TABLE 2404.1
c₁ FACTORS FOR VERTICAL AND SLOPED GLASS^a
[For use with Figures 2404(1) through 2404(12)]

[For use with Figures 2404(1) through 2404(12)]				
GLASS TYPE	FACTOR			
Single Glass				
Regular (annealed) early white sales o	70 So sain 1.0 Ja . 11 as			
Hear strengthened well 3 3 to 10 and 10 source	a from flood 2.0 may and a			
Fully tempered	4.0			
on politicist of particles of proceed forth 25.00	22 - 12 - 12 - 12 - 12 - 12 - 12 - 12 -			
Patterned Sandblasted Sandblasted	0.50			
an Laminated regular plies to see the second	the first state of the state of			
Laminated heat-strengthened plies	1.5/1.862			
Lanunated—fully tempered plies	3.0/3.6			
Insulating Glass	eminer Stronger leger			
Regular (annealed)	W 1997 1.8 1 1 1/1 bo			
Heat strengthened	3.6			
Fully tempered lines and the second second	4 15.15 (7.2)			
Laminated—regular plies ^e	1.4/1.6			
Laminated—heat-strengthened plies	2.7/3,2			
Laminated—fully tempered plies ^e	5.4/6.5 ^r			

- a. Either Table 2404.1 or 2404.2 shall be appropriate for sloped glass depending on whether the snow or wind load is dominant (see Section 2404.2). For glass types (vertical or sloped) not included in the tables, refer to ASTM E 1300 for guidance.
- b. Values apply for insulating glass with identical panes.
- c. The value for patterned glass is based on the thinnest part of the pattern; interpolation between graphs is permitted.
- d. The value for sandblasted glass is for moderate levels of sandblasting.
- e. Values for laminated glass are based on the total thickness of the glass and apply for glass with two equal glass ply thicknesses.
- f. The lower value applies if, for any laminated glass pane, either the ratio of the long to short dimension is greater than 2.0 or the lesser dimension divided by the thickness of the pane is 150 or less; the higher value applies in all other cases.

2404.2 Sloved glass. Glass sloved more than 15 degrees (0.26 rad) from vertical in skylights, sunrooms, sloped roofs and other experior applications shall be designed to resist the most critical of the following combinations of loads.

$$F/W_0 = D$$
 of wave for an equation 24-2. In the case of the contract of the

world's are not precise the degree of the contract of the proof
$$F_e = 0.5 W_i + D + S$$
 (Equation 24.)

$$F_g = 0.5 W_i + D + S$$
 (Equation 24)

where:

D = Glass dead load (ps)

For glass sloped 30 degrees (0.52 rgd) or less from horizontal,

D = 13 t (For SI: 0.0245)

For glass sloped more than 0 degrees (0.52 ad

$$\theta = 13 t_e \cos \theta \text{ (For SI: 0.0245 } t_e \cos \theta)$$

 $F_{\sigma} = \text{Total Vad, psf (kN/m}^2) \text{ on mass.}$

S = Sno/load, psf (kN/m²) as determined in Section 1608

 $t_g = \text{Total glass thickness, in the (mm) of glass pines and plies.}$

 W_i = inward wind force, sef (kN/m²) as calculated in Section

 $W_o = \text{Outward wind force, psf (kN/m}^2)}$ as calculated in Section 1609.

 $\theta = A$ gle of slope from Porizontal.

Exception: Unit skylights shall be designed in accordance with Section 2405.5

The design of slop d glazing shall be based on the following equation:

File Figure 246

where F_g is the maximum load on the glass determined from Equations 24-3 through 24-5, and F_{ga} is the maximum allowable load on the glass.

If F_g is determined by Equation 24-3 or 24-4 above, F_{ga} shall be computed as for vertical glazing in Section 2404. If F_g is determined by Equation 24-5 above, F_{ga} shall be consputed by the following equation:

 $F_{\hat{g}\hat{a}} = \hat{o}_{\hat{g}} E_{\hat{g}\hat{e}}$ and the free graph of all as **Equation 24.7** above all at radial relationship is the speciment where:

 F_{ge} = Maximum allowable equivalent 1 ad (psf) determined from Figures 2404(1) through 2404(12) for the applicable glass dimensions and thickness.

 c_2 = Facto determined from Table 2404.2 based on gl ss type.

