



# THE FULL RANGE OF SELF-ADHESIVE WINDOW FILMS

With over 300 product references permanently in stock, exceptional Europe-wide delivery times and a team of highly skilled technicians that are passionate about their work, SOLAR SCREEN® has been the partner of choice to the world's leading window film installers for over thirty years.

Our network of over 3,000 installers are responsible for fitting, between them, over 2 million m<sup>2</sup> of high performance SOLAR SCREEN® window films every year, providing enhanced privacy and protection against heat, solar glare or colour fading. Our self-adhesive window films not only improve the aesthetic and technical properties of glass, they also limit the need for the costly replacement of glazed surfaces and cut air conditioning usage by up to 70%.

There are 6 main categories in our product range:

Solar control films - Anti-UV films - Privacy films - Security films - Special films - Automotive films



# **CONTENTS**

#### **SOLAR CONTROL**



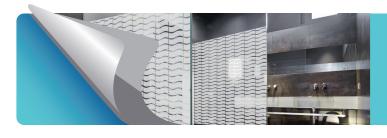


ANTI-UV

#### **SAFETY AND SECURITY**

TRANSPARENT COMBINATION ONE-WAY MIRROR EFFECT ANTI-GRAFFITI





## **DISCRETION**

# **SPECIAL**

ANTIBACTERIAL ANTI-FOG ANTI-HIGH FREQUENCY RADIATION





### **AUTOMOTIVE**

PAINTWORK PROTECTION COLOURS ANTI-CARJACKING



#### HIGH PERFORMANCE WINDOW FILMS

The popularity of window films has grown continuously since their introduction in the 1970s. Architects and building designers alike have promoted their use, as a versatile solution to many problems linked with glazing. Amongst other things, these specially designed films offer cost-effective and long term protection against solar heat gain, help diminish solar glare, limit fading of objects as a result of exposure to harmful UV rays and can help secure windows by ensuring that the glass does not shatter.

Originally developed in the USA, this constantly evolving technology is based on the application of a laminated film to windowpanes. The laminated film is composed of two polyester film layers sandwiching a deposited layer of vaporised aluminium particles. The metalized layer is so thin and unobtrusive that you can still see clearly through the window. It is sufficiently effective however to ensure the reflection of (depending on layer density) 50, 60, 70, or even up to 80% of light in the infrared spectrum, the primary cause of heat gain.

#### PREVENTING SOLAR HEAT GAIN AND SOLAR GLARE. WHILST IMPROVING THE EXTERNAL **AESTHETICS OF YOUR BUILDING!**

Solar control films provide effective thermal protection against overheating in summer and improved insulation in winter. Productivity in an office space has been shown to immediately increase following the installation of window film.

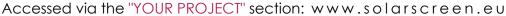
The drop in ambient temperature during the summer months is particularly remarkable. Visible light transmission is automatically regulated and solar glare is eliminated entirely. Some of our films are designed to provide either complete or partial protection against prying eyes, allowing you to see without being seen.

PERFORMANCE SAMPLE & GUARANTEES					
	Solar ratio		Reduction	Total solar	Guarantee
Interior film:	Single pane	Clear double pane	in Solar Glare	energy rejected	Oddianiee
ARGENT 80 C ARGENT 70 C ARGENT 50 C BRONZE 80 C BLEU 80 C STEEL 75C MULTIGLASS 66C	0.20 0.31 0.48 0.23 0.27 0.32 0.36	0.26 0.37 0.49 0.30 0.34 0.36 0.42	83% 68% 47% 91% 86% 78% 58%	80% 68% 58% 76% 72% 68%	10 years 5 years* 5 years*
Exterior film: PLATINE 285 XC NATURAL 275 XC PLATINE 80 XC PLATINE 60 XC	0.14 0.27 0,16 0.29	0.12 0,18 0.14 0.26	86% 77% 82% 60%	86% 74% 80% 66%	10 years* 8 years* 5 years* 5 years*





#### CALCULATE POTENTIAL ENERGY SAVINGS ON OUR WEBSITE:





# SOLAR CONTROL FILMS THAT SELECTIVELY FILTER OUT THE ULTRAVIOLET AND NEAR-IN-FRARED SOLAR SPECTRUM

Applying technologies derived from the space research industries, SPECTRA and CELSIUS Cristal window films carefully applied to glazing offer revolutionary thermal shielding with properties unrivalled by standard window film.

