Safety Products

FLEET Solutions

Why Sell AWF

Make headway with fleets being serviced by a competitor

Keep a pulse on your customer and strengthen relationships

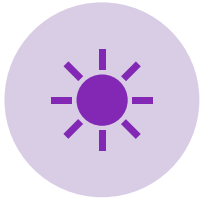
Leverage existing core competencies but better weather market cyclicity

Its forward thinking

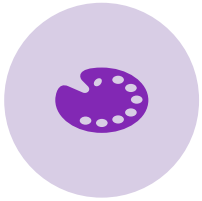
Why Buy 3M™ Automotive Window Film

Improve occupant comfort within the cab

Glare reduction



UV/Fade protection



Aesthetics

Privacy

Security

Types of Light

Ultraviolet Light (UV)

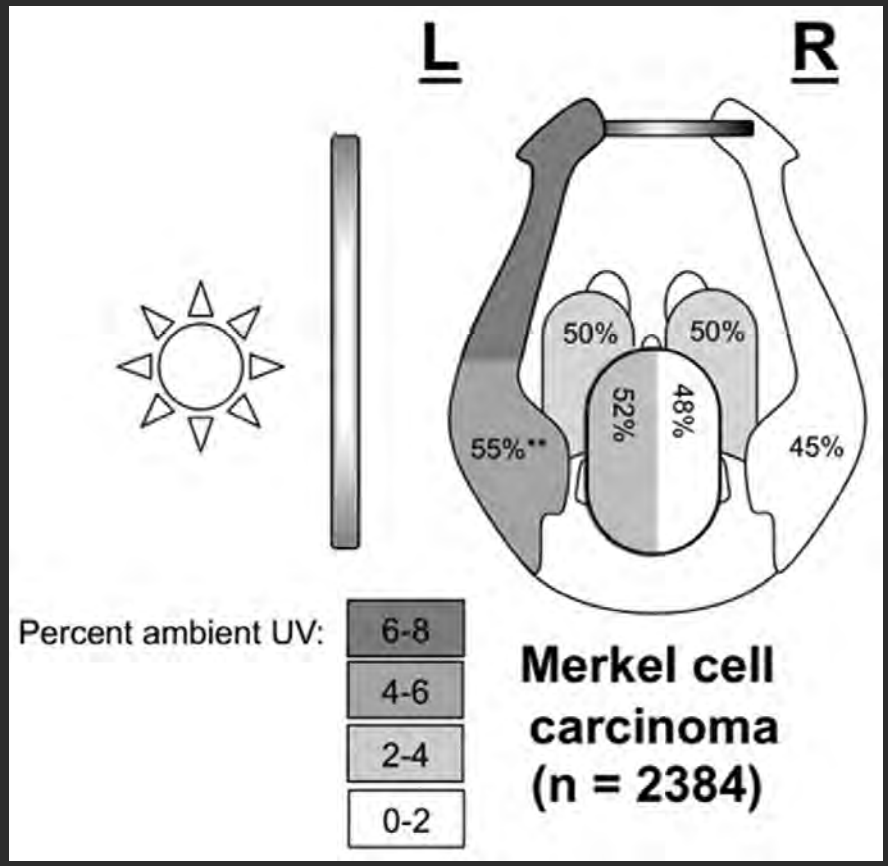
Ultraviolet A (UVA) has a longer wavelength. It is associated with skin aging.

Ultraviolet B (UVB) has a shorter wavelength. It is associated with skin burning

Unprotected exposure to UVA and UVB damages the DNA in skin cells, producing genetic defects, or mutations, that can lead to skin cancer and premature aging. UV rays can also cause eye damage, including cataracts and eyelid cancers.

Source: Skin Cancer Foundation

More UV-linked skin cancers arise on the left rather than the right side of the body.



Source: National Library of Medicine

Types of Light

Ultraviolet Light (UV)

Ultraviolet A (UVA) has a longer wavelength. It is associated with skin aging.

Ultraviolet B (UVB) has a shorter wavelength. It is associated with skin burning

Unprotected exposure to UVA and UVB damages the DNA in skin cells, producing genetic defects, or mutations, that can lead to skin cancer and premature aging. UV rays can also cause eye damage, including cataracts and eyelid cancers.

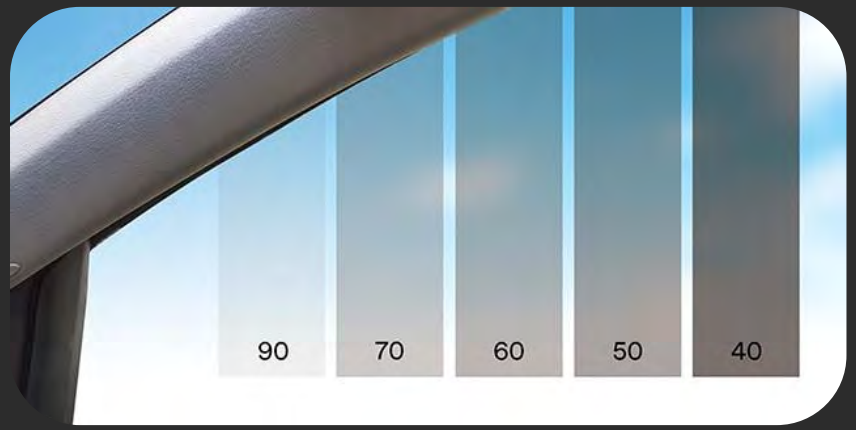
Source: Skin Cancer Foundation

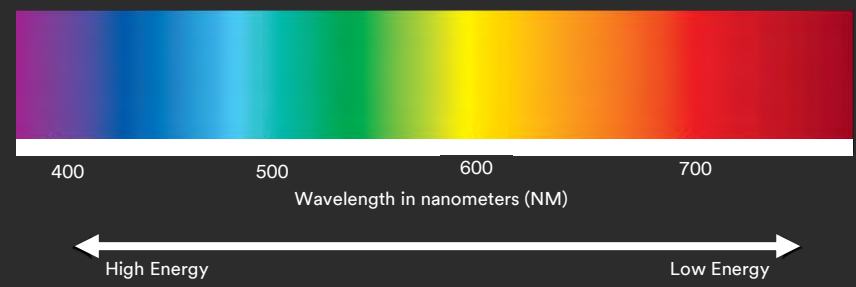
Visible Light

As the full spectrum of visible light travels through a prism, the wavelengths separate into the colors of the rainbow because each color is a different wavelength. Violet has the shortest wavelength, at around 380 nanometers, and red has the longest wavelength, at around 700 nanometers.

