



Now Fully Tested per ICC 500-2014

FEMA SHELTER COMPLIANT PER ICC-500/FEMA 361				
CITADEL PRODUCTS 5000 SERIES WINDOW				
Threat	Threshold Level	Requirements	Testing Protocol	Results
Hurricane	210 mph wind zone*	Large Missile Impact 9# @ 125 mph**	ASTM E 1886	Pass
		Pressure Cycling @ +110/-130 psf (9000 cycles)	ASTM E 1886	Pass
Tornado	EF-5 Tornado***	Structural Design Pressure @ ±250 psf	ASTM E 330	Pass
		Structural Test Pressure @ 1.2(250) =±300 psf	ASTM E 330	Pass
		Large Missile Impacts 15# @ 100 mph	ASTM 1886	Pass
Air/Water	Environment	Air Infiltration @ 1.57 psf		<0.01 cfm/ft ²
		Air Infiltration @ 6.24 psf		<0.01 cfm/ft ²
		Water Infiltration @ 20.0 psf		Pass
Ballistic Resistance	9 mm Lugar (7 shots)	ISO 17025 Level 6	ANSI/UL 752-2005	Pass

* Category 5 hurricanes start above 156 mph (meets new standard for FEMA hurricane shelter)

**Actual Impacts 15# @ 100 mph

***Fully compliant with FEMA 361-2015 requirements

Window Features

- < Fully compliant with ICC 500-2014 & FEMA 361-2015
- < Storefronts and curtain walls available with mullions
- < Largest single size tested 40 sq. ft.
- < Smallest single size tested 4 sq. ft.
- < Available with ballistic protection LEVEL VI
- < Transparent glazing (74% VLT)
- < Fully tested up to 210 mph hurricane FEMA shelter



Window Design

- < Window perimeter frame is 2" X 5"
- < Window intermediate vertical mullion is 2" X 10"
- < Fully concealed fasteners and hair line joints
- < 6063-T6 alloy and temper
- < Anodized or painted finishes
- < Accepts 3/4" to 2" thick glazing
- < Window anchoring requirements by certified PE

DESIGNED FOR SURVIVAL

Survivalite Impact Systems 5100
 NW 72nd Ave., Bldg C
 Miami, FL 33166
 727-453-8019



Fully Tornado Tested per ICC 500-2014

FEMA SHELTER COMPLIANT PER ICC-500/FEMA 361				
CITADEL PRODUCTS 5000 SERIES WINDOW				
Threat	Threshold Level	Requirements	Testing Protocol	Results
Tornado	EF-5 Tornado	Structural Design Pressure @ ± 250 psf	ASTM E 330	Pass
		Structural Test Pressure @ $1.2(250) = \pm 300$ psf	ASTM E 330	Pass
		Large Missile Impacts 15# @ 100 mph	ASTM 1886	Pass
Air Infiltration	6.24 PSF	.039 cfm/sq.ft.	ASTM E 331-04	Pass
Water Infiltration	37.5 PSF	15 min. Duration	ASTM E 332-00	Pass
Forced Entry	300 lbs.	300 lb. point load @ specified locations	AAMA 1304	Pass

* Category 5 hurricanes start above 156 mph (meets new standard for FEMA hurricane shelter)

**Actual Impacts 15# @ 100 mph

Door Features

- < Double doors up to 8 ft. X 8 ft.
- < Single doors down to 3 ft. X 7 ft.
- < Panic Bar activates **ALL** latches
- < ADA threshold: 1/2 inch
- < Compatible with electronic latches, openers and closers
- < No center mullion
- < Transparent glazing (74% VLT) provided by SAF-GLAS



Door Design

- < Rough opening up to 100" X 100"
- < 7" deep receptor frame
- < 6065-T6 alloy and temper
- < Shipped fully assembled ready for installation
- < Anodized or painted finishes
- < Door anchoring requirements by certified PE

DESIGNED, TESTED AND BUILT FOR SURVIVAL

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 5100 NW 72. Ave - Bldg. C
 Miami, Florida 33166
 727-453-8019



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SAF-GLAS, LLC SPECIFICATION FOR GLASS CLAD POLYCARBONATE

1-5/8" Tornado , Physical Attack, Bomb, BR and Terror Glass

The intent of this specification is to clearly define the correct product and protocol. A format and specific data are named in this text to aid in the specification of a chosen product.

Product description: Ballistic, Saf-Glas GCPC, Tornado Hurricane, Physical Attack, Bomb blast resistant.

Frame per specification supplied, glass make to be: { $\frac{1}{4}$ " clear H.S. glass x $\frac{1}{4}$ " ANN glass x $\frac{1}{4}$ " ANN glass x 13/16" SAF-GLAS Tornado TNT: 1-5/8"}

Saf-Glas is a glass clad polycarbonate consisting of one or more plies of polycarbonate, two or more plies of patented bonding film, glass and / or glass ceramic. Saf-Glas thickness of product ranges from $\frac{1}{4}$ " through 3-1/2". Saf-Glas GCPC is fabricated as a defense against bullet, bomb blast, forced entry, fire, hurricane, typhoon, tornado, earthquake or any other threat of a man-made or natural origin. Saf-Glas can be also laminated for photovoltaic solar cell, hologram and for all other nano tech products utilizing glass.

Saf-Glas Standard Composition: [Glass x Bonding Film x Polycarbonate x Bonding Film x Glass]

1. Glass thickness: [2.5mm].
2. Glass type: [HS]
3. Glass color: [Clear] offered by float glass manufacturers.
4. Coatings: [N/A].
5. Glass Ceramic: [N/A].
6. Bonding Film: [Saf-Glas Patented]
7. Bonding Film Thickness: [0.025"].
8. Bonding Film Color: [Clear].
9. Polycarbonate Thickness: [0.25", 0.75"].