



Shade Films

Elevate Your Space.

Cut Energy Costs with Clear Vision.

3	About Us
4	Material & Technology
5	Energy Saving with Shade Films
6	Shade Film Core Values
8	Shade Films in Detail
9	Contribution to Green Certification
10	Applications and Scenarios
	Commercial and High-Rise
	Education
	Health Care
	Residential
	ATCTs and VCRs
	Window & Façade Integration
	Skylight Shading
	Tailor Made Solutions
18	Shading Systems
	Roller Blinds
	Multi-Axle Systems
	Drives & Controls
22	RHODETEC Window Films
	Window Film Range





RHODETEC - Let's create a greener, safer and more efficient future.

About Us

Shaping the Future of Advanced Material Solutions

RHODETEC develops high-performance materials for thermal insulation and electromagnetic interference (EMI) shielding, enhancing energy efficiency, data security, and sustainability.

Our product portfolio includes:

- Solar control films and systems
- Advanced thermal insulation films
- EMI shielding materials
- Composite functional fabrics

RHODETEC's reflective and transparent space films set new standards in thermal insulation and glare control, supporting green, low-carbon buildings while improving indoor comfort.

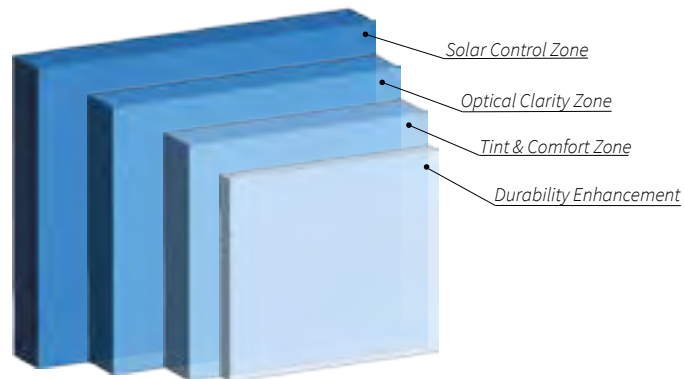
Our EMI shielding materials provide robust protection against electromagnetic radiation, securing sensitive data in an increasingly connected world.

With over 30 years of experience and partnerships with leading institutions, we remain at the forefront of material technology. RHODETEC is certified to ISO 9001 and ISO 14001 and is proudly part of the US and German Green Building Councils. In addition, RHODETEC is committed to sustainable development and healthy sun shading concepts.

Material & Technology

Space Technology Brought Back to Earth

Engineered with precision and built for endurance, RHODETEC shade films consist of multiple precision-engineered zones - each tailored to perform a specific function.

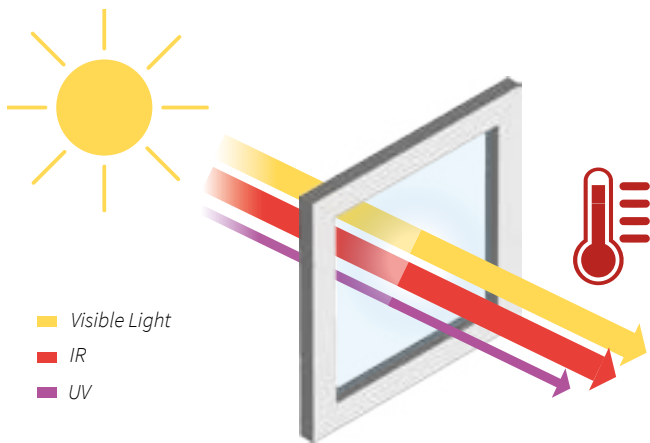


- **Multi-Layer Precision**
Advanced layering techniques deliver superior solar control, optical brilliance, and form stability.
- **Lasting Beauty**
Deep, vibrant colors resist fading, maintaining their elegance even under extreme conditions.
- **Surface Resilience**
Specialized finishes safeguard against scratches and environmental impact.
- **Reliable Performance**
Designed for smooth processing and long-term dimensional consistency.
- **Enhanced Structural Integrity**
Surface refinement strengthens for even greater performance under demanding use.
- **Protective Coatings**
Optional hard coatings add an invisible shield against wear and tear.