“Visible Light” is associated with how dark or light you want your window film to be.

Source: NASA





Types of Light

Ultraviolet Light (UV)

Ultraviolet A (UVA) has a longer wavelength. It is associated with skin aging.

Ultraviolet B (UVB) has a shorter wavelength. It is associated with skin burning

Unprotected exposure to UVA and UVB damages the DNA in skin cells, producing genetic defects, or mutations, that can lead to skin cancer and premature aging. UV rays can also cause eye damage, including cataracts and eyelid cancers.

Source: Skin Cancer Foundation

Visible Light

As the full spectrum of visible light travels through a prism, the wavelengths separate into the colors of the rainbow because each color is a different wavelength. Violet has the shortest wavelength, at around 380 nanometers, and red has the longest wavelength, at around 700 nanometers.

“Visible Light” is associated with how dark or light you want your window film to be.

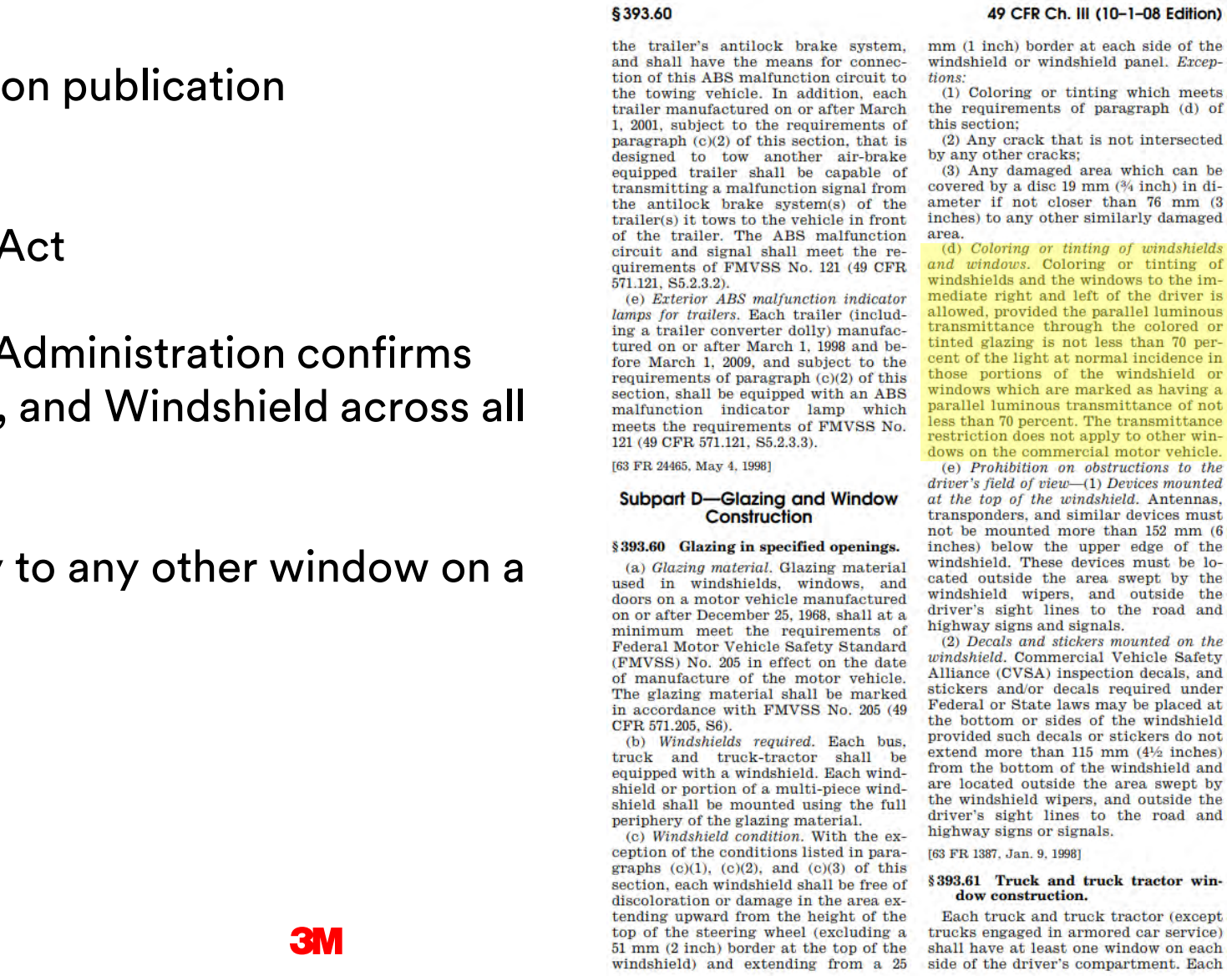
Source: NASA

Infrared Light (IR)

Infrared radiation (IR), or infrared light, is a type of radiant energy that's invisible to human eyes but that we can feel as heat.

US and Canada Approves Window Tinting for Commercial Vehicles

- American Standards Association publication Z26.1-1966 and Z26.1a-1969
- Canada Motor Vehicle Safety Act
- Federal Motor Carrier Safety Administration confirms 70% VLT on Driver, Passenger, and Windshield across all 50 states
- VLT restriction does not apply to any other window on a commercial vehicle.



§ 393.60 49 CFR Ch. III (10–1–08 Edition)

the trailer's antilock brake system, and shall have the means for connection of this ABS malfunction circuit to the towing vehicle. In addition, each trailer manufactured on or after March 1, 2001, subject to the requirements of paragraph (c)(2) of this section, that is designed to tow another air-brake equipped trailer shall be capable of transmitting a malfunction signal from the antilock brake system(s) of the trailer(s) it tows to the vehicle in front of the trailer. The ABS malfunction circuit and signal shall meet the requirements of FMVSS No. 121 (49 CFR 571.121, S5.2.3.2).

(e) *Exterior ABS malfunction indicator lamps for trailers.* Each trailer (including a trailer converter dolly) manufactured on or after March 1, 1998 and before March 1, 2009, and subject to the requirements of paragraph (c)(2) of this section, shall be equipped with an ABS malfunction indicator lamp which meets the requirements of FMVSS No. 121 (49 CFR 571.121, S5.2.3.3).

