



Saflex® Q Series Advanced Acoustic Interlayer

Eastman introduces Saflex® Q series advanced acoustic interlayer for architectural glazing applications. This multi-layer product was designed with improved handling and processability in mind. The product allows laminators to produce glass laminates with enhanced acoustical properties compared to laminates made with standard polyvinyl butyral (PVB).

As a co-extruded product, Saflex Q series has all the advanced acoustic benefits of an acoustic PVB, with similar process parameters than standard Saflex R series products. Reduced handling time, combined with improved lamination yield will help glass laminators to stay more competitive in the fast growing acoustic LAG market. Other benefits the product provides include:

- Compatibility with clear and translucent white Saflex PVB
- Same shelf life as Saflex R series products
- Security of supply

Acoustic Data in Double and Triple Glazing

	Rw	C	CTR	Overall Thickness (mm)
Laminated Glass				
33.1*	35	-1	-5	6.64
33.2	36	-1	-3	6.76
44.1*	37	-1	-4	8.64
44.2*	37	-1	-4	8.76
55.2	38	-1	-2	10.76
66.2	39	-1	-3	12.76
1212.2	43	0	-3	24.76
Laminated Insulating Glass				
3/12/44.2	38	-1	-5	24.46
6/12/36.2	42	-2	-6	28.46
6/12/66.2	43	-2	-6	31.46
Double Laminated Insulating Glass				
33.2/12/33.2	42	-2	-5	26.22
Triple Laminated Insulating Glass**				
6/12Kr90/4/12Kr90/44.2	43	-2	-8	44.16
8/12Ar90/4/12Ar90/44.2	43	-2	-7	46.16
8/12Kr90/4/12Kr90/44.2	44	-2	-7	46.16
44.2/12Ar90/6/12Ar90/55.2	47	-2	-7	50.92
44.2/12Kr90/6/12Kr90/55.2	48	-3	-8	50.92

Sound Transmission Loss Data*

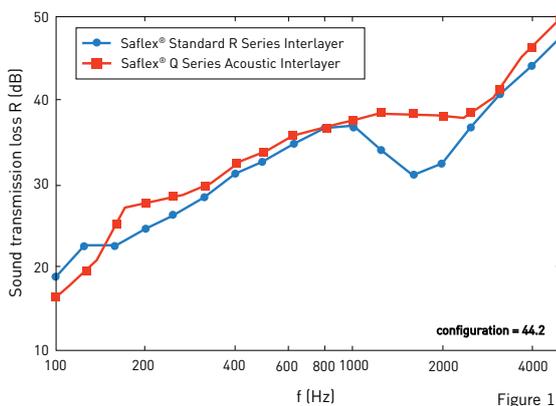


Figure 1: Sound Transmission Loss of Laminated Glass with Saflex® Q series acoustic interlayer and Saflex® R series interlayer. Configuration = 44.2

*The ability to reduce noise as perceived by the human ear can be measured. This measurement involves sending specific frequencies of sound through a material, in this case, laminated glass with Saflex® Q series acoustic interlayer, and re-measuring what comes "through" the glass to determine what gets "filtered" out. The transmission loss is recorded and can be illustrated in graphical form as shown above in Figure 1.

* Data tested in accordance with ISO 140 and 717-7

** Data from German Glass Association

All other data test in accordance with ASTM E 90

Product Performance

	Product Name	EN12600	EN356	Comply
Impact Data	QS41	1B1	P2A	with 4mm glass
	QS31	1B1	P1A	with 3mm glass

	Product Name	Rw, Iso 717-7	MIM	Comply
Acoustic Data	QS41	37dB	> 0.25	with 4mm glass
	QS31	37dB	> 0.25	with 4mm glass
	QS31	35dB	> 0.25	with 3mm glass

1B1 - Twin Tire pendulum impact test at 1200mm Drop Height, glass shard containment is achieved.

2B2 - Twin Tire pendulum impact test at 450mm Drop Height, glass shard containment is achieved.

P2A - Impact test for security glazing, 3000mm Drop Height of 100mm diameter steel sphere weight 4.11 kg. Ball is dropped three times on same specimen in a triangular formation

Product Description

Product Name	Thickness	Roll width (cm)	Roll length (m)
QS41	0.76mm	100, 120, 140, 160, 200, 225, 244, 260 322	250 250, 500
QS31	0.63mm	100, 120, 140, 160, 200, 225, 244, 260 322	300 300, 600

General Data

	Property	Test Method	Units	Test Conditions	Saflex® Q Series Acoustic Interlayer
Physical	Thickness	Micrometer	mm	-	0.63 0.76
	Moisture	-	%	-	0.38 ± 0.07
	Specific Gravity	ASTM D792	-	23° C	1.060
	Specific Heat	ASTM E1269	Joules/Kg-°K BTU/lb-°F	50°C (122°F)	2050 0.41
Mechanical	Tensile Strength	JIS K6771	MPa KG/cm ² psi	23° C / 50% RH	21 210 3040
		ISO 527-3	MPa KG/cm ²	23° C / 50% RH 20mm/min	21.7 221
	Elongation at Failure	JIS K6771	%	23° C / 50% RH	250
		ISO 527-3	%	23° C / 50% RH 20mm/min	264
Thermal	Coefficient of Thermal Expansion	Thermal Mechanic	ppm/°C	0 - 50°C	2.2
	Thermal Conductivity, K	ASTM F433	W/m-°K BTU/hr-ft-°F	48°C 118°F	0.21 0.11
Flame Retardant	Auto Ignition Temperature	ASTM D1929	°C °F	ASTM D1929-96	360 680

Solar and Light Performance**

Visible Light	Transmittance	Reflectance	Absorptance	UV	Transmittance	Reflectance	Absorptance
EN 410/ ISO 9050	89.5	8.5	1.9	EN 410	0.1	6.2	93.7
				ISO 9050	0.1	6.0	93.9

Solar	Direct Transmittance	Direct Reflectance	Direct Absorptance	Solar Factor	Total Reflectance	Shading Coefficient
EN 410	74.7	7.5	17.5	79.3	20.5	0.91
ISO 9050 (air mass 1.5)	75.5	7.3	16.9	79.9	19.8	0.92

**Note: Measured between 2 layers of 2.2mm glass

Durability Data

Saflex® Q Series acoustic interlayer, when properly selected, laminated, and installed, is capable of meeting architectural safety glazing codes for all applications, including EN 12543-4 requirements. In addition, durability testing indicates exceptional durability and resistance to delamination when exposed to heat and humidity.

For more information on Saflex Q series acoustic interlayer, please contact your Eastman representative.

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