

**Blast & Hurricane  
Building Envelope  
products that meet  
the most stringent  
building standards**

blast & hurricane



**Oldcastle** BuildingEnvelope®

*Engineering your creativity™*



# Our blast- and hurricane-resistant products meet or exceed all codes.

Oldcastle BuildingEnvelope® incorporates the latest advances and technologies to meet your expectations for high performance. Applying best practices for integrated systems designed for specific requirements, our products are engineered and tested to withstand blast and hurricane events. With the largest national footprint of any building envelope company in North America, we offer some of the best engineering minds in the industry for you to rely on, as well as the experience and knowledge to handle the most complex projects—every step of the way. In addition to our expertise in providing blast mitigation and hurricane-resistant products, we offer the most comprehensive portfolio of products and services specified to close the building envelope. Our products include custom-engineered curtain wall and window wall, architectural windows, storefront systems, doors, skylights and architectural glass.

## HURRICANE-RESISTANT

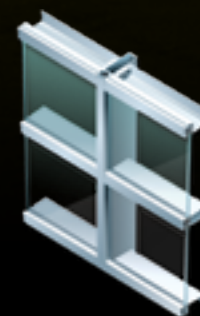
Our heavy-duty systems are engineered and tested for hurricane resistance.



## BLAST-RESISTANT

Our exclusive blast mitigation systems are engineered to withstand blast events.

## OUR EXCLUSIVE BLAST- AND HURRICANE-RESISTANT PRODUCTS:



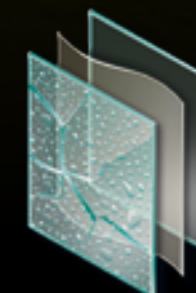
### BLASTMAX™

Our proprietary blast-resistant systems offer a sophisticated, patented energy-absorbing system approach. This technology utilizes the curtain wall frames, glazing, hardware and anchoring system as energy dissipating components. All of our BlastMax™ products meet or exceed GSA and DoD codes.



### STORMMAX™

Our systems provide maximum protection against wind-borne debris and cyclic wind pressure. Engineered with our exclusive StormGlass™ glazing, our heavy-duty hurricane-resistant systems meet the most stringent code requirements.



### STORMGLASS™

Our hurricane-resistant glazing is engineered and tested to meet the most stringent codes for high velocity hurricane zones.



# BlastMax™ Reliance™ Curtain Wall @ Fort Belvoir

The largest American Army base specified our blast-resistant building envelope. The Fort Belvoir Community Hospital is a 1.27-million-sq-ft facility. Oldcastle BuildingEnvelope® provided BlastMax™ Reliance™ Series curtain wall designed to meet blast resistance requirements. BlastMax™ utilizes a tough plastic interlayer that holds the glass together after a blast event, and with the proper framing systems, the glazing will be retained in the opening, reducing the amount of flying glass.

## BLASTMAX™ RELIANCE™ SERIES

This blast-resistant curtain wall system is designed to meet the most current and demanding test standards of ASTM, GSA and DoD.



Fort Belvoir  
Location: Fairfax County, VA  
BlastMax™ Curtain Wall

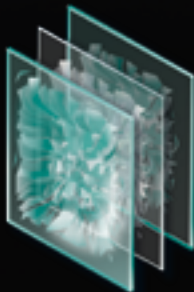


## OUR BLAST-RESISTANT PORTFOLIO ALSO INCLUDES:

1

### LAMINATED GLAZING

Blast mitigating laminated glass with a PVB interlayer is an excellent glazing choice for any application that may be subjected to bomb blasts. The durable plastic interlayer holds the glass together after a blast event and retains it in the building opening, reducing the amount of flying glass.



2

### BLASTMAX™ FG-5000/ 5100/5100T

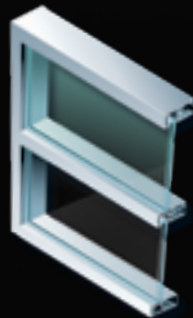
These heavy-duty, flush-glazed storefronts offer very high levels of blast protection.



3

### BLASTMAX™ BRW-500

The windows' dynamic loading components gradually absorb much of the blast energy, allowing the window wall to stay in the opening.



4

### BLASTMAX™ ENTRANCES

The MSD-375 Blast Resistant Entrance Door system has endured extensive blast arena testing and has proven to be a high-performance system meeting the most stringent standards.





HURRICANE-RESISTANT

StormMax™ @  
La Palmera Mall

This 1,017,704-sq-ft shopping mall serving a wide region surrounding Corpus Christi, Texas, is the result of a \$50 million renovation. Oldcastle BuildingEnvelope® was selected to provide a full range of impact-resistant products that met the most demanding building code requirements. Hurricane Ike (2008) did not seriously jeopardize the integrity of the shopping mall’s early construction work. Special attention was given to integrate various construction features that offer protection to withstand the impact of future storms in this area.