Energy Saving with Shade Films

Solar Control Films that Work Even from the Inside



The challenge

Sun light fills indoor spaces with natural daylight and keeps visual connection to the outside world. But too much solar radiation can cause glare, overheating, and discomfort.

Once sunlight enters a building, it turns into heat.

The solution

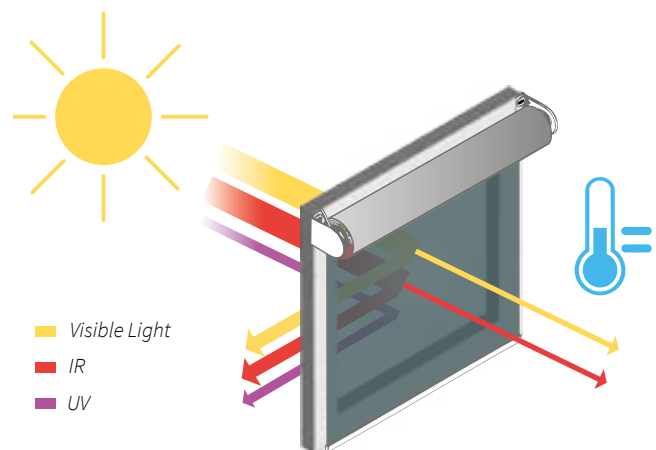
Stop that heat before it builds up.

That's where **RHODETEC Shade Films** come in:

When installed internally, they reflect solar energy back toward the glass, redirecting it outward - as glass allows reflected rays to pass equally in both directions.

Proven performance:

- Shade Films reflect up to 84% of solar energy
- With glazing, they can block over 85% of IR-heat
- Significantly reduces heat gain and cooling costs



And while doing that, RHODETEC still:

- Preserves natural daylight and clear outside views
- Maintains visual comfort without glare
- Supports a balanced circadian rhythm
- Pays off quickly by cutting air conditioning energy use

Shade Film Core Values

The Full Spectrum of Performance

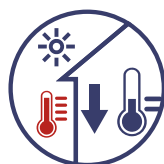
Our high-performance films offer glare reduction, heat insulation, UV protection, clear visibility, and energy savings - all in a single solution, with no compromises.



Glare Protection

Without Darkness

- Filters harsh light without darkening the room
- Maintain optimal lighting levels
- Creates glare-free zones at desks and screens
- Meet workplace lighting standards
- Enhanced comfort without the closed-in sensation



Heat Protection

Naturally Cooler Spaces

- Reflects solar radiation
- Blocks longwave infrared heat
- Prevents interiors from overheating
- Keeps indoor climate comfortable
- Cuts down on air conditioning use and cost



Crystal-Clear Views

Line of Sight to the Outside

- Exceptional clarity without visual distortion
- Maintains full transparency
- Enhanced spatial orientation and overall well-being
- Supports circadian rhythm
- No indoor mirror effect



It's the sum of their properties that sets shade films apart.



Less Energy Usage

Year-Round Energy Saving

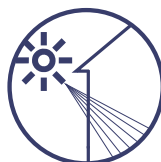
- Improves glass building envelope performance
- Summer: blocks heat and reduces cooling needs
- Winter: adds insulation and slows heat loss
- Cuts HVAC usage across all seasons
- Helps meet energy targets and ESG requirements



UV Protection

Invisible but Essential

- Blocks nearly 100 % of harmful UV rays
- Protects interiors from fading and damage
- Reduces skin exposure and long-term risks
- Fully transparent resulting in no change in window appearance



Natural Daylight

Pure and Balanced

- Preserves the full spectrum of daylight
- Keeps the light natural and vibrant
- Improves mood and reduces fatigue
- Supports alertness throughout the day

Shade Films in Detail

Performance Meets Precision

RHODETEC shade films offer tailored solutions for controlling light, heat, and privacy. Designed for diverse applications, they come in various styles to meet specific visual, thermal, and mechanical needs.