[63 FR 24465, May 4, 1998]

Subpart D—Glazing and Window Construction

§ 393.60 Glazing in specified openings.

(a) *Glazing material.* Glazing material used in windshields, windows, and doors on a motor vehicle manufactured on or after December 25, 1968, shall at a minimum meet the requirements of Federal Motor Vehicle Safety Standard (FMVSS) No. 205 in effect on the date of manufacture of the motor vehicle. The glazing material shall be marked in accordance with FMVSS No. 205 (49 CFR 571.205, S6).

(b) *Windshields required.* Each bus, truck and truck-tractor shall be equipped with a windshield. Each windshield or portion of a multi-piece windshield shall be mounted using the full periphery of the glazing material.

(c) *Windshield condition.* With the exception of the conditions listed in paragraphs (c)(1), (c)(2), and (c)(3) of this section, each windshield shall be free of discoloration or damage in the area extending upward from the height of the top of the steering wheel (excluding a 51 mm (2 inch) border at the top of the windshield) and extending from a 25 mm (1 inch) border at each side of the windshield or windshield panel. *Exceptions:*

(1) Coloring or tinting which meets the requirements of paragraph (d) of this section;

(2) Any crack that is not intersected by any other cracks;

(3) Any damaged area which can be covered by a disc 19 mm (¾ inch) in diameter if not closer than 76 mm (3 inches) to any other similarly damaged area.

(d) *Coloring or tinting of windshields and windows.* Coloring or tinting of windshields and the windows to the immediate right and left of the driver is allowed, provided the parallel luminous transmittance through the colored or tinted glazing is not less than 70 percent of the light at normal incidence in those portions of the windshield or windows which are marked as having a parallel luminous transmittance of not less than 70 percent. The transmittance restriction does not apply to other windows on the commercial motor vehicle.

(e) *Prohibition on obstructions to the driver's field of view—(1) Devices mounted at the top of the windshield.* Antennas, transponders, and similar devices must not be mounted more than 152 mm (6 inches) below the upper edge of the windshield. These devices must be located outside the area swept by the windshield wipers, and outside the driver's sight lines to the road and highway signs and signals.

(2) *Decals and stickers mounted on the windshield.* Commercial Vehicle Safety Alliance (CVSA) inspection decals, and stickers and/or decals required under Federal or State laws may be placed at the bottom or sides of the windshield provided such decals or stickers do not extend more than 115 mm (4½ inches) from the bottom of the windshield and are located outside the area swept by the windshield wipers, and outside the driver's sight lines to the road and highway signs or signals.

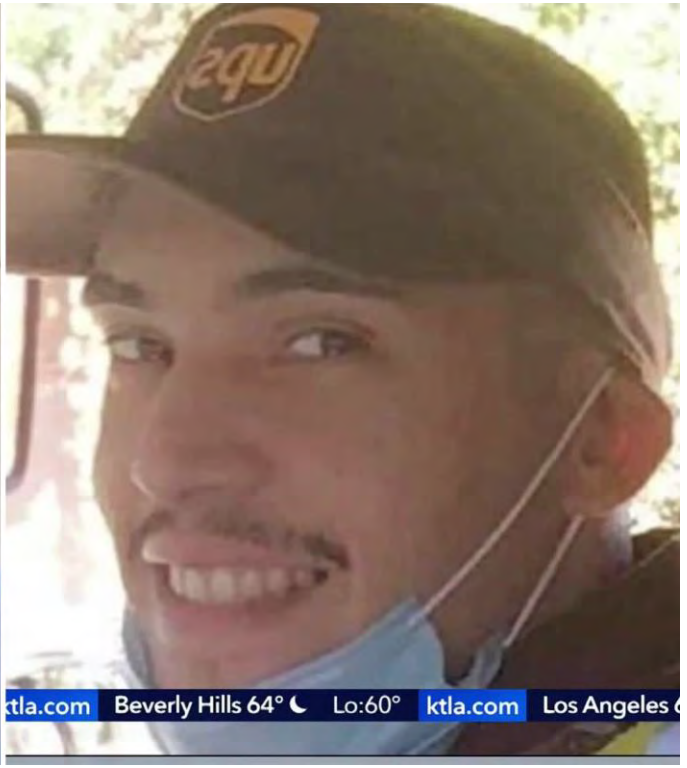
[63 FR 1387, Jan. 9, 1998]

§ 393.61 Truck and truck tractor window construction.

Each truck and truck tractor (except trucks engaged in armored car service) shall have at least one window on each side of the driver's compartment. Each

An Avoidable Tragedy

- Delivered packages in Pasadena, CA June 25, 2022
- passed out in his truck in the early afternoon.
- at least a 20-minute gap before someone noticed and called for help.
- died from heatstroke after finishing his last delivery just a day after turning 24 years old