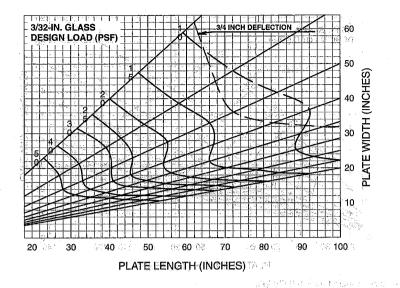
TABLE 2404.2

c₂ FACTORS FOR SLOPED GLASS^a

[For use with Figures 2404(1) through 2404(12)]

For use with Figures 2404(1) thro	
GLASS TYPE	
Single Glass	रित प्रतिकृतिकोत्त को जिल्लाहरून -
Regular (annealed)	0.6
Heat strengthened SAS VOITORE	1.6
Fully tempered	3.6
Wired funder with cool finite same double.	antening of Long
Patterned,	0.5
The state of the second	0.3/0.45°
Laminated heat-strengthened plies	
Laminated fully tempered plies	1.8/2.7°
Insulating Glass of because of these of	Pady yettet bugan
Regular (annealed)	1.1
Heat strengthened	2.9
Fully tempered	6.5
Laminated regular plies	
Laminated — heat-strengthened plies (1999)	
Laminated - fully tempered plies de Assign	040uma 3.3/4.9 *gars)

- a. Either Table 2404.1 or 2404.2 shall be appropriate for sloped glass depending on whether the snow or wind load is dominant (see Section 2404.2). For glass types (vertical or sloped) not included in the tables, refer to ASTME 1300 for guidance.
- b. Values apply for insulating glass with identical panes.
- c. The value for patterned glass is based on the thinnest part of the pattern; interpolation between graphs is permitted.
- d. Values for laminated glass are based on the total thickness of the glass and apply for glass with two equal glass ply thicknesses.
- e. The lower value applies where, for any laminated glass pane, either the ratio of the long to short dimension is greater than 2.0 or the lesser dimension divided by the thickness of the pane is 150 or less. The higher value applies in all other cases.



For SI: 1 inch = 25.4 mm, 1 pound per square foot = 0.0479 kPa.

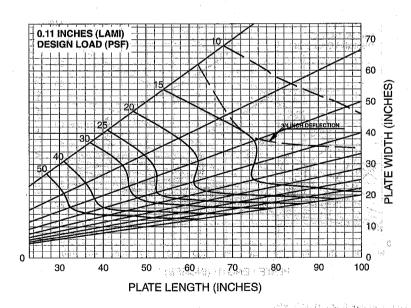
J. FIGURE 2404(1)^{a, b, c, d, e, f} MAXIMUM ALLOWABLE LOAD FOR VERTICAL AND SLOPED RECTANGULAR GLASS SUPPORTED ON ALL EDGES

chivitizate fallica della salta la sistemate

Supposed to a second to go the distribution of a south to examine the place of the

NOTES:

- a. In each graph, the vertical axis is the lesser dimension; the horizontal axis is the greater dimension.
- b. The diagonal number on each graph shows the equivalent design load in psf.
- c. The dashed lines indicate glass that has deflection in excess of $\frac{3}{4}$ inch.
- d. Interpolation between lines is permitted. Extrapolation is not allowed.
- randon de la companya e. For laminated glass, the applicable glass thickness is the total glass thickness, the second plant of t
- f. For insulating glass panes, the applicable glass thickness is the thickness of one pane.

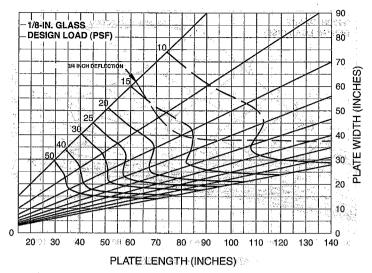


For SI: 1 inch = 25.4 mm, 1 pound per square foot = 0.0479 kPa.