Each film is customized through key parameters:

- **Optical density** for controlling glare and solar energy transmission
- **Color tone** to shape the visual appearance and light color
- **Layer structure** to ensure stability and processability
- **Surface treatments**, such as scratch-resistant coatings, embossing, or pleating



Performance at a Glance (excerpt from the range)

Type	Category	LT	SR	UV	TSER*	SC*	Protection		Energy Saving	Clear View
							Glare	Heat		
SiGr01	reflective, transparent	1%	84%	99%	87%	0.15	++	++	++	++
SiGr02	reflective, transparent	2%	73%	98%	80%	0.23	++	++	++	++
SiGr07	reflective, transparent	7%	50%	93%	65%	0.40	+	+	+	++
SiWh00	reflective, blackout	0%	83%	99%	87%	0.15	++	++	++	-
GrGr02	non-reflective, transparent	2%	27%	97%	54%	0.53	++	o	o	++
GrGr07	non-reflective, transparent	8%	18%	99%	50%	0.57	+	o	o	++

Legend: LT = Light Transmission | SR = Solar Reflection | UV = UV Block | TSER = Total Solar Energy Rejection | SC = Shading Coefficient
* Combination with 3 mm clear glass
++ very good | + good | o medium | - none

Contribution to Green Certification

Smart Solar Control for Sustainable Buildings

Thanks to their performance and intelligent design, RHODETEC shade films and systems make a valuable contribution to sustainable architecture, energy efficiency, and the reduction of CO₂ emissions.

They can support **LEED, WELL, BREEAM, or DGNB certifications** in several ways.

RHODETEC contributes to the following LEED categories:

- **Integrative Process (IP)**
 - Early Design Synergies
- **Energy and Atmosphere (EA)**
 - Energy Performance
- **Materials and Resources (MR)**
 - Building Life-Cycle Impact Reduction
- **Indoor Environmental Quality (EQ)**
 - Indoor Air and Environmental Quality
 - Thermal Comfort
 - Interior Lighting & Glare Control
 - Daylight
 - Quality Views

Efficient. Comfortable. Certified.

RHODETEC solar control solutions go beyond heat reduction - they unlock the full potential of sustainable building performance.



Applications and Scenarios

Commercial and High-Rise

Enhance Workplace Comfort and Reduce Energy Costs.



Modern office and high-rise buildings rely on glass architecture - but too much sunlight can disrupt workspaces and raise cooling costs. RHODETEC shade films are engineered to strike perfect balance by preserving light and views while reducing heat and glare.

By improving visual and thermal comfort, RHODETEC systems support higher employee satisfaction and productivity. Our films seamlessly integrate into your architecture - subtle in appearance and strong in performance.

Key Benefits:

- Glare-free workspaces
- Heat protection and comfortable room temperatures
- Reduced cooling costs
- Natural daylight access
- Better working conditions which lead to higher productivity

Smart Light for Smarter Learning.



From elementary classrooms to university lecture halls, well-managed daylight can improve learning environments dramatically. RHODETEC shade films limit glare without darkening the room, helping students focus longer and stay engaged.

Natural light fosters concentration and well-being. Combined with thermal comfort, RHODETEC helps create conditions where students and teachers can perform at their best.

Key Benefits:

- Glare-free classrooms and study spaces
- Thermal comfort the entire year
- Increased daylight access
- Enhanced concentration and academic performance
- Unobstructed outside visibility

Health Care

Natural Light. Clean and Comfortable.



Patients heal faster in environments that feel calm and natural. RHODETEC shade films help hospitals and care facilities create such spaces by controlling sunlight while allowing in beneficial daylight. They also provide privacy, improve patient rest cycles by supporting circadian rhythms, and offer robust resistance to cleaning chemicals - an essential feature for medical environments.