Multiglass 66c is the latest and most eagerly awaited arrival in our range of « multi allov » films!

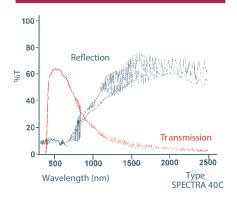
It is capable of eradicating almost entirely most risks of thermal shock\* thanks to an improved metal complex composition. The absorption rate is practically halved compared to standard solar films.

#### **OUR SPECTRA AND CELSIUS CRISTAL FILMS:**

- Are at the pinnacle of technology offered by adhesive window films, presenting an optimal balance between transparency and performance,
- present a clear aspect, are perfectly transparent and eliminate reflections (Spectra 30C),
- provide you with a more comfortable work/life environment by protecting you against the heat of the Sun,
- prevent the occurrence of a "greenhouse effect" and offer significant savings in air-conditioning costs with the initial cost of purchase quickly offset (use our online interactive savings calculator here: www.solarscreen.eu),
- absorb 99.5% of UV solar radiation,
- allow over 70% of visible light transmission (Spectra 30 C),
- reflect up to 90% of infrared radiation between 780 and 2,500nm (Spectra 33 C),
- reduce heat loss in winter by ± 10 %,
- are specially treated to afford scratch-resistance and ease of maintenance to your window panes.

		TECHNICAL SPECIFICATIONS				
		Solar	ratio	Visible light	Total solar	Guarantee
		Single pane	Clear double pane	transmission	energy rejected	Guarantee
	SPECTRA 30 C	0.49	0.54	70%	49%	10 years*
varnished edge seal required.	SPECTRA 33 C	0.41	0.45	68%	59%	10 years*
	SPECTRA 40 C	0.44	0.47	62%	57%	10 years*
	CELSIUS 50 C	0.38	0.42	50%	65%	10 years*
	CELSIUS 70C	0.27	0.31	34%	74%	10 years*
* varnishe	MULTIGLASS 66C	0.36	0.39	41%	66%	10 years*

### SOLAR RADIATION CURVE



<sup>\*</sup>consult the technical specifications sheet and installation guidelines.

#### SPECIAL POLYCARBONATES

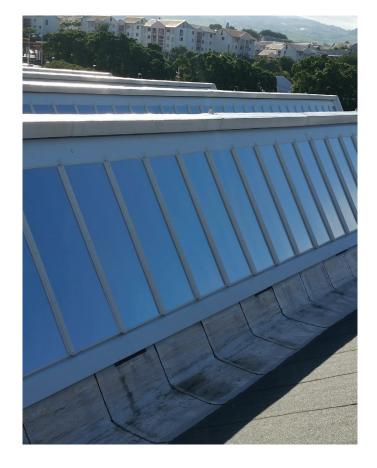


#### **OUR SOLUTIONS**

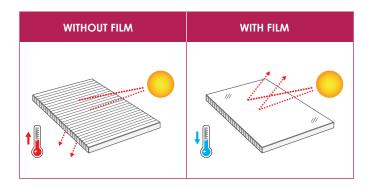
The METALUX PLUS, ARTIKA-X and MASTER 80 XC are new products in the SOLAR SCREEN® catalogue. Self-adhesive and incorporating reflective properties, these films are specially designed to protect against the detrimental effects of solar exposure on polycarbonate and other synthetic materials, all the while shielding their vulnerable surfaces against scratches (Protec 4C-6C).

#### **OUR FILMS**

- suitable for installation on practically every type of polycarbonates, methacrylates and other substrates,
- reflect infrared solar radiation, the principal cause of heat gain in summer,
- prevent the occurrence of a "greenhouse effect" (reflective films),
- significantly reduce glare by ensuring an ambient and uniform diffusion of incident light,
- protects furnishings exposed to light from fading and premature ageing...,
- protects substrates against scratches (MASTER 80 XC or PROTEC 4C),
- initial cost of purchase quickly offset thanks to considerable savings generated during summer months.
- offer novel solutions with an accessible price tag, that are highly valued and easy to apply by our Europe-wide network of certified installers.