STORMMAX™ ENTRANCE  
AND CURTAIN WALL

Our products meet or exceed all building code requirements.

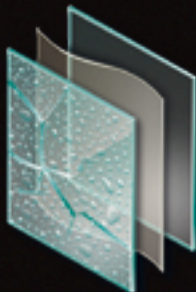


La Palmera Mall  
Location: Corpus Christi, TX  
StormMax™ Hurricane-Resistant  
Curtain Wall and Entrances

OUR HURRICANE-RESISTANT  
PORTFOLIO ALSO INCLUDES:

1 STORMGLASS™

Our hurricane-resistant glazing is engineered and tested to meet the most stringent codes for high velocity hurricane zones.



2 STORMMAX™  
RELIANCE™

Engineered and tested to meet the most demanding code requirements. This system complies with Florida and International Building Code requirements.



3 STORMMAX™  
HR-250/HR-251

Designed to accommodate 9/16" or 1-5/16" laminated glass, this impact-resistant curtain wall system combines maximum performance with the versatility of conventional screw spline assembly.



4 STORMMAX™  
FG-5000/  
5100/5100T

Significant hurricane protection is provided with our heavy-duty, impact-resistant systems.







## 1 OUR BLAST-RESISTANT PRODUCTS MEET THE MOST STRINGENT BUILDING CODES

All of our blast-resistant products meet or exceed DoD, ASTM and GSA code requirements.



## 2 WE EMPLOY LEADING-EDGE TESTING

We continually conduct extensive blast arena tests to ensure that our systems will exceed all required standards.

## 3 WE LISTEN AND ASSESS THREAT LEVELS

When the U.S. Army called on us to engineer blast-resistant storefronts, windows, entrances and curtain walls, we analyzed their unique requirements and engineered a custom solution.



## 7 ONE WARRANTY

Why juggle multiple manufacturers' warranties when you can have just one? With Oldcastle BuildingEnvelope®, you have clarity, assurance and peace of mind.



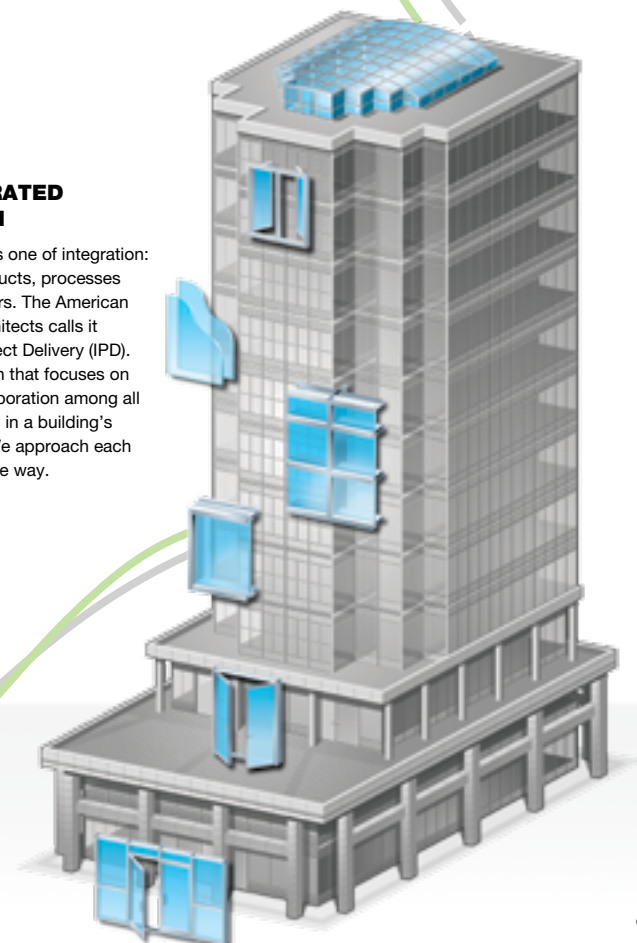
## 4 ENGINEERED AND TESTED TO WITHSTAND HURRICANE IMPACTS

All of our hurricane-resistant products are engineered, tested and manufactured to meet or exceed all hurricane and impact resistance requirements.



## 5 AN INTEGRATED APPROACH

Our approach is one of integration: integrated products, processes and stakeholders. The American Institute of Architects calls it Integrated Project Delivery (IPD). It's an approach that focuses on increased collaboration among all parties involved in a building's construction. We approach each project the same way.



