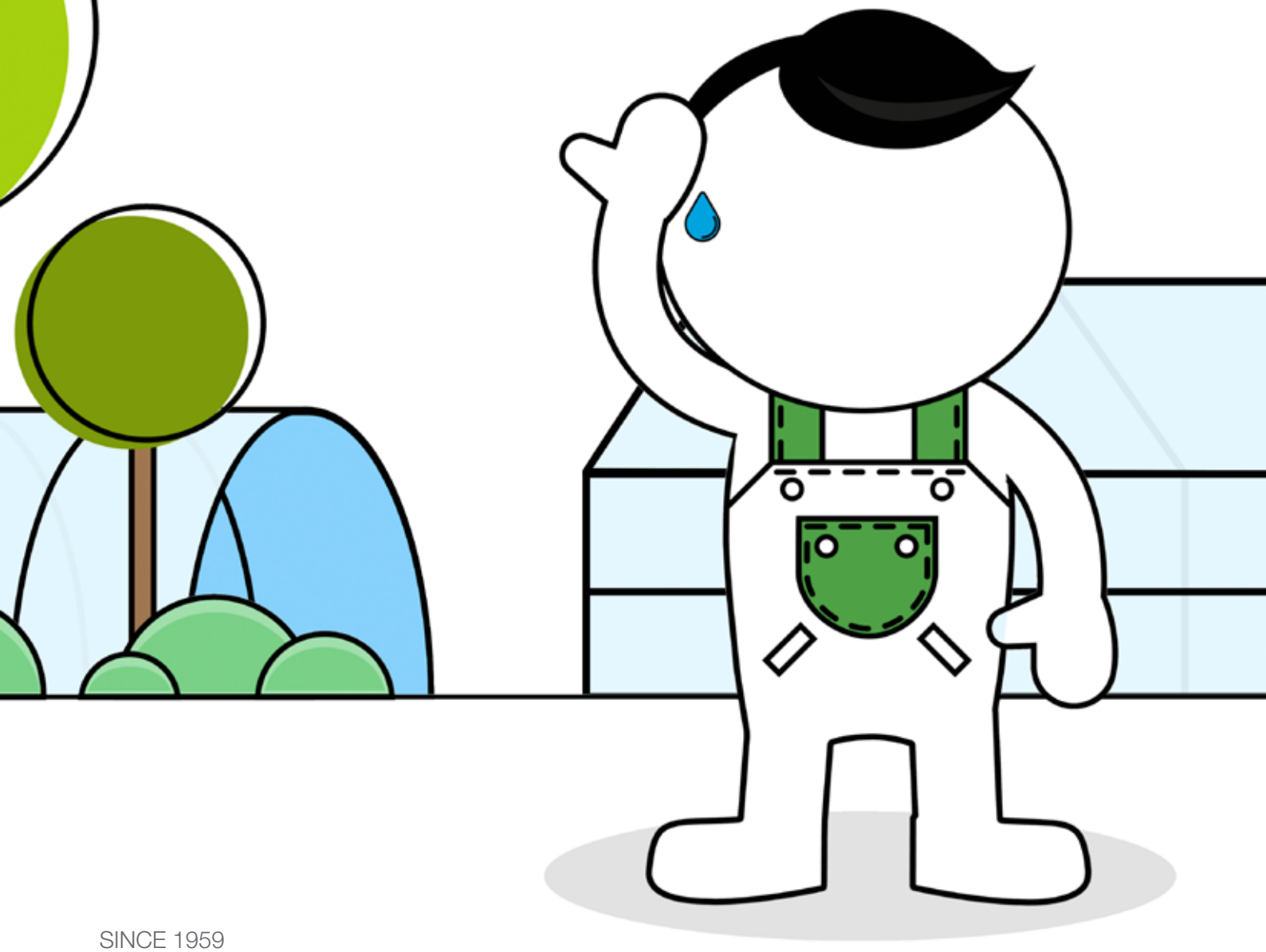
SUDLAC

WE'VE GOT YOU COVERED

COATINGS FOR MAXIMUM SHADING FROM SUNLIGHT



SINCE 1959

TABLE OF CONTENTS

WE'VE GOT YOU COVERED 3

HISTORY THAT MADE US WHAT WE ARE NOW 4

OUR VALUES 4

HOW WE TAKE CONTROL 6

CROP PROTECTION COATINGS 7

CHOOSING THE BEST SOLUTION FOR YOUR NEEDS 8

Eclipse® F-SERIES 10

Eclipse® LD 12

Transpar® 13

Topclear 14

PRODUCT ADVICE TOOL 15

SUDLAC

WE'VE GOT YOU COVERED

Some facts and figures summing up 60 years of the Sudlac brand:

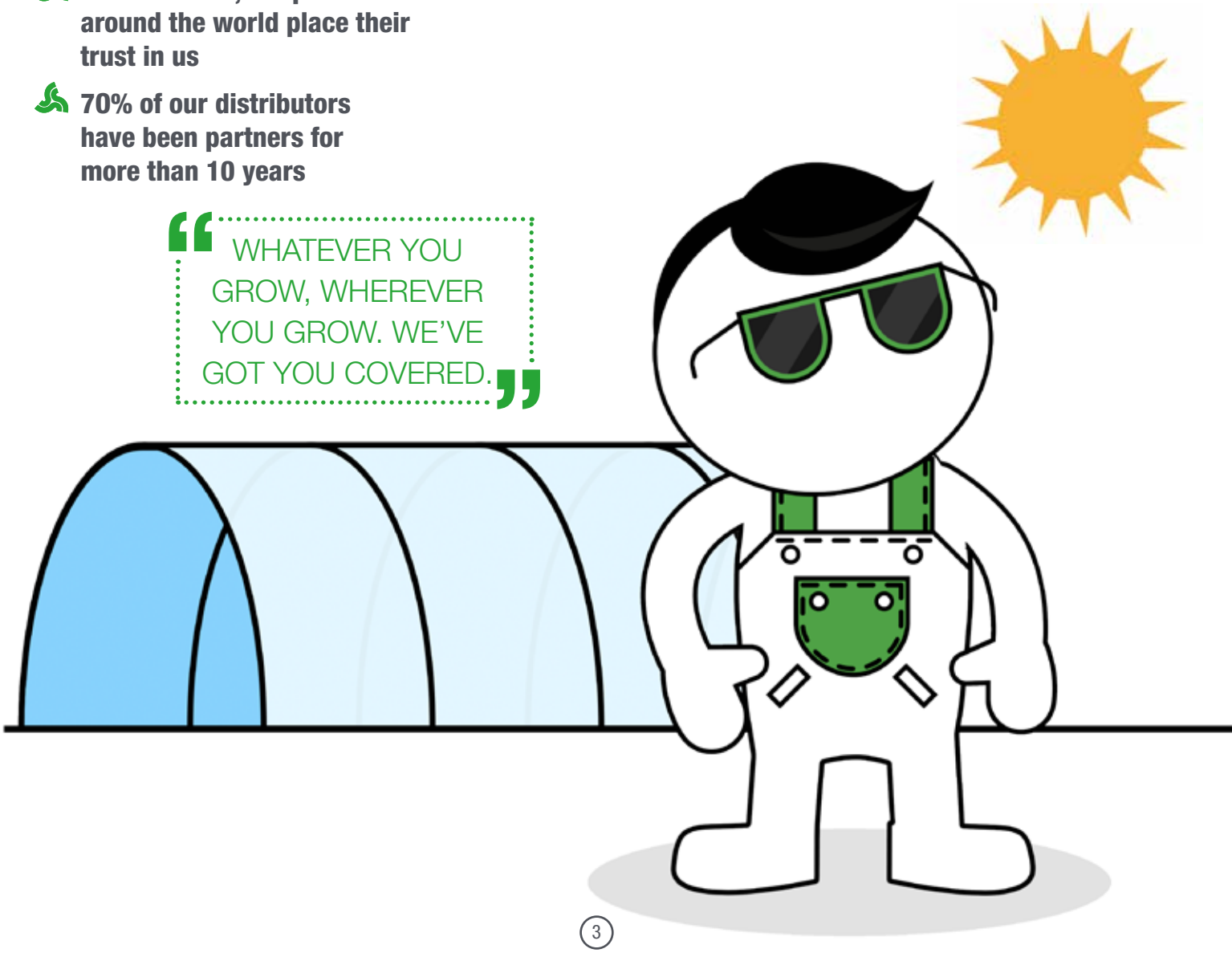
- **245 coating formulas developed**
- **>75,000 tonnes of coatings covering 360,000 hectares of greenhouses**
- **Our products are used in 34 different countries**
- **More than 20,000 producers around the world place their trust in us**
- **70% of our distributors have been partners for more than 10 years**

> "WHATEVER YOU GROW, WHEREVER YOU GROW. WE'VE GOT YOU COVERED."

We offer high quality coatings to protect crops by optimizing the incoming sunlight, and coatings that protect the greenhouse itself.

We believe in the power of adapting to the ongoing changing climate. As global temperatures increase, extended periods of drought, heat waves, and unpredictable rainfall have intensified. We see that the changing climate requires great flexibility from growers all around the planet to constantly anticipate to their local weather conditions. It's our goal to enable all greenhouse owners to adapt to these conditions.

Therefore we don't offer standardized products, but products, developed to meet specific demands for specific parts of the planet. We manufacture products that help growers to protect their crops and their greenhouses from too much light and heat, to ensure optimal production, no matter what the local circumstances are.



HISTORY THAT MADE US WHAT WE ARE NOW

1959

Sudlac company started in Grenoble, manufacturing highly concentrated quality wall paints that were economical in use.