SOLAR PROTECTION PERFORMANCE VALUES	ARTIKA-X	METALUX PLUS	MASTER 80XC
UV transmission	1%	1%	1%
Visible light transmission	10%	10%	16%
Reduction in Solar Glare	88%	88%	84%
Total solar energy reflected	80%	78%	85%
g-value (solar ratio)	0,20	0,22	0,15



#### THERMAL INSULATION



By effectively reducing heat loss through windows by up to 55% in winter, Solar Screen low emissivity films such as SOLAR 65 and 80 Cristal offer the following benefits:

Fuel cost savings of up to 33%, depending on the total glazed surface area of our building.

- Improved insulation achieved through eliminating the "cold wall" effect.
- Considerable future savings generated as a result of the initial cost of purchase being rapidly offset. In fact, raising the ambient indoor
- temperature of a building in winter by as little as 1°C leads to increased heating costs of between 1 and 7 %. Whereas by simply installing a window film system you can modify the indoor temperature by several degrees C...

#### **HOW DO WINDOW FILMS WORK?**

In the winter months, heat finds a way out of the confines of a building via its glazed surfaces. Effectively this amounts to heat loss, and is caused by three processes: radiation, conduction and convection

Lets take a closer look at the two first important factors:

- Radiation: In winter heat dissipates through windowpanes by the process of radiation. By installing our window film you can help retain this heat by reflecting it back inwards, thereby providing a more comfortable and agreeable environment in proximity to windows.
- Conduction: Thermal loss by heat transfer from air to glass, determined by measuring the spot temperature at a determined point on the inside and the outside of the glass pane. The installation of a window film improves the glazing's heat transfer coefficient (K)».

Solar Screen has the technical know-how to demonstrate, with quantifiable data, the potential savings that you can make. During the summer months, the SOLAR window film provides shielding from up to 80% (SOLAR 80C) of total incident solar energy, making it your best choice for an "all seasons" window film.

In winter	Reduction in heat loss	"U" Coefficient EN 673 (W+m² °C)	In summer "g" Value
SOLAR 40 C	23%	4.50	0.61
SOLAR 65 C	27%	4.60	0.35
SOLAR 80 C	33%	4.27	0.22

# DON'T MISS OUT ON POTENTIAL ENERGY SAVINGS!

To demonstrate its extraordinary properties to you, we have put the SOLAR 65C window film through its paces in a series of tests. The results speak for themselves!

Under winter-like conditions, with an exterior temperature measured at 0°C and a normal wind speed, differences of temperature of between 3.3°C and 2°C have been recorded in the areas adjacent to clear double-glazed windowpanes (difference between treated and untreated areas).

In layman terms, low emissivity window films help mitigate the "cold wall" effect, resulting in appreciable improvements in ambient temperature and energy savings, as reflected by the technical data for the properties of each window film model (see below).

TEST SOLAR 65C	
Wind speed	3m/sec. (conventional)
Exterior temperature Interior temperature	0° C 18.2° C
Clear double-glazed pane (4-6-4) filled with Argon gas     Identical pane + SOLAR 65 C window film	14.8° C 16.8° C Δ = + 2,0°C
2) Clear double-glazed pane (4-6-4) Identical pane + SOLAR 65 C window film	12.5° C 15.8° C ∆ = + 3,3° C



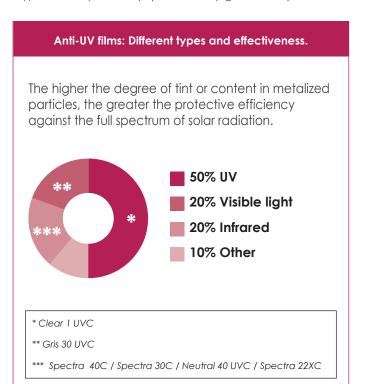
# APPLICATIONS IN TRADE, INDUSTRY, PRIVATE SECTORS...

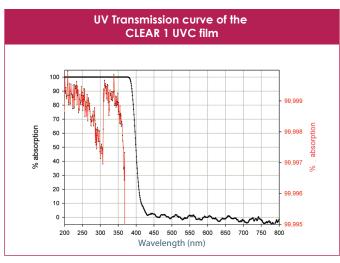
Exposure to the visible, ultraviolet and infrared rays originating from the Sun and the Moon can cause many coloured items or furnishings to fade or deteriorate, thereby causing a depreciation in their monetary value.