FIGURE 2404(2)^{a, b, c, d, e, f} MAXIMUM ALLOWABLE LOAD FOR VERTICAL AND SLOPED RECTANGULAR GLASS SUPPORTED ON ALL EDGES

 $\chi = 4(\pi + 3) = -(4.93 \chi/4) =$

- real attraction to see the second of the contraction a. In each graph, the vertical axis is the lesser dimension; the horizontal axis is the greater dimension.
- b. The diagonal number on each graph shows the equivalent design load in psf.
- c. The dashed lines indicate glass that has deflection in excess of $\frac{3}{4}$ inch.
- d. Interpolation between lines is permitted. Extrapolation is not allowed.
- e. For laminated glass, the applicable glass thickness is the total glass thickness,
- f. For insulating glass panes, the applicable glass thickness is the thickness of one pane.



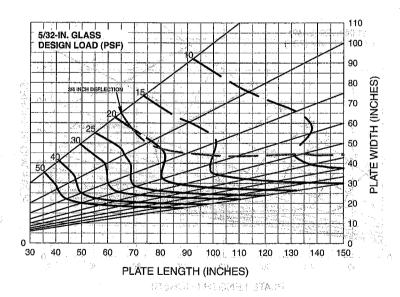
For SI: 1 inch = 25.4 mm, 1 pound per square foot = 0.0479 kPa.

FIGURE 2404(3)^{a, b, c, d, e, f} MAXIMUM ALLOWABLE LOAD FOR VERTICAL AND SLOPED RECTANGULAR GLASS SUPPORTED ON ALL EDGES

and egypta melata as the control of a provedency conjuit. I then Burrelly to be properly on the control of ing in a resident of the total recent of apparatus says the arm of the seather are an expense of the

NOTES:

- a. In each graph, the vertical axis is the lesser dimension; the horizontal axis is the greater dimension.
- b. The diagonal number on each graph shows the equivalent design load in psf. 1990 to the way to the contract of the contract
- c. The dashed lines indicate glass that has deflection in excess of $^{3}I_{4}$ inch.
 d. Interpolation between lines is permitted. Extrapolation is not allowed.
- e. For laminated glass, the applicable glass thickness is the total glass thickness.
- f. For insulating glass panes, the applicable glass thickness is the thickness of one pane? The residual transfer and the residual transfer and the same of the residual transfer and the same of the

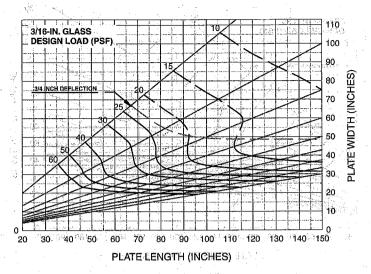


For SI: 1 inch = 25.4 mm, 1 pound per square foot = 0.0479 kPa.

FIGURE 2404(4)^{a, b, c, d, e, f} MAXIMUM ALLOWABLE LOAD FOR VERTICAL AND SLOPED RECTANGULAR GLASS SUPPORTED ON ALL EDGES

- a. In each graph, the vertical axis is the lesser dimension; the horizontal axis is the greater dimension.
- The diagonal number on each graph shows the equivalent design load in psf.

 The deshed lines indicate glass that has deflection in excess of 3/, inch.
- c. The dashed lines indicate glass that has deflection in excess of $\frac{3}{4}$ inch.
- d. Interpolation between lines is permitted. Extrapolation is not allowed.
- e. For laminated glass, the applicable glass thickness is the total glass thickness.
- f. For insulating glass panes, the applicable glass thickness is the thickness of one pane.

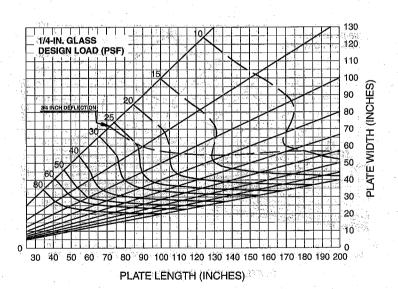


For SI: 1 inch = 25.4 mm, 1 pound per square foot = 0.0479 kPa.