1970

Production capacity increased by moving to Echirolles on the outskirts of Grenoble (current premises).

1978

Sudlac abandons solvent-based paints derived from petroleum products to concentrate solely on water-based products.

1979

Sudlac's first contact with the horticultural world. A local farmer contacts Sudlac to find out whether the company has a product to remove the whitewash he had applied to his greenhouse. Sudlac develops VarioNet cleaner in response and goes on to produce its first shading paint.

OUR VALUES



NEW SOLUTIONS

The world is changing and so is the horticultural sector. And that's why we are so committed to research and development. We strive to constantly improve the formulation of our existing products and develop new solutions to meet the changing needs of growers and other specific demands.



CAREFULLY ANALYZED

We implement a very precise quality control process to meticulously check every production run. Each bucket of coating that leaves our warehouse is first analyzed and approved by our quality team before being carefully packed by our logistics department.

1995

Evolution of Serra l'Ombre shading coating. Sudlac develops three different temporary formulas to offer growers the protection they need.

2004

Eclipse® F-series temporary shading range launched to replace Serra l'Ombre.

2006

Removable shading range developed. Sudlac launches Eclipse® LD, Transpar® and Topclear.

2021

Sudlac becomes part of Lumiforte® company. Horticulture coatings continue to be available under Sudlac brand name.



EXPECTATIONS AND NEEDS

We take the satisfaction of our users very seriously. We work in partnership with our distributors and growers to ensure that our products meet their expectations and needs. It is a matter of great pride to us that our distributors and growers continue to place their trust in us year after year.



RESPECT

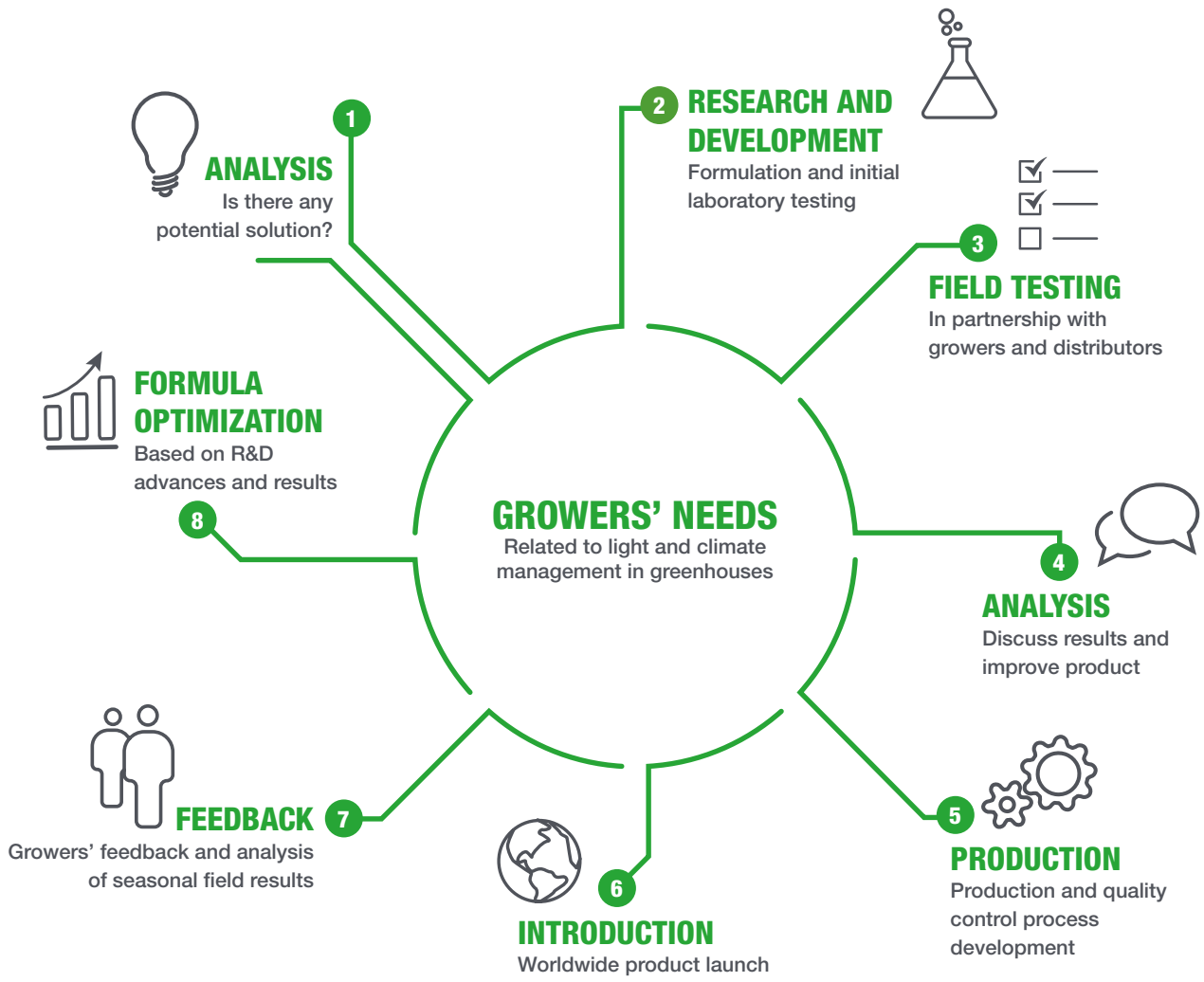
We respect the environment and take great care to preserve it. This means that we give serious thought to our environmental impact both in the development of our products and in our long-term operations.