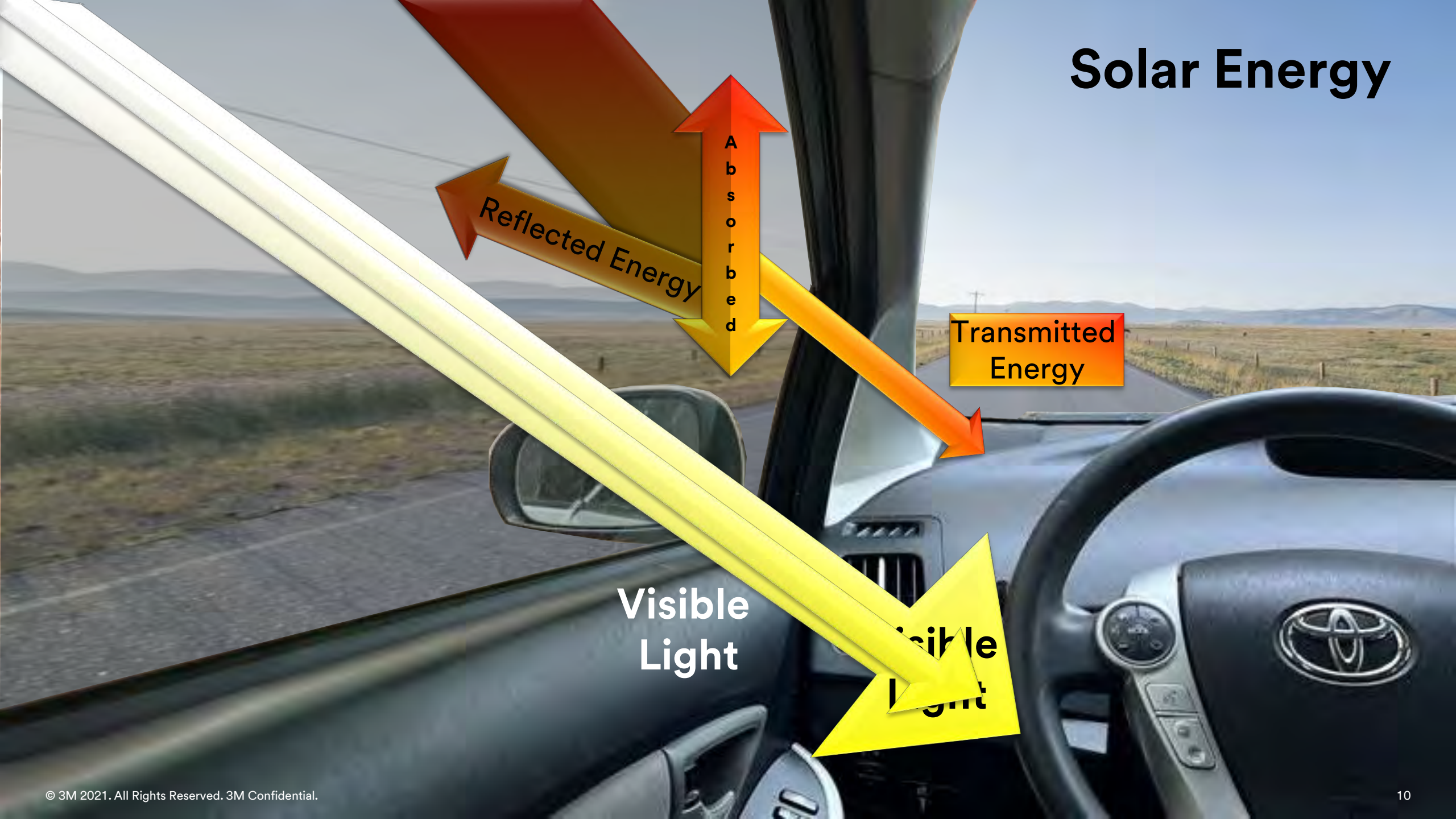
FedEx May 1, 2023

27 stitches

Truck totaled

https://truckingtrend.com/fedex-driver-suffers-head-injuries-from-rock-thrown-through-windshield/

Solar Energy



Visible Light Transmission

The percentage of visible light that passes directly through filmed glass: the higher the number, the lighter the film.

	Visible Light Transmittance	Visible Light Reflectance: Exterior	Visible Light Reflectance: Interior	UV Block	Total Solar Energy Rejected	Glare Reduction	Infrared Rejection*	Infrared Energy Rejection**
Crystalline 20	17%	5%	5%	99.9%	64%	77%	99%	66%
Crystalline 40	33%	6%	6%	99.9%	62%	55%	99%	69%
Crystalline 50	42%	7%	7%	99.9%	59%	43%	98%	68%
Crystalline 60	51%	7%	7%	99.9%	57%	30%	98%	68%
Crystalline 70	58%	8%	7%	99.9%	55%	21%	97%	68%
Crystalline 80	62%	7%	7%	99.8%	52%	15%	96%	64%
Crystalline 90	72%	9%	8%	99.9%	46%	1%	95%	59%

UV Rejection

The percentage of ultraviolet (UV) light that is rejected by the filmed glass. UV light contributes to the fading and deterioration of fabrics and leather.

	Visible Light Transmittance	Visible Light Reflectance: Exterior	Visible Light Reflectance: Interior	UV Block	Total Solar Energy Rejected	Glare Reduction	Infrared Rejection*	Infrared Energy Rejection**
Crystalline 20	17%	5%	5%	99.9%	64%	77%	99%	66%
Crystalline 40	33%	6%	6%	99.9%	62%	55%	99%	69%
Crystalline 50	42%	7%	7%	99.9%	59%	43%	98%	68%
Crystalline 60	51%	7%	7%	99.9%	57%	30%	98%	68%
Crystalline 70	58%	8%	7%	99.9%	55%	21%	97%	68%
Crystalline 80	62%	7%	7%	99.8%	52%	15%	96%	64%
Crystalline 90	72%	9%	8%	99.9%	46%	1%	95%	59%

Infrared Rejection and Infrared Energy Reduction

Infrared Rejection -The percentage of solar infrared energy rejection over the wavelength range from 900-1,000 nm. Infrared rays are primarily responsible for the heat you feel when driving.

Infrared Energy Reduction - The percent of solar infrared energy rejection over the wavelength range from 780–2,500 nm. IRER takes into account the transmitted and absorbed IR energy that will be reradiated into a car.

	Visible Light Transmittance	Visible Light Reflectance: Exterior	Visible Light Reflectance: Interior	UV Block	Total Solar Energy Rejected	Glare Reduction	Infrared Rejection*	Infrared Energy Rejection**
Crystalline 20	17%	5%	5%	99.9%	64%	77%	99%	66%
Crystalline 40	33%	6%	6%	99.9%	62%	55%	99%	69%
Crystalline 50	42%	7%	7%	99.9%	59%	43%	98%	68%
Crystalline 60	51%	7%	7%	99.9%	57%	30%	98%	68%
Crystalline 70	58%	8%	7%	99.9%	55%	21%	97%	68%
Crystalline 80	62%	7%	7%	99.8%	52%	15%	96%	64%
Crystalline 90	72%	9%	8%	99.9%	46%	1%	95%	59%


WARREN
VOLVO

3M Safety and Security Auto Window Film

3M™ Scotchshield™ Automotive Security Window Film

With

Without

AWF Portfolio

Good

Obsidian

- ✓ Dyed film construction
- ✓ Subject to more heat absorption
- ✓ Economically priced