Key Benefits:

- Thermal protection and comfort
- Clear views of nature which supports mental health
- Circadian rhythm support
- Daylight exposure aids recovery and sleeping regulation
- Compatible with hygiene protocols and disinfectants

Live Comfortably. Save Year-Round.



Whether it's an apartment or a home, RHODETEC shade films provide seasonal performance: blocking summer heat and supporting winter insulation.

They also shield furniture and flooring from UV damage, preserve your views, and allow natural light to fill the space. It's a discreet solution with a major impact on daily comfort.

Key Benefits:

- Efficient summer cooling and improved winter insulation
- Energy savings on heating and cooling
- UV protection to prevent fading of interiors
- Clear view and daylight exposure
- Improved comfort in living spaces

ATCTs and VCRs

Clear Vision. Maximum Safety.



In air traffic control towers (ATCTs) and visual control rooms (VCRs) every degree of visibility matters. RHODETEC's non-reflective glare films ensure uninterrupted, distortion-free views across the tarmac and skies. They're engineered for mission-critical environments where safety depends on clarity.

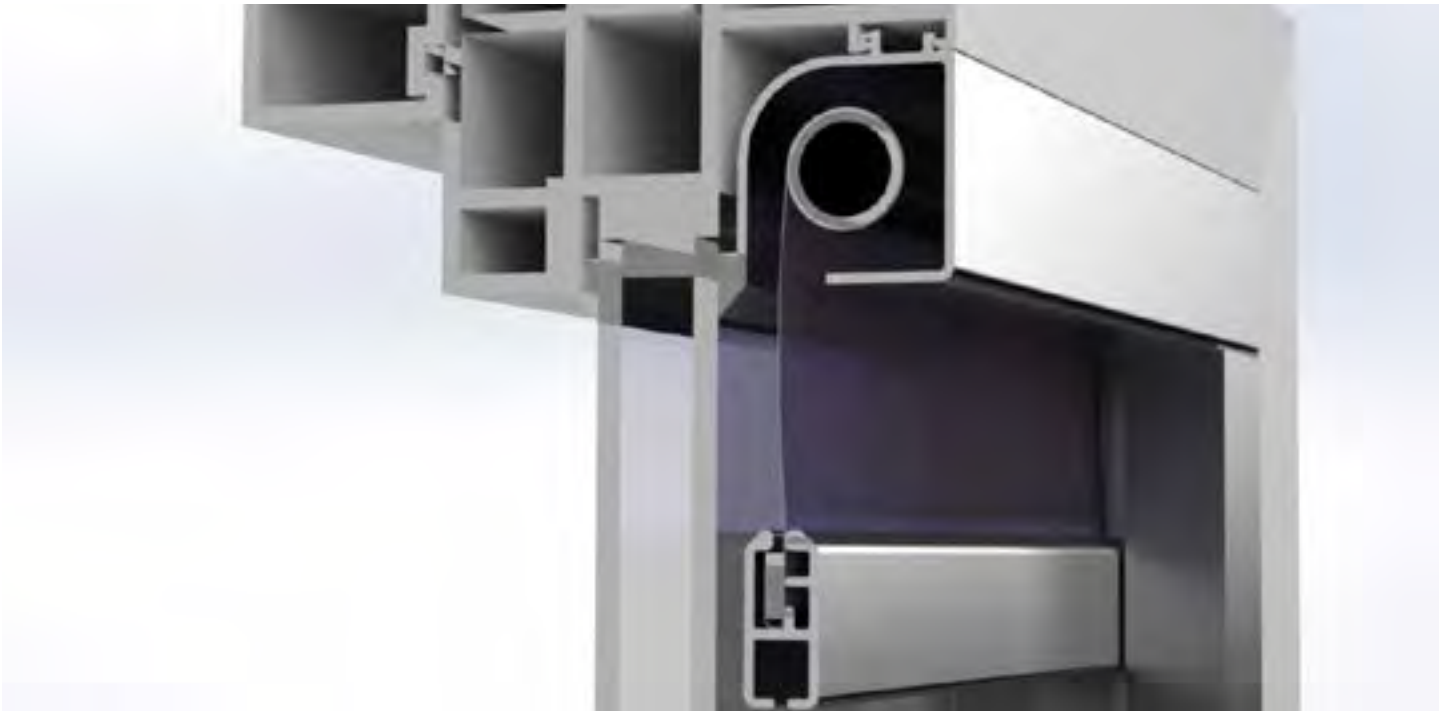
No matter the angle of the sun or the time of day, our films protect the view - supporting smooth, accurate operations inside towers, control rooms, and mobile ground units.