## 6 OUR HURRICANE-RESISTANT PRODUCTS MEET OR EXCEED ALL CODES

All of our hurricane-resistant products meet or exceed TDI, ASTM and Miami-Dade County requirements.



# So why specify our blast- and hurricane-resistant products?

## BLAST-RESISTANT

We offer the most comprehensive collection of blast-resistant curtain wall, window wall, architectural windows, storefronts, entrances, skylights and architectural glass. So what makes our products unique? For starters, we design, engineer, test and manufacture our products as a fully integrated building envelope system. In addition, we have invested significantly in designing our complete line of systems and testing them to meet the specific threat levels and requirements detailed under ASTM, DoD and GSA standards. Gone are the days of coordinating multiple suppliers to obtain all the products needed for a specific project. We are The Building Envelope Company™.

## HURRICANE-RESISTANT

Protecting the building envelope is our key concern in areas where hurricane protection is required by code. Whether it's a curtain wall, window wall, architectural window, storefront, entrance, skylight or architectural glass product, we have you covered. After many years of designing innovative systems capable of withstanding hurricanes, we have not relented in developing and testing the latest and most innovative systems that meet the specific requirements of the ASTM and TAS standards. Our systems have been tested by and have obtained product approvals from such entities as the Florida Building Commission and Miami-Dade County, and they have been evaluated by the Texas Department of Insurance. You have the peace of mind knowing our products will meet your project's specific requirements. We are The Building Envelope Company™.





LaPalmera



MO Courthouse

# We are everywhere

From Tampa to Tahoe, our blast- and hurricane-resistant products grace some of America’s most discerning buildings. Our extensive industry experience includes hospitality, retail, education, government, healthcare, military, museums, airports and more.



Fort Belvoir



San Francisco International Airport

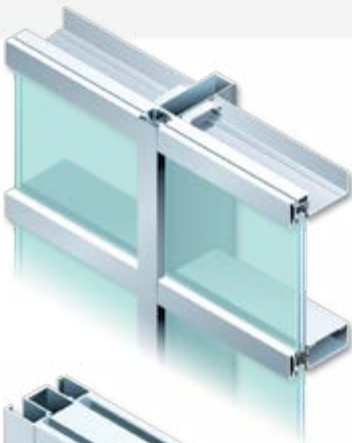


U.S. Federal Courthouse  
Location: Miami, FL  
Curtain Wall



# Blast-Resistant

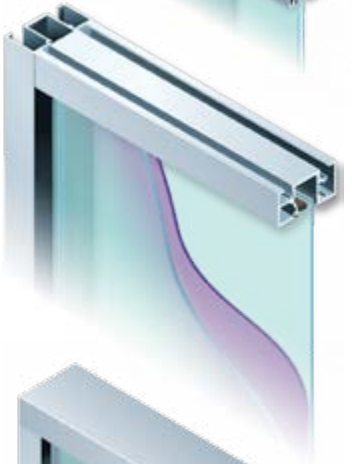
# Hurricane-Resistant



## BLAST MITIGATION: BLASTMAX™ RELIANCE™ CURTAIN WALL

Blast arena tested with standard Reliance™ Curtain Wall profiles offer significant levels of blast protection with the economies of a standard system. Our blast mitigation systems are unique in that the curtain wall and the glass are engineered and tested together as one system.

<b>Performance</b>
<b>ASTM:</b> F-1642 – minimal hazard
<b>UFC (DoD) 4-010-01</b> medium level of protection
<b>GSA / ISC</b> – condition 3b



## BLAST MITIGATION: BLASTMAX™ FG-5100/FG-5100T STOREFRONTS

BlastMax™ FG-5100 is a heavy-duty, flush-glazed storefront that offers very high levels of blast protection. This system can offer both blast and hurricane protection. Our blast mitigation system is unique in that the curtain wall and the glass are engineered and tested together as one system.

<b>Performance</b>
<b>ASTM:</b> F-1642 – no hazard
<b>UFC (DoD) 4-010-01</b> high level of protection
<b>GSA / ISC</b> – condition 2



## BLAST MITIGATION: BLASTMAX™ BRW-500 RIBBON WINDOW

After extensive blast arena testing, the BRW-500 ribbon window system has proven to be a high-performance system that meets the most stringent standards of ASTM, GSA and UFC.

<b>Performance</b>
<b>ASTM:</b> F-1642 – no hazard
<b>UFC (DoD) 4-010-01</b> medium level of protection
<b>GSA / ISC</b> – condition 2



## BLAST MITIGATION: BLASTMAX™ MSD-375 ENTRANCES

After extensive blast arena testing, the MSD-375 Blast-Resistant Entrance Door system has proven to be a high-performance system that meets the most stringent standards of ASTM, GSA and UFC. The MSD-375 Blast-Resistant Entrance Door System performs exceptionally well without the need for reinforced steel or special anchoring.