FIGURE 2404(5)^{a, b, c, d, e, f} MAXIMUM ALLOWABLE LOAD FOR VERTICAL AND SLOPED RECTANGULAR GLASS SUPPORTED ON ALL EDGES

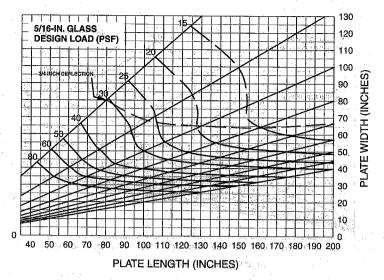
NOTES

- a. In each graph, the vertical axis is the lesser dimension; the horizontal axis is the greater dimension.
- b. The diagonal number on each graph shows the equivalent design load in psf.
- c. The dashed lines indicate glass that has deflection in excess of $\frac{3}{4}$ inch.
- d. Interpolation between lines is permitted. Extrapolation is not allowed.
- e. For laminated glass, the applicable glass thickness is the total glass thickness.
- f. For insulating glass panes, the applicable glass thickness is the thickness of one pane.



For SI: 1 inch = 25.4 mm, 1 pound per square foot = 0.0479 kPa.

- a. In each graph, the vertical axis is the lesser dimension; the horizontal axis is the greater dimension.
- b. The diagonal number on each graph shows the equivalent design load in psf.
- c. The dashed lines indicate glass that has deflection in excess of $^{3}/_{4}$ inch.
- d. Interpolation between lines is permitted. Extrapolation is not allowed.
- e. For laminated glass, the applicable glass thickness is the total glass thickness.
- f. For insulating glass panes, the applicable glass thickness is the thickness of one pane.



For SI: 1 inch = 25.4 mm, 1 pound per square foot = 0.0479 kPa.

FIGURE 2404(7)a, b, c, d, e, f MAXIMUM ALLOWABLE LOAD FOR VERTICAL AND SLOPED RECTANGULAR GLASS SUPPORTED ON ALL EDGES

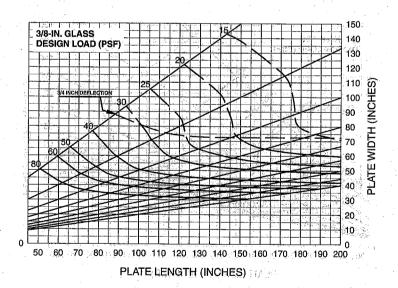
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NOTES:

- a. In each graph, the vertical axis is the lesser dimension; the horizontal axis is the greater dimension
- a. In each graph, the vertical axis is the lessel difficulty different axis is the ground attraction and the graph shows the equivalent design load in psf.
- b. The diagonal number on each graph shows the equivalent states.
 c. The dashed lines indicate glass that has deflection in excess of ³/₄ inch.
 Extrapolation is not allowed.

- e. For laminated glass, the applicable glass thickness is the total glass thickness.

 f. For insulating glass panes, the applicable glass thickness is the thickness of one pane.

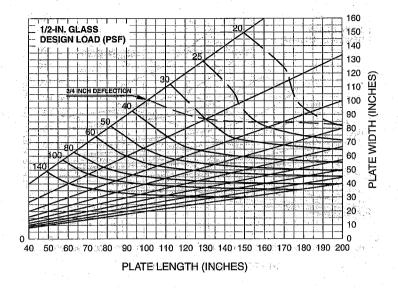


For SI: 1 inch = 25.4 mm, 1 pound per square foot = 0.0479 kPa.

FIGURE 2404(8)a, b, c, d, e, f MAXIMUM ALLOWABLE LOAD FOR VERTICAL AND SLOPED RECTANGULAR GLASS SUPPORTED ON ALL EDGES

- d. Interpolation between lines is permitted. Extrapolation is not allowed.
- e. For laminated glass, the applicable glass thickness is the total glass thickness. f. For insulating glass panes, the applicable glass thickness is the thickness of one pane.

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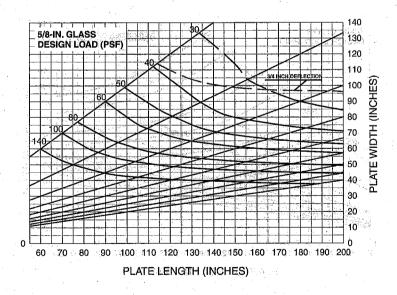


For SI: 1 inch = 25.4 mm, 1 pound per square foot = 0.0479 kPa.

