater than 50 ppm will not be accepted. Sulphur and chlorine contents are determined according to the analytical methods described in the EN 13206 standard.
- In tunnel and multi-tunnel structures, when the areas of the film that come into contact with the structure and the areas of the structure that come into contact with the film have not been painted with a white acrylic paint. Do not use paints with organic solvent mixtures.
- Burning materials inside the greenhouse.
- In macro-tunnel structures, tears due to folds in the area of the end walls, if they have a pivot closing (like the one used in low tunnels).
- Claims related to the anti-drip effect.



- Claims regarding the effectiveness of the pollinators.
- Claims related to agricultural yields.
- Any other reason not attributable to SOLPLAST, S.A.



Pol. Industrial Saprelorca

Avda. Francisco Jimeno Sola,
Parcelas A1- A5

30817 – Lorca, Murcia

www.solplast.com