Best

Crystalline

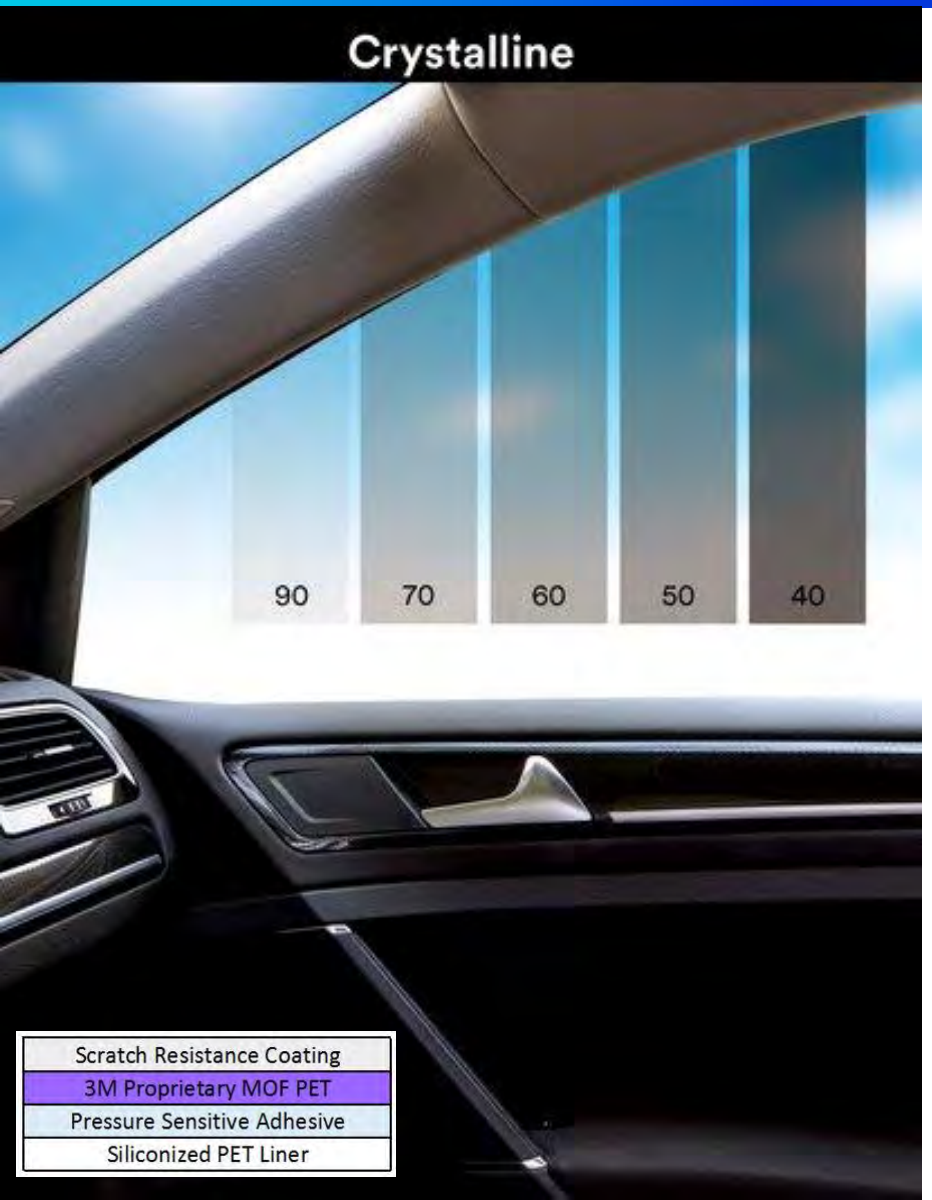
- ✓ Patented Multi-layer optical film
- ✓ Superior heat rejection
- ✓ Broad VLT offering
- ✓ Premium price point

Better

Ceramic IR

- ✓ Ceramic film construction
- ✓ Excellent heat rejection without metallized components
- ✓ Intermediate price point

3M™ Crystalline



- Multi layer Optical Film (MOF) = 3M patented film technology
- 200+ polymeric layers in the film, thinner than a Post-it® Note
- Crystalline is the only AWF on the market with MOF technology
- Metal free film – No RF interference, no corrosion
- Up to 64% heat rejection
- Great total solar energy rejection without having to go to the darkest tints
- VLT Options: 20, 40, 50, 60, 70 & 90

Frequently Asked Questions - AWF

What is the recommended installation temperature for Auto Window Film?
60° - 85° F

How do I clean 3M™ automotive window film?
After thirty (30) days, you may clean 3M™ Films using normal household cleaning solution including ammonia-based products: e.g., Windex, and a soft, lint-free cloth or towel. You may also use a squeegee to clean the films. Abrasive products which would scratch or damage the film should not be used.

What does the Skin Cancer Foundation logo mean?
based on testing qualifications meeting the Skin Cancer Foundation criteria and standards established by their Photobiology committee to block 99% or more of UVA and UVB radiation

Is the warranty transferable?
No. 3M warrants as long as you own your vehicle, and it was installed by an Authorized Installer

3M™ Safety Walk™

Keeping Everyone on a Safer Path

85%

Workers' compensation claims are attributed to employees slipping on slick floors.

$2.18 Billion

Total cost to U.S. companies as a result of slips and trips in 2019.

