

QUALITY GLASS FOR ORIGINAL
EQUIPMENT MANUFACTURERS

**AUTOMOTIVE &
TRANSPORTATION
FLOAT GLASS**



GUARDIAN
Glass • Automotive • Building Products



Guardian Industries manufactures float glass specifically for customers who create advanced glass solutions for use in vehicles, specialty transportation and related industries. When it comes to float glass production, no one has more experience or technological know-how.

Serving you exclusively.

Our focus is producing float and specialty glass for automotive and transportation industries. Guardian supports OEMs with top-quality glass for multiple applications, and we continue to make significant investments to ensure our float glass meets or exceeds your needs.

Years of experience.

As a manufacturer of quality automotive float glass since 1970, Guardian Industries delivers the glass products, global reach and expertise that you can rely on. We continue to grow and invest in new and innovative products to deliver float glass that meets OEM requirements today and into the future.

Unparalleled availability.

Our automotive and transportation float glass is manufactured at one central facility in Carleton, Michigan. This dedicated plant produces a broad mix of products—including privacy glass—year round. With wide availability and order fulfillment from a single facility, you can mix loads, order the volume that makes the most sense for your business and improve your inventory management costs.

GREEN TINTED GLASS

ALL-PURPOSE GLASS FOR TRANSPORTATION

Guardian green float glass is prized for its high light transmission, optical clarity and ability to be fabricated to meet customer needs for performance and aesthetics. Decades of manufacturing experience have resulted in the highest quality float glass for a variety of automotive and transportation applications.

PERFORMANCE

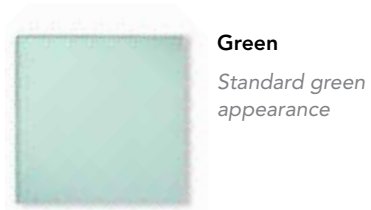
- High visible light transmission
- Reduces solar heat gain

APPLICATIONS

- Automotive and transportation applications, including marine and commercial sectors

GREEN TECHNICAL SPECIFICATIONS

Typical Thickness ¹	Visible Light %	% T(DS) ²	% T(TS) ³
1.70 mm	85.1	68.6	75.7
2.10 mm	83.8	66.0	73.8
2.30 mm	83.1	64.7	72.9
3.30 mm	79.8	58.3	68.2
4.00 mm	77.5	53.8	65.0
5.00 mm	74.2	47.3	60.3



Green

Standard green appearance

SOLAR MANAGEMENT GLASS (SMG)

ENHANCED SOLAR PERFORMANCE

The SMG product family balances light transmission with improved solar gain to meet various customer and application requirements. It combines maximum solar heat absorbing capabilities while exceeding 70% visible light transmission with standard green glass aesthetics in varying shades, depending on customer needs.

PERFORMANCE

- Reduces solar load inside a vehicle by absorbing a larger portion of the sun's heat than standard green glass
- Meets a minimum of 70% visible light transmission

APPLICATIONS

- SMG II is primarily used in windshield applications and other vehicle uses that require the highest visible light transmission available
- SMG III and SMG IV are largely used as body glass for the rest of the vehicle (non-windshield applications), including backlites, sidelites and more
- Additional transportation segments that require solar management

TECHNICAL SPECIFICATIONS

SMG II

Typical Thickness ¹	Visible Light %	% T(DS) ²	% T(TS) ³
2.10 mm	82.6	63.9	72.3
2.30 mm	81.9	62.6	71.4
4.70 mm	73.0	47.0	60.1

SMG III

Typical Thickness ¹	Visible Light %	% T(DS) ²	% T(TS) ³
3.15 mm	75.7	50.2	62.4
3.20 mm	75.5	49.9	62.3
3.50 mm	74.3	48.3	61.1
4.00 mm	72.3	45.6	59.1

SMG IV

Typical Thickness ¹	Visible Light %	% T(DS) ²	% T(TS) ³
2.10 mm	78.6	55.5	66.3
3.10 mm	73.9	49.0	61.6
3.50 mm	72.0	46.5	59.8
3.80 mm	70.6	44.5	58.4



SMG II

Light green appearance

SMG III

Medium green appearance

SMG IV

Deep green appearance

PRIVAGUARD® AND MIDNIGHTGRAY II®

HIGH SOLAR PERFORMANCE

PrivaGuard and MidnightGray II glass formulations are used extensively in automotive privacy glazing applications that require privacy or lower visible light transmission. These products exhibit outstanding heat-absorbing ability with deep-tinted, neutral gray aesthetics. They are ideal in applications where high solar performance, uncoated glass is required.

PERFORMANCE

- Reduces solar thermal load
- Provides privacy, security and comfort
- Enhances styling options
- Helps achieve additional EPA and NHTSA emission and fuel economy credits

APPLICATIONS

- SUVs and trucks in the OEM market
- Roof glass systems
- Automotive and transportation privacy glazing
- Does not require films or coatings to meet performance requirements



PrivaGuard

*Deep-tinted,
neutral gray
appearance*



MidnightGray II

*Deep-tinted, dark
gray appearance*

TECHNICAL SPECIFICATIONS

PRIVAGUARD

Typical Thickness ¹	Visible Light %	% T(DS) ²	% T(TS) ³
1.70 mm	42.3	< 42.1	< 55.9
2.10 mm	39.3	< 38.5	< 53.5
3.20 mm	25.1	< 25.0	< 44.0
3.50 mm	22.2	< 21.0	< 41.8
3.80 mm	19.7	< 20.0	< 40.5
4.00 mm	18.2	< 18.5	< 39.8

MIDNIGHTGRAY II

Typical Thickness ¹	Visible Light %	% T(DS) ²	% T(TS) ³
2.10 mm	33.6	< 36.0	< 51.1
4.00 mm	13.5	< 15.5	< 37.0

NOTES

¹ Additional thicknesses are available; contact Guardian for more information.