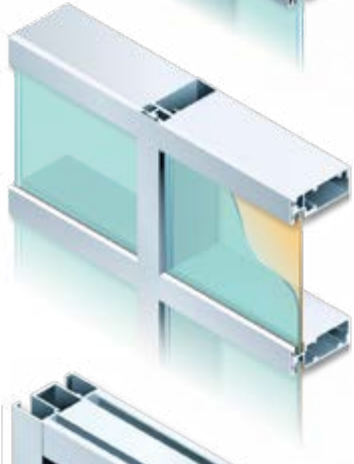
<b>Performance</b>
<b>ASTM:</b> F-1642 – no hazard
<b>UFC (DoD) 4-010-0</b> medium level of protection
<b>GSA / ISC</b> – condition 2



## HURRICANE-RESISTANT: STORMMAX™ RELIANCE™ CURTAIN WALL

The StormMax™ Reliance™ Curtain Wall System was designed to meet the most demanding specifications. This system complies with the requirements of the Florida and International Building Codes. It is an exterior glazed system that can also be glazed with our exclusive StormGlass™ hurricane-resistant glass.

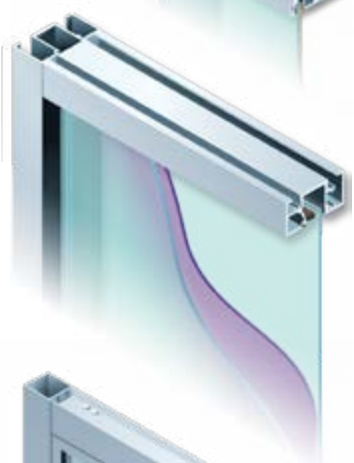
<b>Performance</b>
<b>ASTM:</b> E-1886, E-1996
<b>Florida Building Code:</b> TAS 201, 202, 203
<b>IBC 2006</b>
<b>Miami-Dade County Product Approval</b>



## HURRICANE-RESISTANT: STORMMAX™ HR-250/HR-251 CURTAIN WALL

HR-250/HR-251 StormMax™ curtain walls provide substantial hurricane protection with the use of both monolithic and insulating glass. They are available with both dry and wet glazing options.

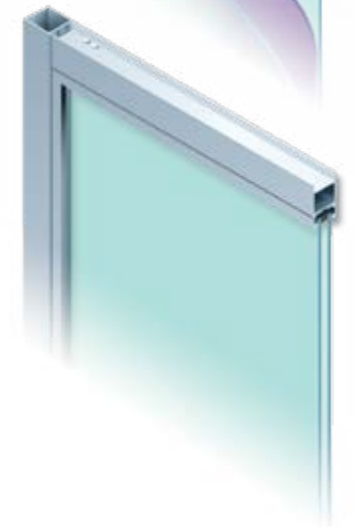
<b>Performance</b>
<b>ASTM:</b> E-1886, E-1996
<b>Florida Building Code:</b> TAS 201, 202, 203
<b>IBC 2006</b>
<b>Miami-Dade County Product Approval</b>



## HURRICANE-RESISTANT: STORMMAX™ FG-5000/FG-5100/FG-5100T

These heavy-duty, flush-glazed storefronts provide significant hurricane protection with the use of both monolithic and insulating glass. The FG-5000 system is available with both dry and wet glazing options. The FG-5100T system is available with wet glazing option only.

<b>Performance</b>
<b>ASTM:</b> E-1886, E-1996
<b>Florida Building Code:</b> TAS 201, 202, 203
<b>IBC 2006</b>
<b>Miami-Dade County Product Approval</b>



## HURRICANE-RESISTANT: STORMMAX™ MSD-375 ENTRANCES

The Series MSD-375 is an impact-resistant medium stile entrance door. This entrance system meets the most demanding requirements of both Florida and International building codes. The series MSD-375 offers the largest variety of hardware options in the industry.

<b>Performance</b>
<b>ASTM:</b> E-1886, E-1996
<b>Florida Building Code:</b> TAS 201, 202, 203
<b>IBC 2006</b>
<b>Miami-Dade County Product Approval</b>

**We offer the most comprehensive  
portfolio of products specified to  
close the building envelope.**



**Thermal Products**

**Architectural  
Windows**

**Architectural  
Glass**

**Entrances and  
Storefronts**

**Skylights**



**Oldcastle BuildingEnvelope®**

*Engineering your creativity™*

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