FIGURE 2404(9)⁸ b, c, d, e, f MAXIMUM ALLOWABLE LOAD FOR VERTICAL AND SLOPED RECTANGULAR GLASS SUPPORTED ON ALL EDGES

NOTES:

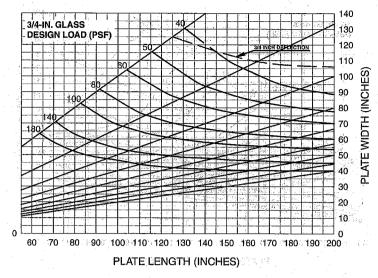
- a. In each graph, the vertical axis is the lesser dimension; the horizontal axis is the greater dimension.
- b. The diagonal number on each graph shows the equivalent design load in psf.
- c. The dashed lines indicate glass that has deflection in excess of $^{3}/_{4}$ inch.
- d. Interpolation between lines is permitted. Extrapolation is not allowed.
- e. For laminated glass, the applicable glass thickness is the total glass thickness,
- f. For insulating glass panes, the applicable glass thickness is the thickness of one pane.



For SI: 1 inch = 25.4 mm, 1 pound per square foot = 0.0479 kPa.

FIGURE 2404(10)^a b. c. d. e. f MAXIMUM ALLOWABLE LOAD FOR VERTICAL AND SLOPED RECTANGULAR GLASS SUPPORTED ON ALL EDGES

- a. In each graph, the vertical axis is the lesser dimension; the horizontal axis is the greater dimension.
- b. The diagonal number on each graph shows the equivalent design load in psf.
- c. The dashed lines indicate glass that has deflection in excess of 3/4 inch.
- d. Interpolation between lines is permitted. Extrapolation is not allowed.
- e. For laminated glass, the applicable glass thickness is the total glass thickness.
- f. For insulating glass panes, the applicable glass thickness is the thickness of one pane.

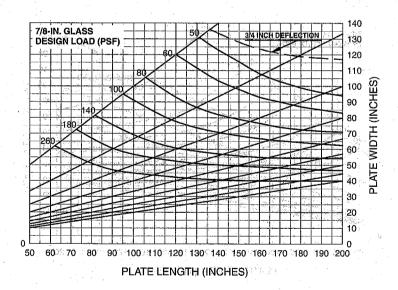


For SI: 1 inch = 25.4 mm, 1 pound per square foot = 0.0479 kPa.

FIGURE 2404(11)^{a, b, c, d, e, f} MAXIMUM ALLOWABLE LOAD FOR VERTICAL AND SLOPED RECTANGULAR GLASS SUPPORTED ON ALL EDGES

NOTES:

- a. In each graph, the vertical axis is the lesser dimension; the horizontal axis is the greater dimension.
- b. The diagonal number on each graph shows the equivalent design load in psf.
- c. The dashed lines indicate glass that has deflection in excess of $\frac{3}{4}$ inch.
- d. Interpolation between lines is permitted. Extrapolation is not allowed.
- e. For laminated glass, the applicable glass thickness is the total glass thickness.
- f. For insulating glass panes, the applicable glass thickness is the thickness of one pane.



For SI: 1 inch = 25.4 mm, 1 pound per square foot = 0.0479 kPa.

FIGURE 2404(12)^{8, b, c, d, e, 1} MAXIMUM ALLOWABLE LOAD FOR VERTICAL AND SLOPED RECTANGULAR GLASS SUPPORTED ON ALL EDGES

- a. In each graph, the vertical axis is the lesser dimension; the horizontal axis is the greater dimension.
- b. The diagonal number on each graph shows the equivalent design load in psf.
- c. The dashed lines indicate glass that has deflection in excess of $^{3}\textit{I}_{4}$ inch.
- d. Interpolation between lines is permitted. Extrapolation is not allowed.
- e. For laminated glass, the applicable glass thickness is the total glass thickness.
- f. For insulating glass panes, the applicable glass thickness is the thickness of one pane.

positive and negative pressure, then the performance grade ratn on the labe shall be the erformance s determined in accordance with 101/1.S.2/NAFS or both posiand negative design pressure, and the sky light shall conrm to Section 2405.5.1.

