



evguard®
Sound Insulation Test

DESIGNED,
DEVELOPED
AND MADE
IN GERMANY



Description



Airborne sounds can be reduced significantly in the office, at home or inside a car by the use of laminated safety glass (LSG). LSG made with highly cross-linked evguard[®] laminated film can hinder the sound waves transmission besides ensuring the other safety properties.

Folienwerk Wolfen GmbH ordered an independent test institute to test the acoustic performance of the LSG made with evguard[®] laminated film and also for measurement of the sound reduction index.



Nerolac, Project Office, Pune, India

Facts



Sound insulation test were performed by the test institute according to the ISO 10140-2 standard. LSG samples made with evguard[®] laminated film was constructed in between two vertically located test rooms (transmitter room and receiver room).

For determination of exact sound reduction by the polymeric film alone, evguard[®] , evguard[®] MPE and glass thickness were varied.

The sound reduction index (R) was determined according to the standard DIN EN ISO 717-1, by using broadband noise in the third-octave frequency range of 50-5000 Hz over the available sample test area.

Images: Sound reduction Test LSG sample made with evguard[®] laminating film according to ISO 10140-2. Testing room environment visible as transmitter room (left) and receiver room (right).

MFPA Leipzig, Report PB 4.2/12-184-3
(2017-11-03)



Conclusion



The **evguard**[®] LSG can insulate airborne sound effectively when it is applied in house, office or in the car.

It was evident from the testing values that the **evguard**[®] and **evguard**[®] MPE laminated film alone can reduce the sound level significantly versus glass depending upon film thickness.**

Charaterstics of the LSG and sound reduction values (R_w) have been mentioned in the below table.

Test Standard	Laminated Glass	Film type	Sound Reduction, R_w^*
ISO 10140-2	44.1	380 μm evguard [®]	36 dB
ISO 10140-2	44.2	760 μm evguard [®]	37 dB
ISO 10140-2	88.2	760 μm evguard [®]	40 dB
ISO 10140-2	44.2/0.2	2 x 380 μm evguard [®] / 200 μm MPE	37 dB
ISO 10140-2	44.2/0.4	2 x 380 μm evguard [®] / 400 μm MPE	37 dB

*Test uncertainty : ± 1.2 dB

** Please contact with your distributor for the sound reduction values for other various glass and film thickness