



GUARDIAN EUROPE Sàrl
19, rue du Puits Romain
L-8070 Bertrange
G-D of Luxembourg

Product Category : Coated Glass - Low Emissivity Glass

TYPE:

ClimaGuard

PRODUCT:

ClimaGuard® Solar

ClimaGuard® Solar

EN 1096-4:2018

Coated soda lime silicate glass intended to be used in buildings and construction works
values as of Februar 2016

		03mm	04mm	05mm	06mm	08mm	10mm	12mm
Resistance to fire test (EN 13501-2)		NPD	NPD	NPD	NPD	NPD	NPD	NPD
Reaction to fire (EN 13501-1)		A1	A1	A1	A1	A1	A1	A1
External fire performance (EN 13501-5)		NPD	NPD	NPD	NPD	NPD	NPD	NPD
Bullet resistance (EN 1063)		NPD	NPD	NPD	NPD	NPD	NPD	NPD
Explosion resistance (EN 13541)		NPD	NPD	NPD	NPD	NPD	NPD	NPD
Burglar resistance (EN 356)		NPD	NPD	NPD	NPD	NPD	NPD	NPD
Pendulum body impact resistance (EN 12600)		NPD	NPD	NPD	NPD	NPD	NPD	NPD
Resistance against sudden temperature changes and temperature differentials	K	40	40	40	40	40	40	40
Wind, snow, permanent and imposed load resistance	mm	3	4	5	6	8	10	12
Characteristic Bending Strength	MPa	45	45	45	45	45	45	45
Direct airborne sound insulation (EN 12758)	dB	28 (-1;-4)	29 (-2;-3)	30 (-1;-2)	31 (-2;-3)	32 (-2;-3)	33 (-2;-3)	34 (0;-2)
Thermal properties								
Normal emissivity of coated glass surface en (EN 12898)		0.01	0.01	0.01	0.01	0.01	0.01	0.01
Radiation properties								
Light transmission τV (EN 410)		0.73	0.73	0.72	0.72	0.72	0.71	0.71
Light reflection (coated side / glass side) ρV (EN 410)		0.19 / 0.22	0.19 / 0.22	0.19 / 0.22	0.19 / 0.22	0.19 / 0.22	0.19 / 0.22	0.19 / 0.21
Solar energy transmission τE (EN 410)		0.45	0.45	0.44	0.44	0.43	0.42	0.42
Solar energy reflection (coated side / glass side) ρE (EN 410)		0.46 / 0.43	0.46 / 0.41	0.46 / 0.40	0.46 / 0.39	0.46 / 0.37	0.46 / 0.34	0.46 / 0.33
Solar factor (coated side / glass side) g (EN 410)		0.47 / 0.47	0.47 / 0.46	0.47 / 0.46	0.46 / 0.46	0.46 / 0.46	0.45 / 0.45	0.45 / 0.45
Durability (EN 1096)		C	C	C	C	C	C	C

NPD = No Performance Determined

Declaration of Performance

No: CRZ0400BL



2023

EN 1096-4:2018
Notified Body: 1174

Off-Line Coated Glass, intended to be used in buildings and construction works (Low-E)

Characteristics	AVCP System	Performance
Safety in the case of fire:		
Resistance to fire (13501-2)	1	NPD
Reaction to fire (13501-1)	3.4	A1
External fire behaviour (EN 13501-5)	3.4	NPD
Safety in use:		
Bullet resistance (EN 1063)	1	NPD
Explosion resistance (EN 13541)	1	NPD
Burglar resistance (EN 356)	3	NPD
Pendulum body impact resistance (EN 12600)	3	NPD
Resistance against sudden temperature changes and temperature differentials	4	40K
Wind, snow, permanent and imposed load resistance of the glass unit	4	4 mm
Protection against noise:		
Direct airborne sound reduction (EN 12758)	3	29 (-2; -3) dB
Thermal properties:		
U-value (EN 673)	3	NPD
Normal emissivity (EN 12898)	3	0.03
Radiation properties (EN 410):		
Light transmission	3	0.88
Light reflection (coated side)	3	0.04
Light reflection (uncoated side)	3	0.06
Solar energy characteristics (EN 410):		
Solar transmission	3	0.6
Solar reflection (coated side)	3	0.29
Solar reflection (uncoated side)	3	0.24

NPD: No performance determined.