$46,000

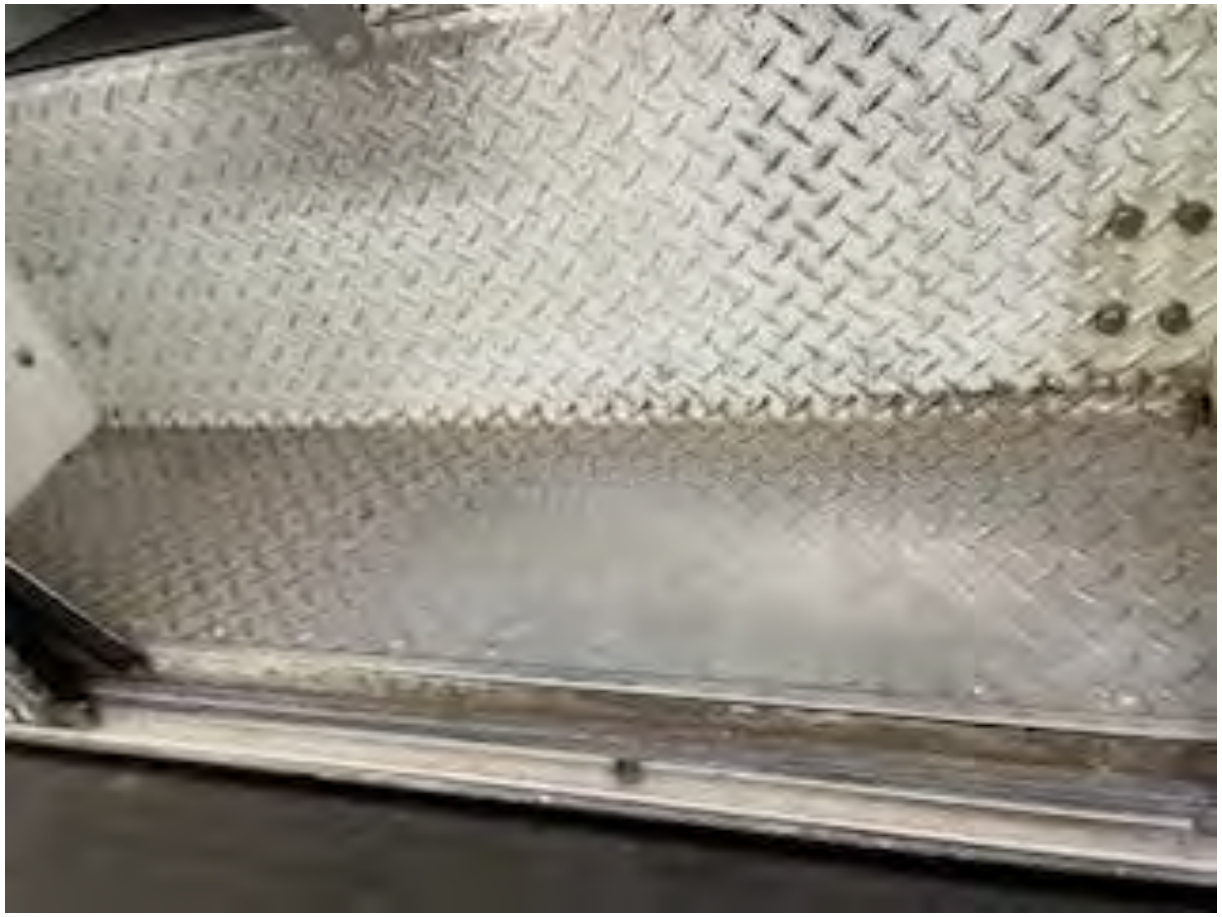
The average cost of a slip and trip claim.

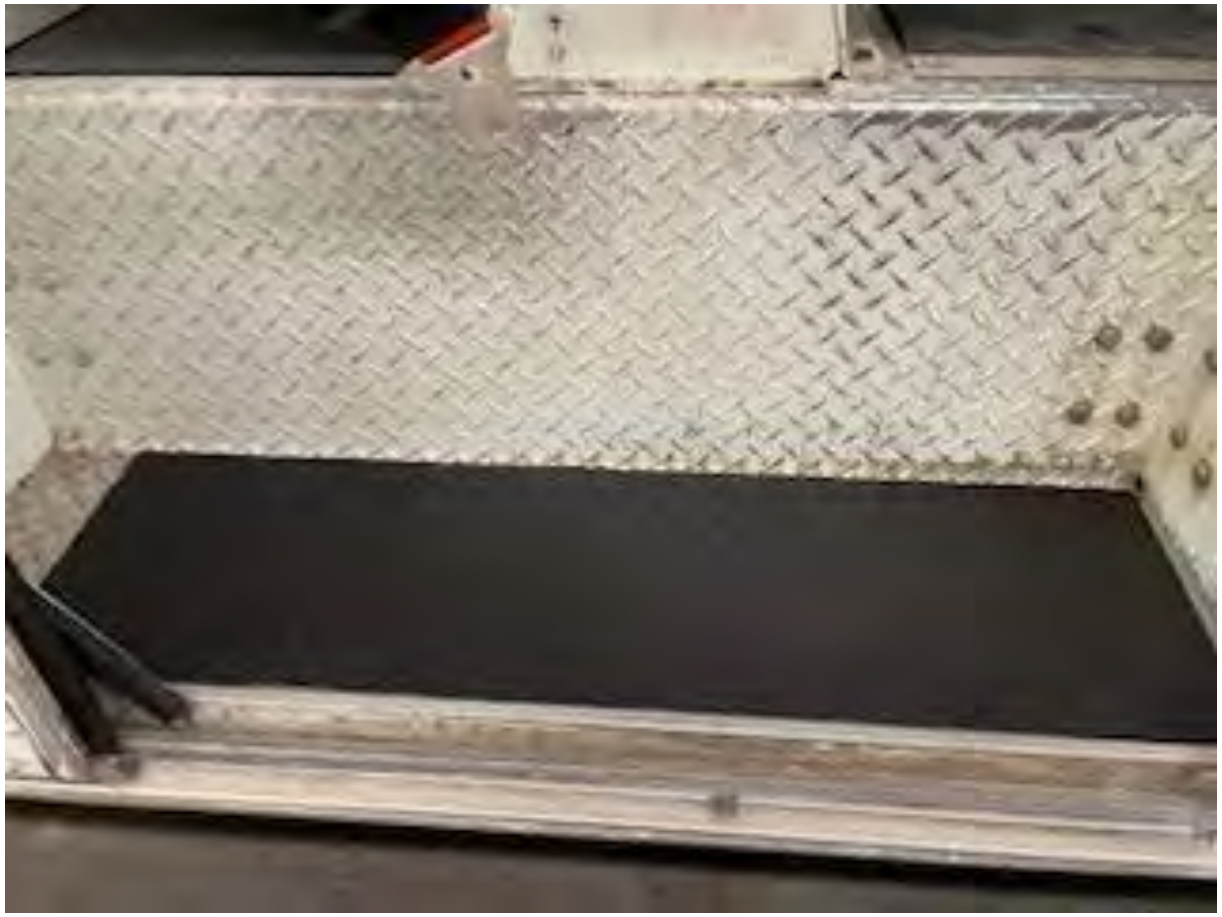
3M graphic solutions:

- Meet industry standards for slip resistance
- Are available for many floor surfaces, including interior and exterior

