

IKATES, s.r.o. – Laboratory for glass and building products testing



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Accredited testing laboratory No.1139

accredited by Czech Institute of Accreditation in Prague

for glass and selected building products testing

TEST REPORT

No. : A – 149C / 2008

Test item : **Laminated safety glass Stratobel Impression
- radiation test acc. to ČSN EN ISO 12543**

Client (address): **AGC Flat Glass Czech a.s., člen AGC Group,
Sklářská 450, 41674 Teplice, Czech Republic**

Producer (address): **AGC Processing Teplice a.s.,
Za Drahou 462, Teplice, Czech Republic**

Place of test performance : **IKATES, s.r.o., Teplice**

Date of sample receiving : **2008-09-08**

Date of test performance : **2008-09-27 to 2009-02-16**

Date of issue : **2008-02-18**

Number of pages : **4**

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Manager of testing laboratory : **Jiří Stránský**



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Normative foundations :

ČSN EN ISO 12543 (2003): Glass in building – Laminated glass and laminated safety glass

Sampling :

To the tests were supplied following test specimens of laminated safety glass Stratobel Impression:

4 pcs. 300x300 mm – Stratobel Impression 44.2 (L08164) - PVB 3b

The specimens were marked with No. 1 to No.3, fourth specimen was kept as reference specimen.

Notes:

real thickness 9,15-9,22 mm; cutted edges

Interlayer printing – CMYK basic colours strips, 100 % coverage (raster mode)

Part of the specimens No.1 to No.3 was covered with aluminium foil to be a possibility to measure of the characteristics of not exposed area.

Metrological provision of tests :

Radiation test was carried out using of testing equipment of lab IKATES, s.r.o. – radiation wall of the 16 pcs. lamps Ultra-Vitalux 300W, radiation flux was measured with calibrated pyranometer Kipp&Zonen, the temperature was measured with calibrated thermocouple. The light transmittance/reflectance of specimens before and after the test was measured using of spectrophotometer Perkin Elmer Lambda 2 with metrological traceability in geometry 0/d and 8/d..

Test results :

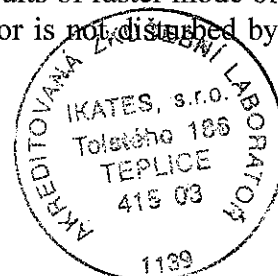
Radiation test (ČSN EN ISO 12543-4, cl.6)

Based on the customer request was the duration of test extended from 2000 h to 3000 h.

Visual evaluation:

No visually observable changes (bubbles, delamination) in evaluated area occur at any from tested specimens. When compared colors of tested specimens with reference one no changes in color tone or intensity were visually detected.

Note: Some local differences of color tone inside the strips are results of raster mode of color application technology. However the overall impress of color is not disturbed by these local differences.

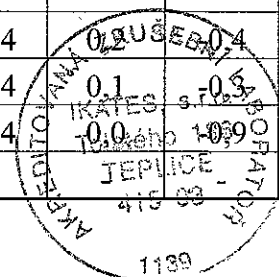


Measurements in transmission (0/d):

Color / Specimen No.		before the test				after the test			
		τ_V (%)	L*	a*	b*	τ_V (%)	L*	a*	b*
Cyan	1	63,5	83,7	-11,1	-13,4	63,3	83,6	-11,0	-13,2
	2	62,5	83,2	-12,0	-14,2	62,3	83,1	-11,3	-13,9
	3	61,8	82,8	-12,2	-14,7	61,8	82,8	-12,0	-14,7
	R	63,2	83,6	-11,2	-13,2	-	-	-	-
Magenta	1	40,0	69,5	47,9	-12,5	40,1	69,6	48,0	-12,6
	2	41,1	70,2	46,0	-12,0	41,0	70,2	46,5	-12,1
	3	41,5	70,5	45,6	-11,9	41,2	70,3	46,0	-11,9
	R	39,9	69,4	48,3	-12,6	-	-	-	-
Yellow	1	73,6	88,7	-11,9	54,5	73,7	88,8	-12,0	54,4
	2	73,4	88,7	-11,7	54,3	73,4	88,6	-11,6	53,3
	3	74,5	88,1	-11,3	49,8	73,9	88,9	-11,2	50,2
	R	73,7	88,8	-12,3	55,6	-	-	-	-
Black	1	27,7	59,6	-0,8	3,2	27,8	59,7	-1,0	3,3
	2	29,0	60,8	-1,1	3,3	28,8	60,6	-0,9	3,5
	3	30,5	62,1	-1,2	2,9	30,7	62,3	-1,1	2,4
	R	31,9	63,3	-1,3	2,9	-	-	-	-

Measurements in reflection (8/d):

Color / Specimen No.		before the test				after the test			
		ρ_V (%)	L*	a*	b*	ρ_V (%)	L*	a*	b*
Cyan	1	5,5	28,2	-1,8	-5,3	5,4	27,7	-1,5	-5,4
	2	5,4	27,8	-1,9	-5,8	5,5	28,0	-1,7	-5,2
	3	5,5	28,0	-1,9	-5,5	5,4	27,9	-1,5	-6,2
	R	5,7	28,7	-1,4	-5,2	-	-	-	-
Magenta	1	4,9	26,4	9,5	-0,8	4,8	26,0	9,5	0,1
	2	4,9	26,3	9,4	-0,4	4,8	26,0	9,4	0,1
	3	4,8	26,3	9,5	-0,9	4,8	26,3	9,7	-0,4
	R	4,8	26,3	9,7	-0,2	-	-	-	-
Yellow	1	7,3	32,4	-5,2	9,3	7,4	32,6	-5,3	10,0
	2	7,4	32,7	-5,4	9,7	7,5	32,8	-5,3	9,8
	3	7,4	32,7	-5,3	9,1	7,4	32,6	-5,4	10,4
	R	7,4	32,8	-5,5	10,3	-	-	-	-
Black	1	4,4	24,9	0,0	-0,8	4,2	24,4	0,1	-0,8
	2	4,4	24,9	0,0	-1,0	4,2	24,4	0,1	-0,8
	3	4,5	25,4	-0,1	-0,7	4,5	25,4	-0,0	-0,9
	R	4,4	24,9	-0,1	-0,7	-	-	-	-



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Statement : Test results, given in this report, apply only to the tested items and does not replace other documents, e.g. administrative characters, issued from other bodies, according to particular regulations.

Distribution list :

2 x AGC Flat Glass Czech a.s., člen AGC Group

1 x Laboratory for glass and building products testing IKATES, s.r.o. (archive)

Test was performed by :


Martin Siegl, Jiří Šnajdr, Jiří Stránský

Report was performed by :

For correctness and validity of report is responsible :


Jiří Stránský