Key Benefits:

- Crystal-clear, distortion-free visibility across airspace, ramp, and runway
- Uninterrupted sightlines for ATC and VC operations
- Reliable 360° visibility without glare or reflections
- Preserves contrast and details in direct sunlight
- Enhances operational safety in critical aviation zones

Window & Façade Integration

Built-In Efficiency.



RHODETEC shade film systems integrate seamlessly into window frames or structural glazing. The low space requirement of the film makes the systems ideal for installation in glazing beads or mullion-transom constructions. The result is a hidden yet highly effective solar control solution.

This seamless compatibility makes them especially valuable for window manufacturers and façade designers seeking high-performance and low-profile solutions.

Key Benefits:

- Seamless integration within framing systems
- Combines the window and shading into one unit
- Adds value to the window and façade
- Supports modern and minimalist building design
- Reduces installation time and complexity on site

Skylight Shading

Control the Light Above.



Glass roofs and atriums create striking spaces - but often struggle with heat buildup and UV exposure. RHODETEC's advanced Multi-Axle skylight shading systems reduce this load without darkening the space or blocking sky views. They are easy to automate, visually discreet, and dramatically improve usability of glazed spaces even during the summer.

Key Benefits:

- Efficiently reduces solar heat gain through skylights
- Comfortable indoor temperatures
- Preserves bright, functional skylights and atriums
- UV shielding to preserve furnishings and interior finishes
- Discreet and smart installation

We Don't just Sell Products. We Solve Problems.



Every building is different. Every challenge is unique. RHODETEC delivers customized shade solutions, combining decades of know-how with a service-first mindset.

From consulting to prototyping, we develop answers that perform - visually, thermally, and functionally. Our films are tailored to color, transparency, light transmission, and reflection. Whatever the issue, we solve it with precision - at any scale.

Key Benefits:

- Tailored solutions in film technology and system integration
- Deep understanding of solar and light control challenges
- Expert support throughout planning and installation
- Films customized in color, transparency, and optics
- Selective transmission and reflection for energy efficiency and comfort

Shading Systems

Enhance Workplace Comfort and Reduce Energy Costs.

RHODETEC shading systems are engineered to seamlessly integrate with the advanced performance of our ultra-thin solar control films. With a modular design and minimal components, they offer fast „plug and play“ installation, compact dimensions, and long-lasting performance - maintenance-free, robust, and versatile for any setting.