Its not just material possessions that can be affected by the Sun's harmful rays, they can also be a catalyst for skin cancer or impact negatively on the health of individuals with a hypersensitivity to UV rays (Xeroderma pigmentosum)

## THERE IS A SOLUTION TO THIS PROBLEM:

SOLAR SCREEN® Anti-UV window films. Carefully applied to any kind of glazing, these protective films are specially designed to filter out harmful UV rays, as well as a considerable amount of infrared and visible light, which also contribute to fading.









#### HOW DO SECURITY WINDOW FILMS WORK?

When applied to any ordinary sheet of glass, our transparent and tinted security films bind securely with the glazed surface thanks to a self-adhesive acrylic layer, instantly transforming it into highly resistant safety glass.

What is more, when applied to a shop window for example, it doubles up as a highly efficient anti-theft device. Whether your shop is fitted with a burglar alarm or not, a thief throwing a brick at the window would expect to see it shatter completely, allowing access to the contents of your establishment. With our security films installed, such an impact would cause only minor damage that would, at most, allow limited access to the shop window display. The film will prevent damage to your merchandise on display and will hold the glazed pane in place until its replacement can be arranged.

#### WHY INSTALL A SECURTIY WINDOW FILM?

Whether in the home, at work or in public spaces, acts of vandalism, terrorism or mere accidents can cause a glass pane to shatter into thousands of smaller and potentially harmful pieces of flying glass. SOLAR SCREEN® polyester security films can be applied to any glass surface and provide 24h, maintenance-free protection for years to come.

Accidents and unfortunate incidents can happen to anyone, and as a result we must consider the effect on those that surround us, particularly in public spaces. Protect your glazed surfaces so that they do not become the unfortunate instrument of harm to others. There is a moral obligation to ensure that your windows are reinforced to prevent avoidable harm, whatever their location or the type of incidents likely to arise.

Furthermore, the SOLAR SCREEN® security window film is the market's number one choice for genuine and effective protection, afforded to all at a modest price.

### COMBINATION – Security combined with solar performance



(Type: Silver 880C - 480C - 470C | Neutral 465C - 440C | Mat White Security)



SOLAR SCREEN® 2 in 1 security films combine to provide your windows with performance, discretion and security.

#### ANTI-GRAFFITI V

(Type: Protec 4C - 6C | Clear 4 XCG)



The damage caused to glazing by tags and graffiti, on both public and private buildings, is a real pain with serious financial implications.

SOLAR SCREEN® has developed its Anti-Graffiti range of window films in order to offer you a cost-effective system for the protection of your windows.

A scratch-resistant coating provides security films with added protection against light surface scratching, as well as against certain inks or paints that can be wiped away without fear of damaging the film. A considerable advantage of these films is that, even if tags resist all attempt at removal or scratches prove too deep, the whole film can be removed and replaced without the need for further costly interventions.

What is more, these films are certified M1 fire-resistant, able to withstand considerable exposure to flames and hold shattered glass securely in place in case of impact.

Our anti-graffiti films feature an adhesive layer that facilitates greatly the installation process and avoids the problem of unsightly glue residues on the window. This allows you to carry out repeat installations at a minimal cost, in particularly exposed areas.

#### MIRROR BACKING FILM





Specially designed to afford mirrors and windows a higher degree of security, the SOLAR SCREEN® Secur 4 security films are ideal for use in spaces such as sports halls or dance studios. They are classed 2B2 and comply with standard EN 12600.

#### SUPER CLEAR 4 CRISTAL

TECHNICAL SPECIFICATIONS		
Visible light transmission	84%	
Reflection of external visible light	9%	
UV transmission (see spectrum)	5%	
Total solar energy transmitted	82%	
Solar energy reflection	10%	
Solar energy absorption	8%	
Shading Coefficient	0,94	
		-

#### PHYSICAL PROPERTIES

Thickness of film 100 microns Structure of film 1x100µ polyester Tear/breakage resistance 28,50 kg/mm² Elongation at break 125%

- Chemically highly resistant to acids, solvents, etc.
- solvents, etc.