HOW WE TAKE CONTROL

Our product users' needs are central to our approach. Depending on the crop, type of greenhouse, and location, growers may have similar needs or encounter problems specific to their particular situation when it comes to crop protection and optimization.

GROWERS AND OUR DISTRIBUTORS

Our close relationship with growers and our distributors enables us to develop local solutions that are tailored to their different needs and are always effective and reliable.



CROP PROTECTION COATINGS

Applied to greenhouse roofs, these coatings influence light and climate in greenhouses in order to protect and optimize crops.

TEMPORARY COATINGS

Shading coatings that wear off gradually over time and do not need to be cleaned off at the end of the season. This range is designed to offer growers an effective, user-friendly solution.

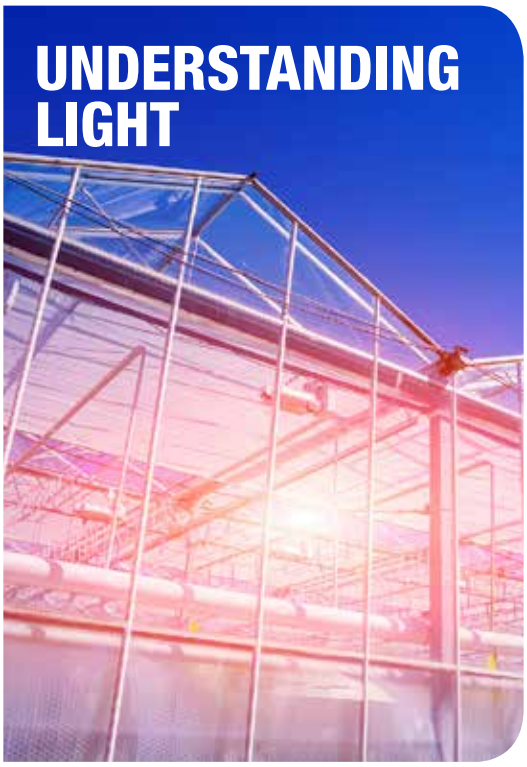
Eclipse® F2	Temporary protection from light and heat which lasts up to 2 months
Eclipse® F4	Temporary protection from light and heat which lasts 2 to 4 months
Eclipse® F6	Temporary protection from light and heat which lasts 4 to 6 months

REMOVABLE COATINGS

Often called On/Off, these coatings produce results that are stable over time until removed using the appropriate cleaning product. Combining shading and diffusion solutions, this range gives growers control over when they remove the coating.

Eclipse® LD	Removable protection against heat and light
Transpar®	Removable protection from heat while maintaining grow-light
Topclear	Cleaner to remove shading coatings

CHOOSING THE BEST SOLUTION FOR YOUR NEEDS



PAR LIGHT (PHOTOSYNTHESIS)

Photosynthetically active radiation, often called PAR, is the spectral range of solar radiation from 400 to 700 nanometers that crops use in the process of photosynthesis.

NIR LIGHT (HEAT)

Near-infrared light (NIR) is the spectral range of solar radiation from 700 to 2500 nanometers and is a very effective method of generating warmth in the greenhouse. NIR is not used by crops for photosynthesis.

