



**ASTM F1642-04/GSA TS01
TEST REPORT**

Report No.: A9873.02-122-12

Rendered to:

3M Company
Saint Paul, Minnesota

PRODUCT TYPE: Blast Resistant Double Pane Windows in Aluminum Frames

SERIES/MODEL: 1) Laminated Glass models
RW001U001, RW001U003, RW001U005, and RW001U007

2) Safety and Security Film models (3M™ Ultra S600)
RW001U002, RW001U004, RW001U006, and RW001U008

SPECIFICATION: ASTM F 1642-04, *Standard Test Method for Glazing and Glazing Systems Subject to Airblast Loading.*

GSA-TS01-2003, *US General Services Administration Standard Test Method for Glazing and Window Systems Subject to Dynamic Overpressure Loadings.*

This report contains in its entirety:

Cover Page: 11 pages

Report Body: 45 pages

Test Facility: 1 page

Pressure-Time Plots: 72 pages

Photographs: 72 pages

Drawings: Drawings have been removed for client confidentiality.



A handwritten signature in black ink that reads "Brady W. McNaughton".

Digitally Signed by: Brady W. McNaughton

Test Dates: 06/21/11
Through: 06/28/11
Report Date: 09/19/11

Test Record Retention End Date: 06/28/15



Summary of Results - by Window Type

Insulated Glass Windows - Laminated Glass¹				
Window Type	Product Code	Blast Load (nominal)	ASTM F1642 Rating	GSA-TS01 Rating
Fixed	RW001U0001	6 psi, 41 psi*msec	Minimal Hazard	2
Fixed / Casement	RW001U0003	6 psi, 41 psi*msec	Minimal Hazard	2
Fixed / Project	RW001U0005	10 psi, 89 psi*msec	Minimal Hazard	2
Fixed / Sliding	RW001U0007	6 psi, 41 psi*msec	Minimal Hazard	2

Insulated Glass Windows -- 3M™ Ultra S600 Safety and Security Window Film²				
Window Type	Product Code	Blast Load (nominal)	ASTM F1642 Rating	GSA-TS01 Rating
Fixed	RW001U0002	6 psi, 41 psi*msec	No Hazard	2
Fixed / Casement	RW001U0004	10 psi, 89 psi*msec	Minimal Hazard	2
Fixed / Project	RW001U0006	10 psi, 89 psi*msec	No Break	1
Fixed / Sliding	RW001U0008	6 psi, 41 psi*msec	Minimal Hazard	2

¹ Laminated Glass Windows comprised of 1/4" heat strengthened glass on exterior pane; 1/2" air gap; laminated annealed glass on interior pane (1/8" annealed glass, 0.030" PVB interlayer, 1/8" annealed glass). Interior pane glazed into frame bite with Dow Corning 983 structural silicone sealant.

² Windows incorporating fragment retention window film comprised of 1/4" heat strengthened glass on exterior pane; 1/2" air gap; 1/4" annealed glass on interior pane with 3M™ Ultra S600 window film applied. Window film professionally wet-applied to surface #4, edge-to-edge, prior to mounting glass into frame. Interior pane wet glazed into frame bite with Dow Corning 983 structural silicone sealant.