  Résistance au feu (voir rapport SNPE classé M1)
- Class "2B2" certification obtained in tests for resistance under impact EN 12600

#### SUPER CLEAR 7 CRISTAL

TECHNICAL SPECIFICATIONS	
Visible light transmission	84%
Reflection of external visible light	10%
UV transmission (see spectrum)	1%
Total solar energy transmitted	82%
Solar energy reflection	10%
Solar energy absorption	8%
Shading Coefficient	0,94

#### PHYSICAL PROPERTIES

Thickness of filma 175 microns Structure of film 1x100µ+1x75µ polyester Tear/breakage resistance 45 kg/mm² Elongation at break 125%

- Chemically highly resistant to acids, solvents, etc.
- Fire resistance rating (see SNPE report, classed M1)
- classed M1)
   Class "1B1" certification obtained in tests for resistance under impact EN 12600

#### **CLEAR 8 CRISTAL**

TECHNICAL SPECIFICATIONS	
Visible light transmission	83%
Reflection of external visible light	10%
UV transmission (see spectrum)	5%
Total solar energy transmitted	76%
Solar energy reflection	10%
Solar energy absorption	14%
Shading Coefficient	0,9

#### PHYSICAL PROPERTIES

Thickness of film 200 microns Structure of film 2x100µ polyester Tear/breakage resistance 45 kg/cm Elongation at break 125%

- Chemically highly resistant to acids, solvents, etc.
- Fire resistance rating (see SNPE report, classed M1)
- Class "1B1" certification obtained in tests for resistance under impact EN 12600

#### CLEAR 12 CRISTAL

TECHNICAL SPECIFICATIONS

Visible light transmission 92%
Reflection of external visible light 10%
UV transmission (see spectrum) 1%
Total solar energy transmitted 81%
Solar energy reflection 10%
Solar energy absorption 9%
Shading Coefficient 0,93

#### PHYSICAL PROPERTIES

Epaisseur du film 300 microns Structure du film 3x100µ polyester Tear/breakage resistance 85,50 kg/mm² Elongation at break 125%

- Chemically highly resistant to acids, solvents, etc.
- Class "P2A", compliant with standard EN 356
- Class "1B1" certification obtained in tests for resistance under impact EN 12600

### ONE-WAY MIRROR FILM V

(Type: Vista 90 C | Vista 90XC)



#### COLOURS



(Type: Yellow 20 C | Red 66C | Blue 40C 60C 80C 90C | Green 50C 60C 80C 90C | Amber C)



In a world where visual communication is an absolute necessity, large expanses of window space have become premium marketing vectors for advertisers.

The distinguishing feature of the SOLAR SCREEN® coloured privacy films (polyester), lies in its remarkable transparency. A highly cost-effective solution that is available in a wide range of original colours, these films will instantly help create a pleasant, vibrant and personalised environment. They help inject a touch of colour in any space defined by expanses of glazing, whether indoors our outdoors. These colourful yet transparent window films incorporate a highly resilient acrylic adhesive and are treated with a special scratch-resistant coating in order to guarantee easy maintenance and a long lasting shine.



SOLAR SCREEN® Blackout window films block all light penetration and ensure total privacy from prying eyes.

### White V

(Type: Mat White | Mat Frosted | Mat Opal | Mat Acid X)



Our white frosted aspect privacy films are ideal for ensuring privacy in determined areas within public or private spaces. They can be used to great effect in order to completely or partially restrict visibility of spaces such as back offices, storage rooms, laboratories etc. Extremely effective in reducing solar glare, this primarily opaque film guarantees privacy from prying eyes, yet still allows a degree of light transmission and perception of shadows.

### DESIGN

Choose from over 40 Design patterns.



SOLAR SCREEN® adhesive Design films add a touch of privacy to your environment, without restricting light transmission. They allow you to personalise the design of your windows or highlight the entrance to a space. Should accidental breakage of the glass occur, these films offer added security by holding shattered glass in place. Last but not least, they do not require specialised maintenance and ensure 95% absorption of ultraviolet rays, the principal cause of furniture discolouration.



# ANTIBACTERIAL V(Clear 4C AV)



In addition to the ability to confer additional security to glass, the Clear 4C AV film also exhibits remarkable antimicrobial properties. Applied to windows, this film ensures the elimination of certain bacteria and limits their propagation through a building.