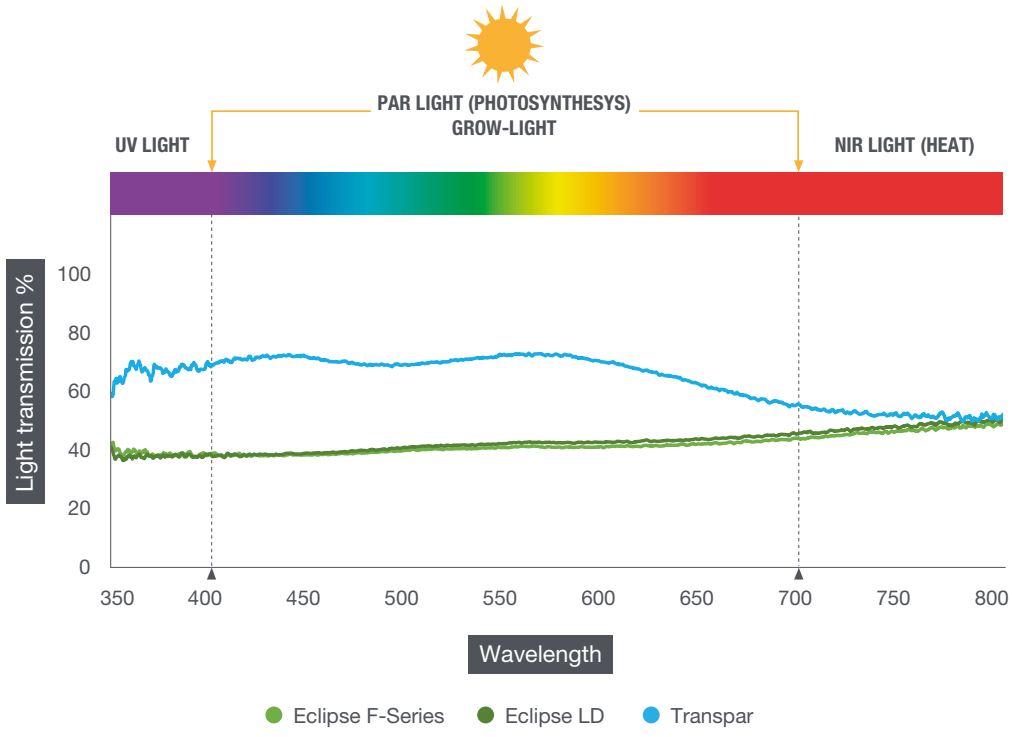
UV LIGHT (ULTRA-VIOLET)

Ultra-violet, which means beyond violet, is the range of solar radiation from 10 to 400 nanometers is present in approximately 10% of the sunlight. UV-light regulates plant growth and could be helpful in preventing fungal diseases.

HORTISCATTER (DIFFUSION)

Hortiscatter is a measure for the light scattering (diffusivity) of greenhouse cover materials and is expressed as a percentage between 0 and 100. A value of 0 % means no light scattering at all and a perfect light distribution has a Hortiscatter of 100%. Hortiscatter says nothing about the amount of light, only about its diffuseness.

PRODUCT EFFECT ON LIGHT TRANSMISSION COMPARISON



Our coatings affect the percentage of light transmission, but also modulate the light spectrum to offer the most appropriate response to different needs.

CROP PROTECTION COATINGS		
	TEMPORARY COATINGS	REMOVABLE COATINGS
SHADING Reduce light transmission	Eclipse® F2 Eclipse® F4 Eclipse® F6	Eclipse® LD Transpar®
CLEANING Clean removable shading coatings		Topclear

APPLICATION METHODS

The shading compounds from Sudlac can be applied and removed in various easy and responsible ways. In general, applications only take place during dry weather circumstances and when no percipitation is expected during the drying process.



EASY TO USE

Our products are manually applied worldwide with great results. Most of the available spray equipment used at greenhouse operations will be suitable for such applications. Make sure that the capacity of the spray equipment is suited for the surface to be applied.



BETTER RESULTS

Our coatings are more and more often applied by machine. Machine applications usually give better results and are more economical in use due to lower use of product. Ask your equipment provider for specific instructions.



SPECIFIC EXPERTISE

Helicopter or airplane applications require very specific expertise. If desired, you can contact us for technical advice.

Eclipse® F-SERIES

TEMPORARY PROTECTION FROM HEAT AND EXCESS LIGHT WITH NO NEED TO CLEAN

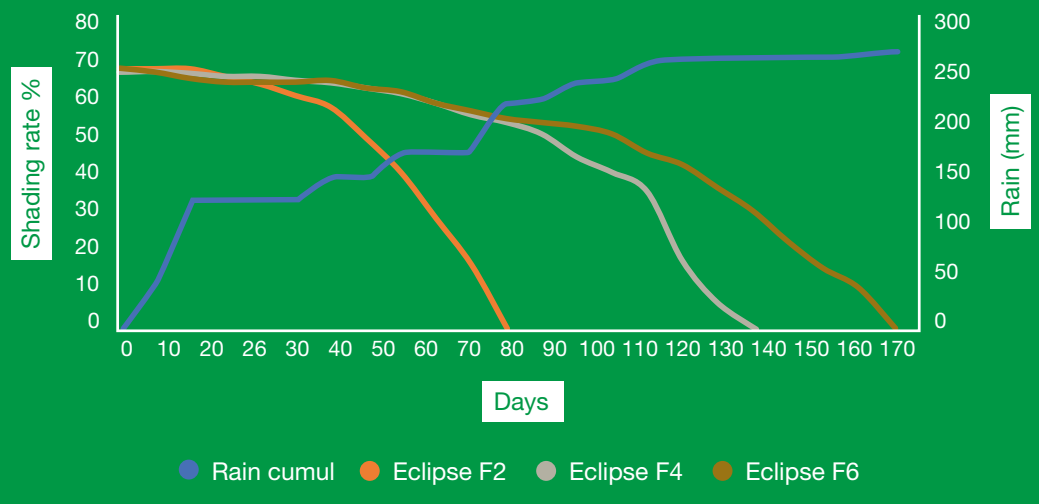


Eclipse® F2/F4/F6 coatings, Sudlac's historical range and the result of years of development and optimization, are three shading coatings for greenhouses, tunnels, and shelters, offering the same level of protection but for different lengths of time. This allows growers to select the protection time that best meets their needs without having to remove the coating.

