



June 22, 2009

Clerk of the Board
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Subject: AB32 Cool Car Glazing Proposed Regulation of May 8, 2009

Dear ARB Board:

The Enhanced Protective Glass Automotive Association (EPGAA) is a trade association having members representing glazing, interlayer and equipment manufacturers and associated parties having interest in promoting further education of the public, government and automotive manufacturers regarding the benefits of laminated glazing.

The key specific benefits of laminated glazing when compared with monolithic glazing designs are as follows:

- Enhanced security regarding vehicle entry including vehicle theft, smash and grab and forced entry.
- Potential Ejection Mitigation in that laminates can provide penetration resistant barriers to occupant ejection. This potential benefit is a key driver in NHTSA's recent work to reduce ejections as mandated by the 2005 SAFETEA-LU Legislation requiring a performance standard by October 2009.
- Significant reduction of UV energy transmission (99% blocking) which is a recognized contributor to skin cancer risks as well as degradation of interior component materials.
- Reduction in weight when replacing a monolithic glazing component of equal thickness. This represents one of only a few possible weight reduction solutions that supports the drive for more fuel efficient vehicles which does not compromise safety.
- Enables enhanced solar performance through the ability to include infrared reflective films or coatings and infrared absorbing interlayer materials. Enhanced solar performance has been demonstrated to improve fuel efficiency and reduce CO2 emissions.

A more detailed description of the benefits of laminated glass was provided to CARB in 2008. Attached to this letter is a list of vehicles currently using laminated glass in locations other than the windshield.

The EPGAA and its members have been following the developments of the Cool Cars regulation and would like to take this opportunity to offer comments on the proposed regulation.

As written, the regulation drives latest available solar load reducing technology for windshields but falls short for all other glazing positions. For roof glazing, it is possible that the 30% Tts performance level could be met by a very dark privacy glazing, negating the true benefit of enhanced solar glazing improvements which is minimizing solar heat gain for a given light transmittance. It should be noted that the enhanced solar performance technology which CARB is requiring for windshields is applicable to roof laminates and is in fact commercially employed in such applications today. The EPGAA suggests that the ARB enhance the roof glazing requirement to gain the benefits of the enhanced solar glazing technologies which are enabled by laminated glass and are already commercially proven in roof systems in use today.

For side and rear glazing, the 60% Tts requirement achieves only marginal improvement which is limited to the minority of vehicles using the tinted glazing technology developed in the 1950s. No real improvement is achieved for the large number of vehicles already employing the marketplace standard solar absorbing glazing which was developed in the 1980s. The EPGAA is aware of the concerns posed regarding laminates for door and back glass with respect to weight and durability. It is our experience that in most cases the laminates employed are of similar thickness to the monolithic glass they replace and hence the vehicles so equipped have achieved net weight reductions. For example, 4.0mm side laminates have been employed commercially on passenger vehicles in relatively high volumes for a number of years. A 4.0mm laminate has roughly the same weight as a 3.6mm monolithic glass part. In the case of a 3.5 square foot door glass, a 4mm laminate will reduce the weight of the individual part by approximately 0.7 lbs when compared with 4mm monolithic glass. In terms of durability, the EPGAA is unaware of any ongoing issues of premature breakage in the existing applications. The growth in laminated door glass use that has occurred voluntarily over recent years is marketplace evidence of product robustness. It should be noted that the enhanced solar performance technology which CARB is requiring for windshields is applicable to side and rear glazing and is in fact commercially employed in such applications today. If the ARB feels that improvement of side and rear glazing is too far reaching for industry at this point, the EPGAA suggests that, at minimum, a timeline be set to take advantage of the enhanced solar glazing technologies which are enabled by laminated glass and are commercially proven today.

The EPGAA thanks you for the opportunity to comment on this proposed regulation.

Sincerely,

A handwritten signature in black ink, appearing to read "P. T. Dishart", with a small "es" superscript at the end.

Peter T. Dishart
President, EPGAA

***Vehicles Equipped with Laminated Glass
(other than windscreens) as either
standard or optional equipment
As of - January, 2009****

***Note:** This is only a partial list of vehicles that offer laminated side window glass. To have a vehicle added to this list, [e-mail the EPGAA](#).

Standard

Model - Glass Position

Bentley Continental GT - Four doors
Bentley Continental Flying Spur - Four doors
Buick Enclave - Front doors
Buick LaCrosse (2010 model) - Front doors
Buick LaCrosse (current) - Front doors
Buick Lucerne - Four doors
Cadillac STS - Front doors
Cadillac DTS - Four doors
Cadillac SRX (2010) - Front doors
Chevy Equinox (2010) - Front doors
Chevy Malibu (acoustic) - Front doors
Ferrari Superamerica - Roof
Ford Taurus (2010) (acoustic) - Front doors
Hyundai Genesis (acoustic) - Front doors
Jaguar XJ
Lamborghini Murcielago
Lexus LX 570 - (acoustic) - Front doors
Lexus RX 350 (2010) (acoustic) - Front doors
Lexus GS 450h - Front doors
Lexus LS 600h - Front doors
Lincoln MKS - Front doors
Mercedes CL 500 - Front door
Mercedes CL 550 - Front door
Mercedes S-Class (acoustic) - All glass
Mercedes R-Class
Mercedes S 400h (acoustic) - All glass
Mercedes SL 650 AMG Black (acoustic) - All glass
Mercedes Maybach (57 & 62) (acoustic) - All glass
Infiniti QX56 - Front doors
Porsche 911 Targa - Roof
Porsche GT
Rolls Royce Phantom - Four doors
Saab 9-4X (2010) - Front doors
Saturn Aura (acoustic) - Front doors

Optional

Model - Glass Position

Audi A8L - Four doors
BMW 7 Series - Four doors
Ford Flex Limited - Roof and - Front doors
Ford Mustang - Roof
Land Rover LR3 - Roof
Land Rover Range Rover Sport - Front doors
Land Rover Range Rover - Front doors
Lexus LS 460 (acoustic) - Front doors
Maserati Quattroporte
Mercedes E-Class - Front doors
Mercedes G-Class - Front doors
Mercedes M-Class - Front doors
Porsche Carrera - Roof
Porsche Cayenne - Four doors, - Roof
Subaru Forrester - Roof
Subaru Outback - Roof
Volkswagen Toureg - Four doors
Volvo S-80 - Four doors, quarter window