2405.5.1 Unit skylights rated for the same performance grade for both positive and negative design pro ylights shall b design of unit s based on the fe Ilowing equation:

$$F_{g} \leq PG$$

(Equation 24-8)

where:

 \circ F is the maximum load on the skylight determined from Equations 24-3 through 24-5 in Section 2404.2.

is the perform ince grade rating f the skyligh

2405.5.2 Unit s kylights rated for separate performance grades for positive and negative design pressure. The design of unit skylights rated for performance grade for both positive and negative design ressures sha be based on the following equations:

$$F_{ei} \leq G_{Po}$$

(Equation 24

 $\leq PG_{Neg}$

(Equation 24/10)

where:

 $PG_{Pos}^{(i)}$ is the performance grade rating of the skylight under positive design pressure,

rade rating of the PG_{Nee} is the performance skylight under negative design pressur , and

 F_{σ} and go are determined in accordance with the following

 $\geq D$, where W is the outward find force, psf (kN/n lculated in Se tion 1609 and D is the dead weight of glazing, psf (kN/m²) as determined in Section 2404 glass, or by the weight of the plastic, psf (kN/m²) for plastic glazing.

 F_{gi} is the maximum load on the skylight determined from Equations 24-4 and 24-5 in Section 2404

the maximy a load on the skylight aetermined fr uation 24-3

 $V_0 < D$, where W_0 is the outward with d force, psf (calculated in Section 1609 and D in the dead weight of the (kN/m²) as determined in Section glass, or by the weight of the plastic for plastic glazing.

 F_{ij} is the maximum load on the skylight determined from 24-3 through 24-5 in Section 2404.2. Equation

$$F_{go} \cong 0$$

SECTION 2406 SAFETY GLAZING

2406.1 Hum in impact logus. Individual dazed areas, inclu ing glass m rrors, in haza dous location, as defined in Section Il comply with Sections 240 5.1.1 through 240

1.1 CPSC 15 CFR 1201 Except as provide frough 2406 1.5, all glazing shall pass the test requirements of CPSC 6 CFR 1201, list d in Chapter 35. Glazing shall comply with the CPSC 16 CFR, Part 1201 criteria, for Category L or II as indicated in Table 2406.1.

Wired glass. In other than Goup E, wired glass in 2406.1 stalle in fire doors, fire windows and view panels in firesist int walls shall be permitted to comply with ANSI ZS

2406.1.3 Plastic glazing. Plastic glazing shall neet the weathering requirements of ANSI Z97.1.

2406.1.4 Glass block. Gass-block walls shall comply with Section 2101.2.5.

2406 1.5 Louvered windows and jalou les. Louvered wins and jalousi s shall comply with Section 2403.5.

240 .2 Identification of safety glazing. Except as indicate Section 2406.2 a, each pane of safety glazing installed in ardous locations shall be identified by a label specifyin beler, whether the manufacty en or installer, and andard with which a complies, as well as glazing st le informacified in Section 2 .03.1. The label shall b acid etched. lasted, ceramic fixed or an embossed ma a type that once applied cannot be removed stroved.

Exceptions

other than tempered glass, labels are not ovided the building afficial approves certificate, affidavit or other evidence confirming compliance with this code.

2. Ter pered spanckel glass is permitted to be identified. the manufacturer with a remayable paper lab

1 Multilight assemblies. I ultilight glazed assemhaving ir dividual lights put exceeding 1 square foot square meter) in exposed area shall have at least one

rentine gradiev sits evelde set in crow Asia's

problem to adding with an experient true county gailways.

The state of the best to be TABLE 2406.1 June amount for white backgrounder are never of MINIMUM CATEGORY CLASSIFICATION OF GLAZING

EXPOSED SURFACE AREA OF ONE SIDE OF ONE LITE	DOORS	GLAZING IN DOORS (Category class)	GLAZED PANELS REGULATED BY ITEM 7 OF SECTION 2406.3 (Category class)	GLAZED PANELS REGULATED BY ITEM 6 OF SECTION 2406.3 (Category class)	DOORS AND BUILDING BU	SLIDING GLASS DOORS PATIO TYPE (Category class)
9 square feet or less	ទើកអាក្សាក្រាក្	inner (j e (ee)	No requirement	ales affects has	bia baba n arao an	aluada(II
More than 9 square feet	13707 (Care 1) 11.	$\mathbf{H}^{(i,j)}$	in the n	n,	no lo Angles	anto e i u

h turk dom pi sel Haik Hakvil da. .