HOW IT WORKS

Our F2/F4/F6 coatings are designed to provide effective, reliable shading protection during the first few weeks after application, gradually wearing off over the season as required. Under identical dilution and application conditions, each of the Eclipse F-series coatings produces the same results in terms of the shading rate, but offers a different protection time. The higher the number following the F, the longer the protection will last.

TREND IN F-SERIES SHADING PERCENTAGE



F-series shading rates evolution during the season
(2018 field results from France, 45th parallel area)

PROTECTION TIME

Eclipse® F2



Up to 2 months

Eclipse® F4



From 2 to 4 months

Eclipse® F6



From 4 to 6 months



- **Temporary protection of your crop**
- **Adjustable shading intensity**
- **Variable protection time**
- **Wears off gradually during the season**
- **No need to clean off at the end of the season**
- **Easy application on all types of greenhouses**

WHY USE SHADING COATING?

The shade layer reduces direct solar radiation, resulting in less stress, and protects the crops from sunburn, which improves yield and quality. In countries with a temperate climate, the Eclipse F-series is mainly used to protect ornamentals and leafy vegetables in greenhouses. In the warmer areas of the world, it is also used for fruit vegetables such as tomatoes and sweet peppers.

USAGE

Eclipse F2/F4/F6 coatings need to be diluted with clean water before being sprayed onto the greenhouse. Depending on the application method, type of greenhouse, and climate, the dilution rate and amount of spraying liquid may vary to achieve the best result. The product can be applied manually, by machine, and by helicopter, and is compatible with all greenhouse surfaces.

AN EMERGENCY CLEANING SOLUTION AVAILABLE

In order to allow users to deal with any unforeseen circumstances, Eclipse F-series coatings can be removed with Eclipse NET cleaner.

DILUTION MANUAL APPLICATION

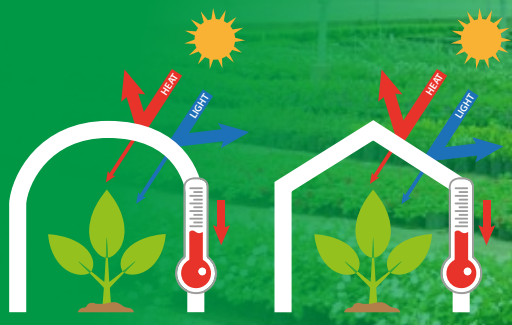
Amount of product				Amount of water		Total amount of spraying liquid		Shading percentage
Buckets per ha		Buckets per acre		Liters	US gal	Liters per ha	US gal per acre	
F2*	F4/F6	F2*	F4/F6					
13	10	5	4	1800	190	2000	210	30 - 35 %
27	20	11	8	1700	180	2000	210	50 - 55 %
40	30	16	12	1550	165	2000	210	70 - 75 %

* Eclipse F2 bucket contains 15KG

For more detailed information about dilution and application, visit our website **www.sudlac.com**

"I HAVE EXPERIENCED GREAT PROTECTION THROUGHOUT THE SEASON WITH THE TEMPORARY F-SERIES COATINGS"

Read more testimonials on sudlac.com



FOR ALL GREENHOUSE SURFACES



Eclipse® LD

REMOVABLE PROTECTION AGAINST HEAT AND LIGHT



- **Optimal protection for your crop**
- **Adjustable shading intensity**
- **Very wear resistant**
- **Applicable to all types of greenhouses**
- **Removable with Topclear**

Eclipse® LD is a removable white shading coating for greenhouses. It protects crops against too much light and heat throughout the season and can be applied on the outside of all standard greenhouses. Eclipse LD needs to be mixed with water and can be applied in many situations, making it a basic yet all-round product for use in horticulture worldwide. Eclipse LD is highly wear-resistant and can be easily removed with Topclear whenever needed.

WHY

The shade layer reduces stress and prevents the crop and fruits from sunburn, improving production and quality. In the countries with a moderate climate, Eclipse LD is mainly used for protecting ornamentals and leaf vegetables in greenhouses. In the warmer areas in the world Eclipse LD is also used for fruit vegetables like tomatoes and sweet peppers.

Eclipse LD is a very efficient and versatile shading coating that reduces the light and temperature in the same ratio. The product is flexible in use because you can adjust the number of buckets, amount of spray solution and application method. Eclipse LD is easy to apply and to remove.