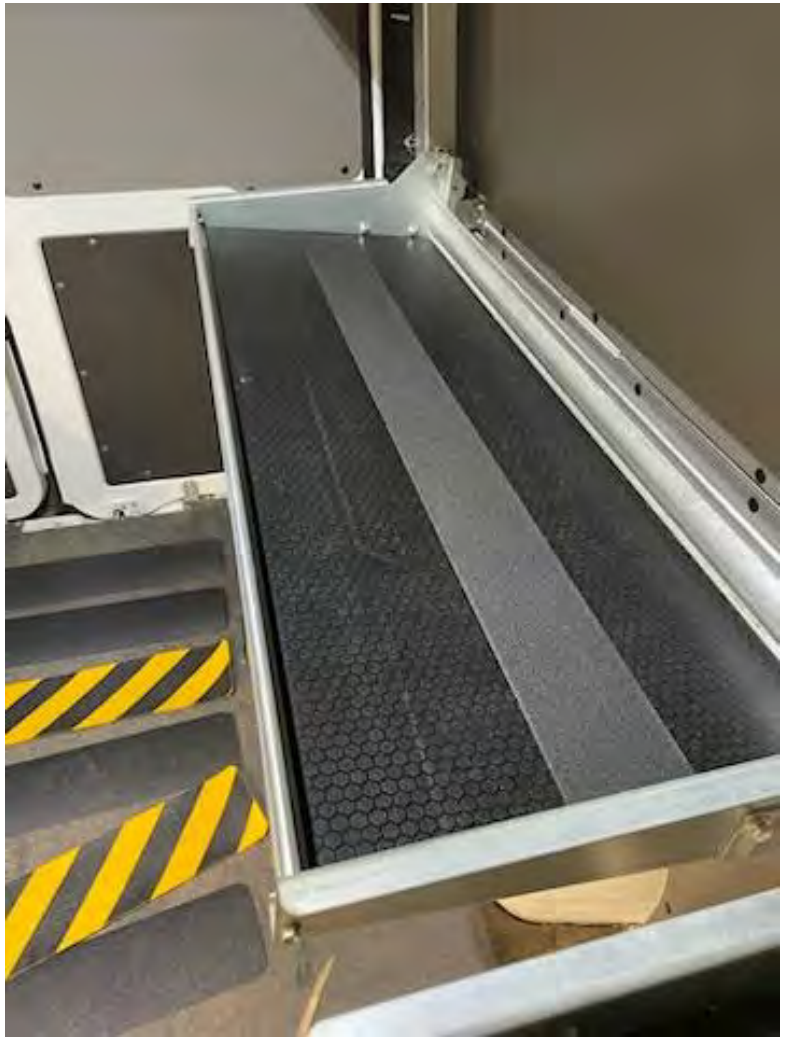
References
1 National Floor Safety Institute Slip and Fall Facts 2019
2 2019 Liberty Mutual Workplace Safety Index
3 "Workers' compensation costs by cause" National Safety Council

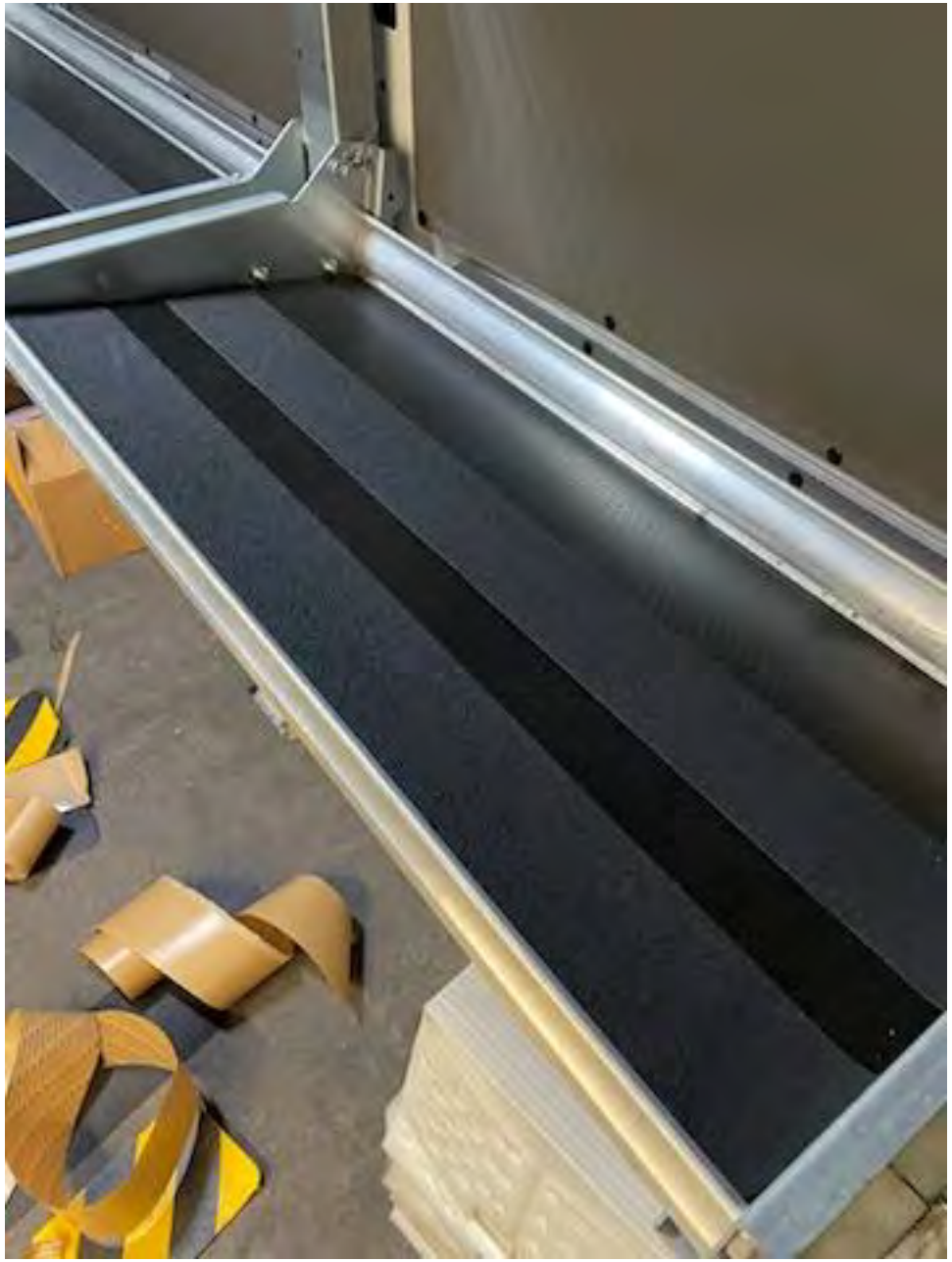
45-year-old vehicle - Safety Walk: Before and After 510 SW For Diamond Plate