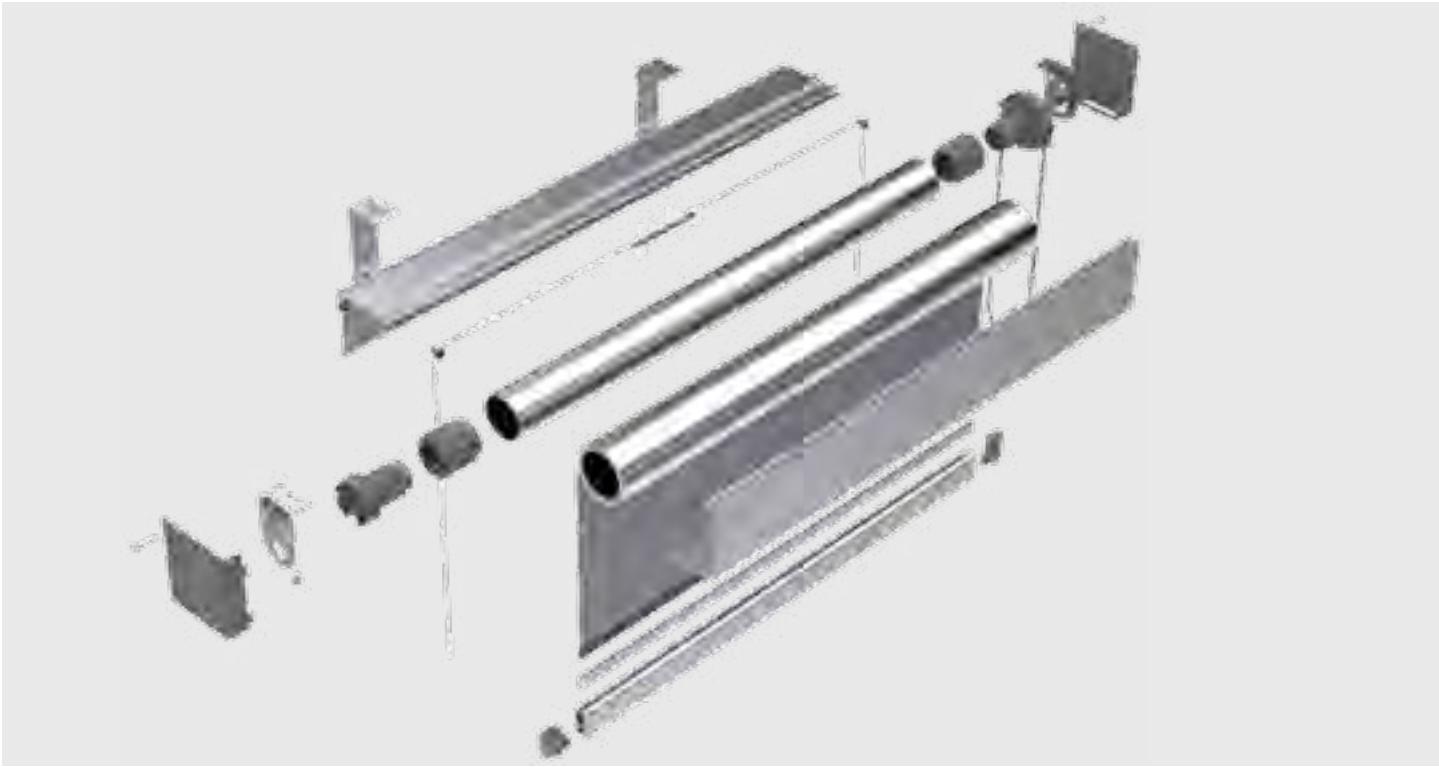
Key Benefits:

- Ultra-compact and discreet
- Whisper-quiet motors
- Seamless smart integration
- Ergonomic controls
- Built for durability



Whether for windows, façades or roofs — RHODETEC delivers efficient solar protection without compromising design.

The Right Solution for Every Space.



Our roller blind systems offer exceptional flexibility in both dimensions and design, making them the ideal choice for any application - whether residential or commercial. Choose from a wide range of configurations to suit your specific needs.

Key Benefits:

- Available as open bracket systems or with sleek aluminum casings
- Optional side channels or cable guides for enhanced stability
- Custom sizes and configurations tailored to your requirements
- Widths up to 3 meters (10 feet)
- Maintenance-free design

With our modular approach and attention to detail, you get the perfect fit and function — every time.

Multi-Axle Systems

Elegant Protection where it's Needed Most.



RHODETEC's Multi-Axle systems combine sleek, minimalist design with smart engineering. They offer reliable solar protection exactly where it matters most - in skylights, overhead glazing, and large glass roofs.

Seamlessly integrating into residential and commercial architecture, they operate horizontally, on an incline, or bottom-up, ensuring precise movement and effective shading without disrupting the visual flow.