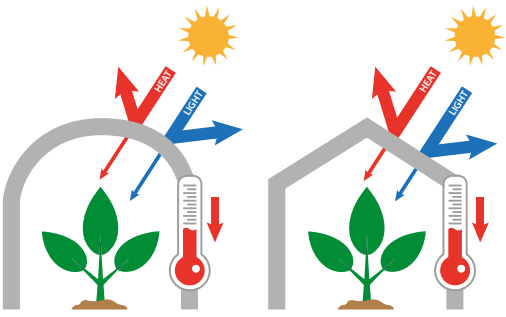
USAGE

Eclipse LD needs to be diluted with water before spraying it onto the greenhouse. Depending on the application method, type of greenhouse and climate, the dilution rate and amount of spraying liquid can vary to achieve the best result. Eclipse LD can be applied manually, by machine and by helicopter.

DILUTION MANUAL APPLICATION

Amount of Eclipse LD		Amount of water		Total amount of spraying liquid		Shading percentage
Buckets per hectare	Buckets per acre	Liter	US gal	Liter per ha	US gal per acre	
10	4	1850	195	2000	210	30 - 35%
20	8	1700	180	2000	210	50 - 55%
30	12	1550	165	2000	210	70 - 75%

For more detailed information about dilution and application, visit our website **www.sudlac.com**



FOR ALL GREENHOUSE SURFACES



Transpar®

REMOVABLE PROTECTION FROM HEAT WHILE MAINTAINING GROW-LIGHT



- **Minimum light shading, maximum heat shading**
- **High diffusion rate**
- **Applicable to all types of greenhouses**
- **Very wear resistant**
- **Removable with Topclear**

Transpar® is a removable shading coating based on a special pigment that reflects heat radiation very efficiently, while maintaining high grow-light levels. It is very wear resistant and can be applied on the outside of all standard greenhouses. Transpar can be easily removed with Topclear whenever needed.

WHY

High solar radiation means high grow light levels for photosynthesis. However, it also generates heat radiation which can be stressful to the crop. Comparing to traditional whitewash solutions Transpar ensures a higher grow-light transmission (PAR) while the heat radiation is partly reflected (NIR).

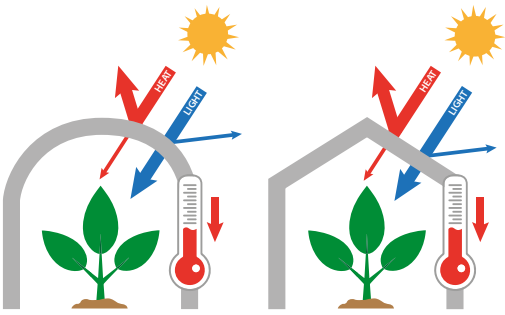
USAGE

Transpar needs to be diluted with water before spraying it onto the greenhouse. Depending on the application method, type of greenhouse and climate, more or less water and buckets should be used to achieve the best result. Transpar can be applied manually, by machine and by helicopter.

DILUTION MANUAL APPLICATION

Amount of Transpar		Amount of water		Total amount of spraying liquid		PAR Light transmission	NIR light reflection
Buckets per hectare	Buckets per acre	Liter	US gal	Liter per ha	US gal per acre	%	%
20	8	1700	180	2000	210	85	25
25	10	1625	172	2000	210	75	40
30	12	1550	165	2000	210	70	50

For more detailed information about dilution and application, visit our website **www.sudlac.com**



FOR ALL GREENHOUSE SURFACES



Topclear

CLEANER TO REMOVE SHADING COATINGS



Topclear is the cleaner for effectively removing Sudlac removable shading and diffusion coatings. With Topclear growers have full control when they remove the coating from their greenhouse.

WHY

Coatings are applied in spring to control the light level in your greenhouse, thereby creating optimum light conditions for your crops. When natural light starts decreasing in early autumn, all the available light is needed for crop growth. Cleaning with Topclear results in a clean greenhouse roof for maximum light transmission.

USAGE

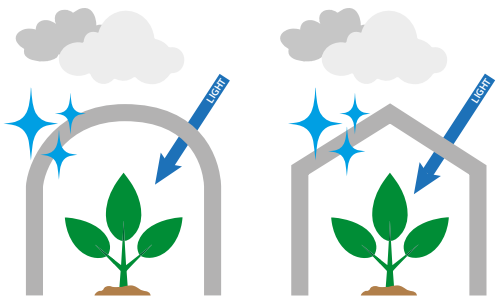
Mix Topclear with the required amount of clean water. Spray the solution evenly onto a dry greenhouse surface in dry weather and at a minimum temperature of 5°C (40°F). Minimum reaction time is 20 minutes before the coating can be rinsed of, machine brushed or before rain can remove the coating. Only apply Topclear if heavy rain is expected in the next few days. Removal using roof sprinklers is not recommended.