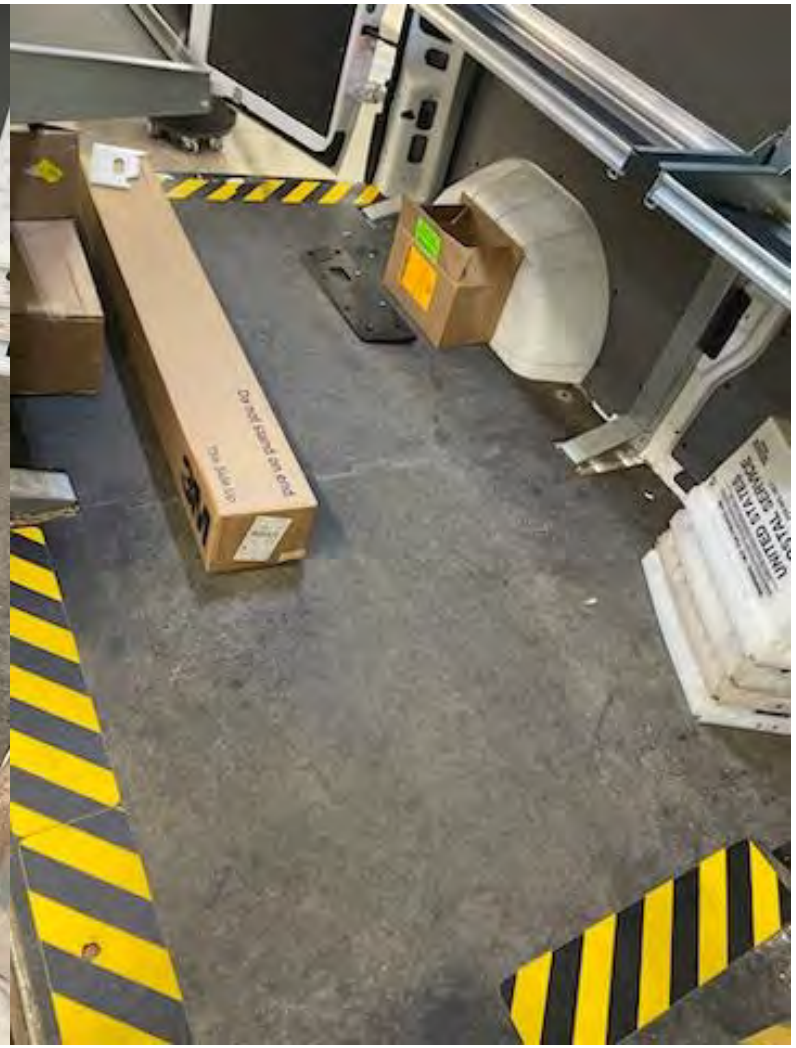


Safety Walk 210 for Van Trays





Safety Walk Stair Treads
Back of Van



Could have full length of walkway in van

In between driver seat and passenger… slip hazard on metal 510 Safety Walk

SW TECH DATA SHEET

https://multimedia.3m.com/mws/media/60289O/3mtm-safety-walktm-slip-resistant-tapes-treads-tech-data.pdf

3M™ Conspicuity Tape

University of Michigan Transportation Research Inst.

Truck collisions fell

58% after conspicuity was introduced.

The largest declines occurred in fatal rear end and angle collisions.[1]

60% for rear impact collisions

55% for angle collisions

UMTRI TRANSPORTATION RESEARCH INSTITUTE UNIVERSITY OF MICHIGAN

Decades of research has demonstrated the safety benefits of conspicuity markings.

Counting the cost.

Even if a company isn't required by law to apply conspicuity markings to their fleet, it still makes good business sense.

Motor vehicle crashes are the **leading cause of work-related deaths** in the U.S.[4]

Pickup trucks, delivery trucks and vans were involved in **26%** **of fatal work-related crashes.**[5]

Fatal medium or heavy truck crashes cost more than any other at an average of **$3.6 million per crash.**[6]

3M Science. Applied to Life.™

Conspicuity for Light Commercial Vehicles:

Don't wait until it's required.

10-26 ft.
12,500-
33,000 lbs.

Early mornings. After nightfall. Making frequent stops (often with lights off) in residential areas. Last mile vehicles have established a significant presence on roads around the world, but many of them could be safer with one simple solution: the brilliant reflectivity of conspicuity markings.

Commercial vehicles should be more visible.

41% of truck rear collisions in low light were caused by **not being recognized in time.**[1]

Pickup trucks, delivery trucks & vans were involved in **26%** of fatal work-related crashes.[2]

Single-unit trucks are involved in **61%** of emergency room visits and **38%** of fatalities resulting from large truck crashes.[3]

Conspicuity tape is a proven solution for accident reduction.

Studies estimate conspicuity tapes help **prevent 600 crashes and save up to 65 lives every year.**[5-6]

▸ Download Our e-Book

Conspicuity tape is a low-cost way to help save money.

Average lost cost from vehicle accidents: **~$70K**[7]

Average fatal medium or heavy truck crashes cost: **$3.6M**[8] **per crash.**

Average annual hospital charges from single-unit truck crashes: **$14.3M**[9]

Outfitting a light commercial vehicle with **brilliant, reflective conspicuity markings costs~$35*.**

*Average cost per vehicle

▸ Calculate Your Cost

Last mile vehicles are everywhere—but are they being seen?

Conspicuity regulations vary around the world, but any light commercial vehicle fleet can benefit from the value of visibility today. Take the next step:

▸ Ready to get started outfitting your fleet? Click here.

3M™ Diamond Grade™ Reflective Markings – 983 Series

Give your vehicles brand new visibility.

- Rigid construction for smooth, flat surfaces
- 10-year warranty
- Available in 50-yard continuous or kiss-cut rolls in a variety of widths, as well as individual strips

Custom Logo - 3M™ Diamond Grade™ Conspicuity Series 983

Customized conspicuity. Optimized visibility.

- Bright and durable
- Outstanding performance backed by an industry-leading warranty
- Non-corroding for the warrantied term


B3
Builders
future.
B3
Builders
Building for the future

IJ280/ 8428G Print/Lam

780mC-10R Reflective

983-23 Fluorescent


B3
Builders
Building for the future.


B3 Builders
Building for the future.


INPS
3M
Safety Products
Offering Solutions, Not Just Products
fleet.inps.net | fleet@inps.net | 1-800-565-3509
FLEET Solutions