The performance of the product identified is in conformity with the declared performance above.

This declaration of performance is issued under the sole responsibility of the manufacturer.

Signed for and on behalf of the manufacturer by:

Name and function	Place and date of issue	Signature
Gökhan Atıkan Basic Glass Production Director	15.02.2023 İstanbul	

TÜRKİYE ŞİŞE VE CAM FABRİKALARI A.Ş.

ŞİŞECAM HEADQUARTERS

İçmeler Mahallesi, D-100 Karayolu Caddesi, No:44A
34947 Tuzla/İSTANBUL

T 0850 206 50 50

F 0850 208 40 40

sisecamduzcam.com

Declaration of Performance

No: FRZ0400Z



2023

EN 572-9:2004
Notified Body: 1174

Basic soda lime silicate float glass, intended to be used in buildings and construction works

Characteristics	AVCP System	Performance
Safety in the case of fire:		
Resistance to fire (13501-2)	1	NPD
Reaction to fire (13501-1)	3.4	A1
External fire behaviour (EN 13501-5)	3.4	NPD
Safety in use:		
Bullet resistance (EN 1063)	1	NPD
Explosion resistance (EN 13541)	1	NPD
Burglar resistance (EN 356)	3	NPD
Pendulum body impact resistance (EN 12600)	3	NPD
Resistance against sudden temperature changes and temperature differentials	4	40K
Wind, snow, permanent and imposed load resistance of the glass unit	4	4 mm
Protection against noise:		
Direct airborne sound reduction (EN 12758)	4	29 (-2; -3) dB
Thermal properties:		
U-value (EN 673)	3	5.8 W/(m ² K)
Normal emissivity (EN 12898)	3	0.89
Radiation properties (EN 410):		
Light transmission	3	0.9
Light reflection	3	0.08
Light reflection	3	0.08
Solar energy characteristics (EN 410):		
Solar transmission	3	0.85
Solar reflection	3	0.07
Solar reflection	3	0.07

NPD: No performance determined.

The performance of the product identified is in conformity with the declared performance above.

This declaration of performance is issued under the sole responsibility of the manufacturer.

Signed for and on behalf of the manufacturer by:

Name and function	Place and date of issue	Signature
Gökhan Atıkan Basic Glass Production Director	1.07.2023 İstanbul	

TÜRKİYE ŞİŞE VE CAM FABRİKALARI A.Ş.

ŞİŞECAM HEADQUARTERS

İçmeler Mahallesi, D-100 Karayolu Caddesi, No:44A
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Declaration of Performance

No: CRZ0400BSL



2013

EN 1096-4:2018
Notified Body: 1174

Off-Line Coated Glass, intended to be used in buildings and construction works (Solar Low-E)

Characteristics	AVCP System	Performance
Safety in the case of fire:		
Resistance to fire (13501-2)	1	NPD
Reaction to fire (13501-1)	3.4	A1
External fire behaviour (EN 13501-5)	3.4	NPD
Safety in use:		
Bullet resistance (EN 1063)	1	NPD
Explosion resistance (EN 13541)	1	NPD
Burglar resistance (EN 356)	3	NPD
Pendulum body impact resistance (EN 12600)	3	NPD
Resistance against sudden temperature changes and temperature differentials	4	40K
Wind, snow, permanent and imposed load resistance of the glass unit	4	4 mm
Protection against noise:		
Direct airborne sound reduction (EN 12758)	3	29 (-2; -3) dB
Thermal properties:		
U-value (EN 673)	3	NPD
Normal emissivity (EN 12898)	3	0.03
Radiation properties (EN 410):		
Light transmission	3	0.74
Light reflection (coated side)	3	0.16
Light reflection (uncoated side)	3	0.21
Solar energy characteristics (EN 410):		
Solar transmission	3	0.47
Solar reflection (coated side)	3	0.41
Solar reflection (uncoated side)	3	0.36

NPD: No performance determined.

The performance of the product identified is in conformity with the declared performance above.

This declaration of performance is issued under the sole responsibility of the manufacturer.

Signed for and on behalf of the manufacturer by:

Name and function	Place and date of issue	Signature
Gökhan Atıkan Basic Glass Production Director	15.02.2015 İstanbul	

TÜRKİYE ŞİŞE VE CAM FABRİKALARI A.Ş.

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