² **T(DS)**: Direct solar energy transmitted through a glazing, 300 to 2500 nanometers inclusive per ISO 13837.

³ **T(TS)**: Total solar energy transmitted and reradiated through a glazing at 4m/s wind velocity, 300 to 2500 nanometers inclusive per ISO 13837.

Additional technical data is available upon request. Please contact your Guardian representative for more details.

TRUST GUARDIAN FOR YOUR GLASS MANUFACTURING NEEDS

Guardian Industries serves customers for the transportation and automotive industries all over the world.

Guardian has earned the reputation of an innovative world leader in float glass products with proven quality, advanced capabilities and a diverse product portfolio.

With a consultative, flexible approach, we work hard to satisfy unique requirements. To learn more, contact us today.

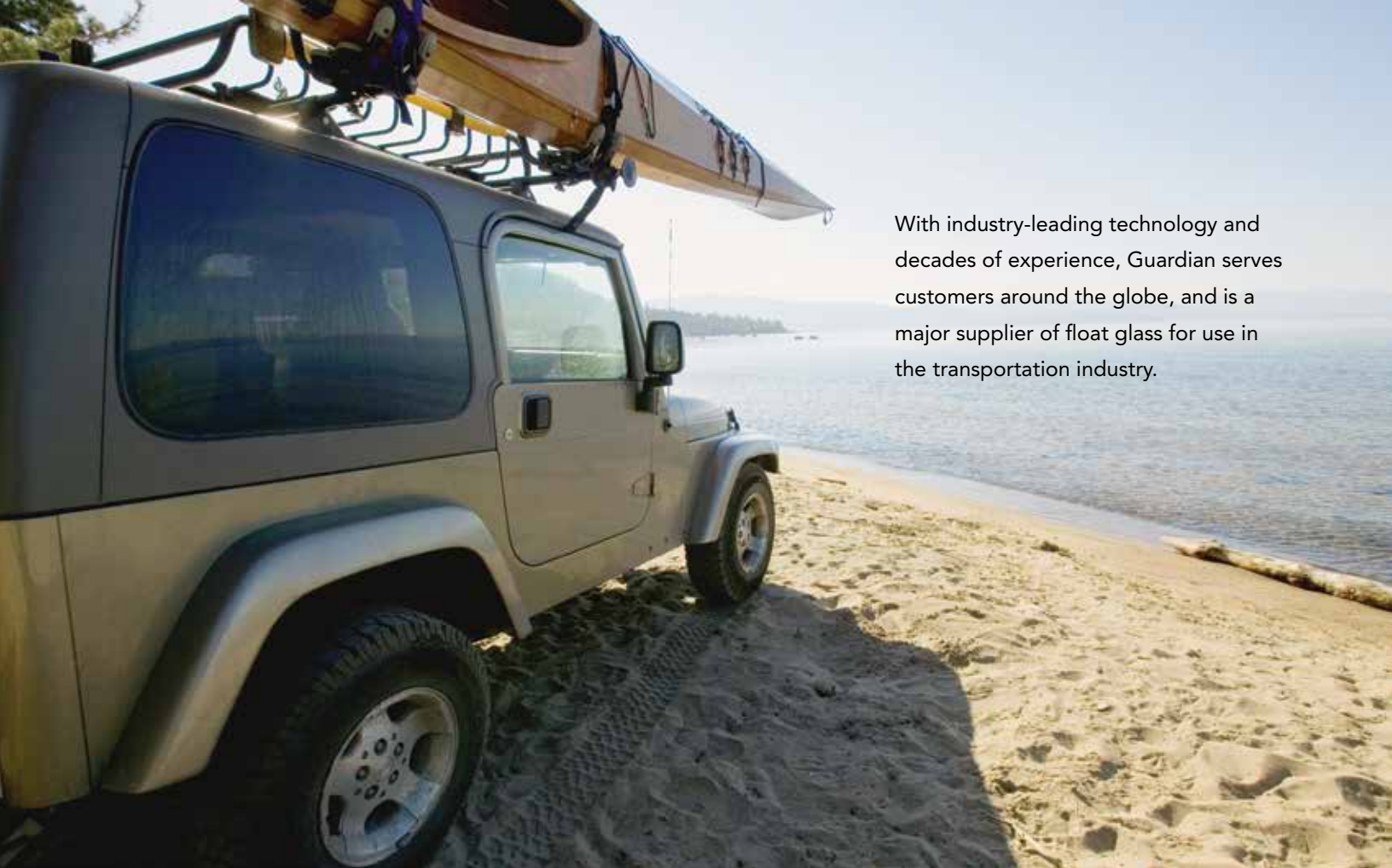




FLOAT GLASS FROM GUARDIAN

YOUR SOLUTION FOR
GLASS ON THE GO





With industry-leading technology and decades of experience, Guardian serves customers around the globe, and is a major supplier of float glass for use in the transportation industry.

**Automotive and
Transportation
Float Glass Products**

Green
SMG II
SMG III
SMG IV
PrivaGuard®
MidnightGray II®

Guardian Automotive Glass

Guardian Industries Corp.
14600 Romine Road
Carleton, MI 48117
USA
734.654.6264
AutoFloatGlass@Guardian.com

Guardian Global Headquarters

2300 Harmon Road
Auburn Hills, MI 48326
USA
248.340.1800



Headquartered in Auburn Hills, Michigan, Guardian Industries is a global leader in float glass, fabricated glass and other building materials for commercial, residential, interior and automotive applications. To learn more, visit Guardian.com.

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