

haas

glass materials

PRODUCT CATALOGUE

Solar Glass

Specialized Materials Catalogue

Anti-Reflection (AR) Coating Solutions & Ceramic Coatings — chemically certified coating solutions for a wide range of photovoltaic applications.

Product Overview Table

A complete overview of all anti-reflection and ceramic coating products in this catalogue, at a glance.

ANTI-REFLECTION COATINGS		
NO.	PRODUCT	DESCRIPTION / KEY BENEFIT
1	 Single-layer AR coating <i>(standard)</i>	Effective anti-reflection performance with cost-efficient single-layer design for standard applications.
2	 Double-layer AR coating <i>(high transmittance)</i>	Enhanced light transmittance with advanced double-layer structure for high-efficiency modules.
3	 Double-layer AR coating <i>(ultra-high transmittance)</i>	Maximum light transmittance for superior energy yield and highest module efficiency.
4	 Color-neutral double-layer AR coating	Maintains natural appearance and color neutrality while delivering excellent anti-reflection performance.
5	 High-durability double-layer AR coating	Superior environmental resistance and long-term stability for harsh operating conditions.
6	 Anti-soiling super-hydrophilic AR coating	Super-hydrophilic surface for self-cleaning effect and reduced soiling losses.
7	 Low-temperature curing AR coating for advanced PV technologies	Low-temperature curing process compatible with advanced PV technologies and temperature-sensitive substrates.

CERAMIC COATINGS		
NO.	PRODUCT	DESCRIPTION / KEY BENEFIT
1	 White high-reflectivity ceramic glaze	High reflectivity for improved efficiency and energy yield in PV modules.
2	 Black ceramic glaze for BIPV back glass	Aesthetic black finish with excellent durability for Building-Integrated Photovoltaics (BIPV) applications.

Anti-Reflection (AR) Coating Solutions

Chemically certified anti-reflection coating solutions engineered for a wide range of photovoltaic applications — from standard crystalline silicon modules to high-efficiency and building-integrated systems.

CG-105

Anti-Fouling Single-Layer Anti-Reflection Coating

Process: Roll Coating + Tempering

KEY FEATURES

- Increases light transmittance by >2.2%
- Excellent anti-fouling performance
- Qualified adhesive tape performance
- Proven environmental durability
- Sealed surface structure for improved coating stability

TYPICAL APPLICATIONS

- Standard crystalline silicon solar glass

CG-108H

High-Transmittance Anti-Fouling Double-Layer AR Coating

KEY FEATURES

- Double-layer anti-reflection coating
- Light transmittance increase of approximately 2.4%
- Higher transmission than conventional single-layer coatings
- Excellent anti-fouling properties
- Improved optical performance

TYPICAL APPLICATIONS

- High-efficiency photovoltaic modules

CG-108N

Color-Neutral Double-Layer AR Coating (BIPV)

KEY FEATURES

- Color-neutral appearance
- Flattened reflectivity curve across the visible spectrum
- Uniform optical appearance
- Designed specifically for Building-Integrated Photovoltaics (BIPV)

BENEFITS

- Improved aesthetics
- Consistent façade appearance
- High optical performance

CG-108D **High Weather-Resistant Double-Layer AR Coating**

Designed for harsh environmental conditions.

KEY FEATURES

- Excellent resistance to:
 - High temperature
 - High humidity
 - Marine environments
- Proprietary ion-barrier technology
- Reduces migration of sodium and calcium ions from the glass substrate
- Improved long-term durability

PERFORMANCE

- Transmittance equal to or higher than single-layer coatings

Weather resistance: **CG-108D > Standard Double Layer > Single Layer**

CG-109 **High-Transparency Super-Hydrophilic Anti-Soiling AR Coating**

KEY FEATURES

- Super-hydrophilic surface
- Excellent rainwater wettability
- Self-cleaning effect
- Dust and contaminants are easily removed by rain

TECHNICAL CHARACTERISTICS

- Average surface roughness (Rq): 9.06 nm
- Customer specification: Rq ≥ 7 nm
- Silicon dioxide network promotes hydrogen bonding with water molecules
- Excellent anti-soiling performance

Testing: M4 Arizona Grey dust · Rotary oscillator 100–200 cycles/min

CG-110 **Low-Temperature Curing AR Coating**

Designed for temperature-sensitive photovoltaic technologies.

SUITABLE FOR

- Perovskite solar cells
- Cadmium Telluride (CdTe) modules
- Ultra-lightweight crystalline silicon modules

TYPICAL CURING CONDITIONS

- **Cadmium Telluride** — 120°C, 5 minutes
- **Ultra-lightweight Crystalline Silicon** — Pre-heating 60°C, curing temperature 270°C, curing time ≈ 1.5 minutes

Ceramic Coatings

High-temperature ceramic glazes for reflective front-side applications and BIPV back glass, combining durability with consistent optical appearance.

CG-203

High-Temperature Ceramic White Reflective Glaze

Key Features

- High reflectivity ($\geq 75\%$)
- Excellent adhesion
- Outstanding weather resistance
- Suitable for high-temperature processing

CG-203B

High-Temperature Ceramic Black Glaze (BIPV Back Glass)

Key Features

- Uniform black appearance
- No visible color variation
- Total reflectance: 4–9%
- Excellent coverage
- Outstanding weather resistance
- Specifically developed for BIPV back glass

Listed Partners



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