Key Benefits:

- Blocks sunlight at its most intense entry point - the roof
- Horizontal, inclined, or bottom-up movement
- Ultra-compact construction for discreet integration
- Minimal light gaps (optional full coverage)
- Designed for demanding architectural solutions
- Suitable for high-spec commercial and residential applications

Perfect for spaces where performance and aesthetics must align.

Drives & Controls

Smart. Silent. Seamless.



High-end, whisper-quiet motors paired with intuitive control options - RHODETEC's drives bring style, comfort and innovation together.

- Power supply via battery, 24VDC, 120VAC, 230VAC, or solar panels
- Control via switch, remote or fully integrated into building automation
- Wide range of sizes, power, and speed options

*Enjoy effortless shading -
whether classic or connected.*

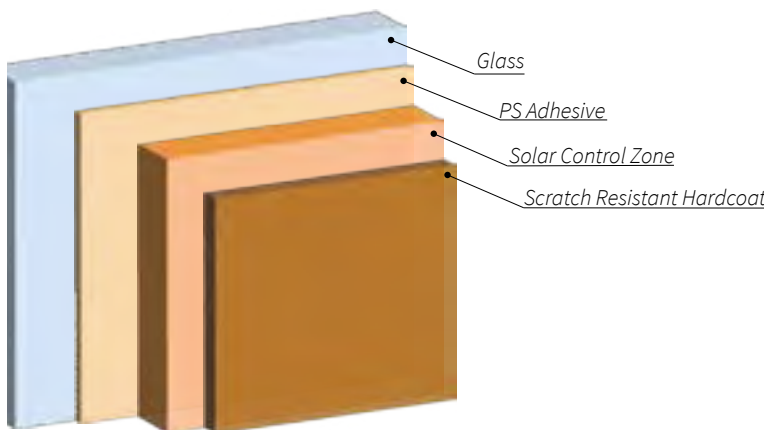


RHODETEC Window Films

Innovative Protection. Unmatched Comfort. Stunning Design.

RHODETEC's window films are more than just a layer on glass - they're a smart solution for modern living and working spaces.

- High-performance PET laminates with multilayer technology
- Built-in layers: metals, metal oxides, tints, and UV filters
- Scratch-resistant hard-coat surface for durability
- Wide selection of types
 - Dyed
 - Reflective
 - Carbon and Nano Ceramic
 - Sputtered
 - For Interior and Exterior Use



Solar Control

Stay Cool. Save Energy. Feel Comfortable.

- Blocks heat from infrared radiation
- Reduces glare for visual comfort
- Maintains natural light levels
- Significant cooling cost savings
- Enhances indoor comfort noticeably

EMI Shielding

Keep Signals In and Threats Out.

- Protects against RF surveillance
- Reduces cyberattack risk
- Enhances data security
- Minimizes electromagnetic interference

Safety & Security

Strong. Reliable. Protective.

- Makes forced entry much more difficult
- Holds shattered glass together after impact
- Reduces risk of injury and property damage
- Nearly invisible and no effect on design

UV Protection

Invisible Shield Against Fading and Damage

- Blocks up to 99.9% of harmful UV rays
- Prevents fading of furniture, textiles, and artworks
- Invisible layer – no change to appearance or clarity

Anti-Graffiti

Easy Defense Against Vandalism

- Sacrificial surface layer for glass protection
- Shields against paint, scratches, and stickers
- Easy to remove and replace
- Ideal for stores, public transportation, and ATMs



Ask us about custom solutions
for your project!

info@rhdtec.com

rhdtec.com



Contact Formular

Certified Glare Control

RHODETEC SiGr01 was tested and classified by Fraunhofer ISE:

„The tested product achieves the highest possible rating in the „Glare control“ category, being aclassified as Class 4 according to EN 14501:2021, meaning that its influence on controlling glare is very good.

Its effect on an unobstructive view to the outside is moderate, being classified as Class 2 in the category „Visual contact with the outside“ of EN 14501:2021.“

Details about the measurements that led to this classification are provided in the Fraunhofer ISE report TLSF-2503-015.a