DILUTION MANUAL AND MACHINE APPLICATION

Application	Amount of Topclear		Amount of water		Total amount of spraying liquid	
	Cans per hectare	Cans per acre	Liter per ha	US gal per acre	Liter per ha	US gal per acre
Manual	12	5	1760	185	2000	210
Machine	12	5	1260	135	1500	160

For more detailed information about dilution and application, visit our website **www.sudlac.com**

- **Easy to apply**
- **Dilute with clean water**
- **Apply in dry weather**
- **Applicable to all types of greenhouses**



FOR ALL GREENHOUSE SURFACES



Use our online Product Advice Tool for instant advice

Product Advice Tool facts:

- **The advice given is based on parameters applicable to given crop or region**
- **For a more detailed advice specific to your needs please contact one of our account managers**
- **Already 15000 growers advised**

Our product advice tool is the result of our close cooperation with our distributors and growers. It provides a quick advice on which of our products suits the growers needs best.

When the user provides the location of his greenhouse, our system looks for the closest weather station in our climate database to get input. By combining this local climate information with the type of greenhouse, size, crop and application method of the grower, we can select the best suitable products and provide the user with a recommanded amount of product needed.

In addition, it gives the user an indication when the crop protection coatings needs to be applied and (if needed) removed with Topclear. This is based on 30 years of historical climate data.

Conditions and needs may vary per location, crop and greenhouse. For a more detailed specific advice, please contact the Sudlac account manager responsible for your area.

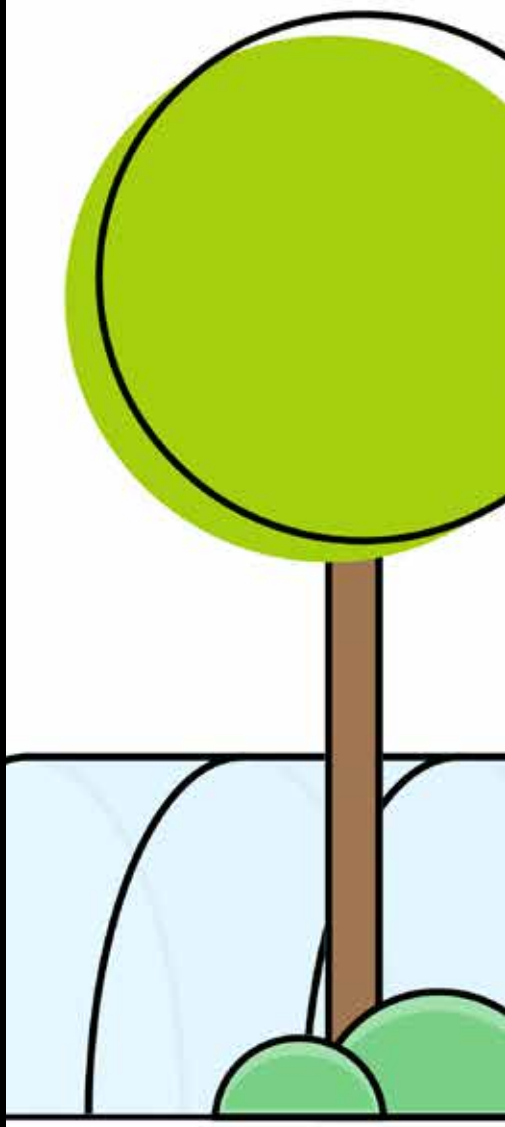


Get your personal advice at sudlac.com

SUDLAC

95% CHANCE YOU CAN USE A SUDLAC COATING TO PROTECT YOUR CROP.

sudlac.com



Sudlac is a brand of Lumiforte®

lumiforte®

Lumiforte EMEA BV
Geerstraat 8
5111 PS Baarle-Nassau
The Netherlands

+31 (0)13 507 5399
welcome@lumiforte.com

Lumiforte EMEA SAS
1 Rue Gaston Monmousseau
38130 Echirolles
France

+33 (0)4 76 23 20 54
welcome@lumiforte.com

Lumiforte Americas Ltd
47341 Hope River Road
V2P 6H5 Chilliwack, B.C.
Canada

+1 604 703 1103
welcome@lumiforte.com

Lumiforte produces coatings for the greenhouse horticulture sector and line marking products for sports fields. We team up with nature by developing coatings that respond to practical needs at specific locations anywhere in the world. It's amazing what nature can do with the right coating.

Horticulture and Sport
Lumiforte produces innovative coatings and line marking agents. The horticulture coatings (ReduSystems and Sudlac) provide for a better greenhouse climate for the cultivation of vegetables, fruits, and flowers. We focus on the international greenhouse sector and export our products to more than 70 countries. In the sports sector we score with our wear-resistant line marking products and accompanying machinery (Selectline).