



Technical Paper on retrofit Automotive Window Film in Europe

13 June 2018

This Technical Paper has been produced by the European Window Film Association (EWFA). As the European Chapter of the International Window Film Association (IWFA), the EWFA represents the interests of the window film industry in Europe by supporting our members' interests and increasing awareness of window film products in the region.

EWFA members are manufacturers and distributors of window film supplying high performance products for both architectural and automotive applications. Typical automotive applications include passenger cars, light commercial vehicles, commercial and industrial transport as well as service vehicles.

The objectives of this Technical Paper are:

- To raise awareness amongst regulators of the advantages of window films and the need for fair, practical, and sustainable legislation. In addition, this paper also serves to engage stakeholders within the retrofit automotive window film sector to support such initiatives.
- To educate and inform regional window film distributors and installers, with the objective to help maintain professional standards and to promote best practise within the industry.

Definition of Automotive Window Film

In Europe, automotive window film is applied via three common sales channels: As an original or factory-approved retrofit accessory, where window film is applied upon final assembly; At point of purchase - A car or vehicle dealership either supplies tinting film through an in-house or off-site tinting service; After purchase - A consumer purchases automotive window film, applied by an independent dealer as a retrofit accessory.

The application of retrofit window film may offer the following benefits:

- Improved thermal comfort;
- Enhanced fuel economy;
- Reduced load on air conditioning;
- Reduced glare, to help lessen driver fatigue;
- Shielding from harmful UV rays, protecting both occupants of the vehicle and the interior fittings;
- Enhanced protection from flying glass in the event of a collision.

Window films offer significant benefits in terms of heat reduction, while not significantly darkening glass. Regardless of colour or shade, almost all films are designed to block more than 99 %, of harmful Ultraviolet (UVA and UVB) rays, which is significantly higher than clear or tinted glass¹.

Vehicle Transformation vs. Modification

Since window films do not change or alter the vehicle's characteristics (structure, function, and/or operation of the glass and window sections) and on the contrary, may enhance the properties of the glass, it cannot be classified as a transformation. It can correctly be defined as an aftermarket or retrofit modification. For the end-user, classification as a transformation can be a deterrent to install automotive window films.

Tinting Levels

In Europe, automotive legislation is usually defined at national level. Such legislation sets the regulatory levels for visibility and safety, notably the allowed Visible Light Transmission (VLT), which is the amount of visible light that passes through either the glass or both glass and window film combined. If the vehicle is equipped with dual side mirrors, windows situated at points which are situated behind the B-post generally have no restrictions in terms of VLT.

Legal Automotive Window Film Application

In line with the views of the IWFA, the EWFA advocates that key stakeholders in the automotive window film industry, such as manufacturers, distributors, dealers and installers, adhere to legal practices by respecting the local window film laws. Consumers are also recommended to become familiar with local regulations and registration practices in their new country, which may differ in scope and enforcement from their home country.

RECOMMENDATIONS FOR THE SECTOR

The window film value chain supports many small local businesses, which depend on this industry. Inappropriate regulation of the window film sector can have a negative impact on these businesses, and potentially increases the cost of these products to the consumers.

The EWFA exists as an organisation to provide technical information and assistance so European decision-makers and legislators can create sustainable laws and regulations pertaining to the uses of window films within their territories, in a manner that will provide a safe environment for both consumers and law enforcement.

¹ With the exception of some clear safety film.