# ANTI-FOG (Clear 4 ABC)



Widely appreciated for their qualities when applied to shop windows, bathrooms, sports halls or swimming pools, anti-fog films help prevent windows and mirrors from fogging up in situations where ambient temperatures may vary significantly.

### ◀ ANTI-HIGH FREQUENCY RADIATION

SOLAR SCREEN® Anti-High Frequency Radiation films shield against the loss of data and protect against certain hacking attempts. Originally developed for financial institutions and the military, the technology is now accessible to all sectors of activity where the protection of client data and sensitive information is critical.

Thanks to a high metallic content, Anti-High Frequency Radiation films reduce by 90% the penetration of electromagnetic waves in the 400 to 2000 MHz range, thereby offering optimal protection against the interception of information through glazing.

# **AUTOMOTIVE**

### PROTECTION TAILORED TO SUIT YOUR VEHICLE





DOWNLOAD OUR "AUTOMOTIVE" FILM BROCHURE FROM OUR WEBSITE:



www.solarscreen.eu



# **SOLAR SCREEN IN NUMBERS**

#### SOLAR SCREEN AT YOUR SERVICE FOR OVER 30 YEARS

Having established partnerships with some of the biggest names in the window film manufacturing industry worldwide, SOLAR SCREEN® designs its own window films and offers unrivalled service excellence to its installers in Europe. We are focused on delivering the highest standards in quality, as well as guaranteeing constant product availability.

#### **OUR STRENGTHS**

- An extensive product range: with over 300 individual product references, SOLAR SCREEN® offers its clients the widest selection of window films available in Europe.
- Stock availability: thanks to our considerable stock of permanently available products, we are able to supply our products throughout Europe within 24h for 98% of orders.
- Customer service: our services are trusted by a network of over 3000 professionally certified window film installers.

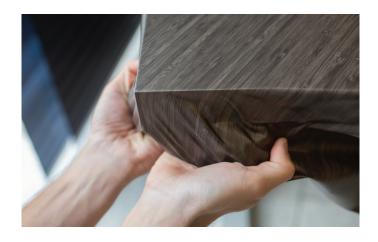
  Moreover, in support of its valuable expertise in the field, SOLAR SCREEN® has for the past 3 years helped reaffirm its product choices thanks to the "Vitrages Décision" software developed by the CEBTP (Centre d'expertise du bâtiment et des travaux publics). Thereby strengthening your project implementation through a personalised service provision.
- Quality: SOLAR SCREEN® films are manufactured under an ISO 9001 compliant quality management system and undergo continuous product testing. Our leading SOLAR SCREEN® films have been tested in CE accredited laboratories.
- Product warranty\*: SOLAR SCREEN® offers the best product warranties available on the market. In the unlikely event of a defect on
  certain external films, our confidence in the quality of our products is such that we include film replacement labour costs in the warranty.
  The outstanding adhesive properties of our external window films are exemplified by the highest ever success rate of 99.84%, achieved
  over the last five years.
   \*see conditions
- Shade film blinds: SOLAR SCREEN® also manufactures bespoke blinds, using an embossed metallised film with excellent reflective properties, shielding efficiently against the Sun's rays. There are many advantages to this complementary product.

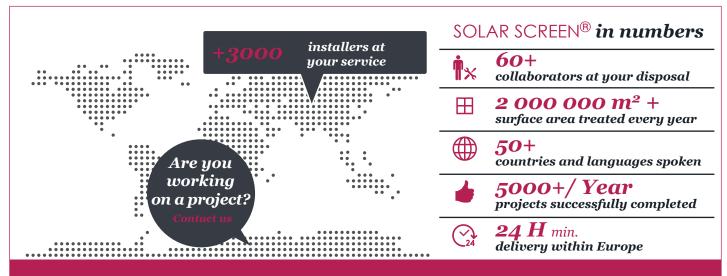


Renovation projects have never been easier. Cover Styl' stands for over 300 product references in self-adhesive coverings, presented in 8 exclusive ranges incorporating highly realistic wood and leather patterns as well as block colour or glitter versions.

Breathe new life into your furniture and interior surfaces thanks to Cover Styl': a highly cost-effective and low-maintenance vinyl covering that is both quick and easy to apply, offering additional benefits such as resistance to UV rays and fire-retardant.

Discover Cover Styl': www.coverstyl.com





Solar Screen, a solid team of professionals at your service for over 30 years.





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