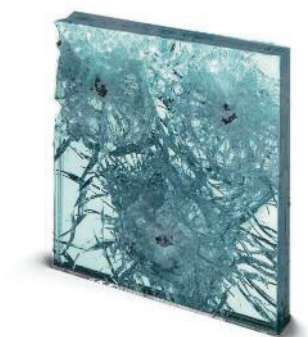# Oldcastle BuildingEnvelope™—the only national manufacturer that offers a complete line of total security glazing solutions.

At Oldcastle BuildingEnvelope™ we offer a comprehensive collection of security glazing products for detention facilities. From ArmorProtect® Plus with 250 times the impact strength of conventional glass to ArmorResist®, our proprietary line of bullet-resistant glazing. What's more, we're the only manufacturer who can provide these solutions nationally. No matter where you or your projects are. It's that kind of consistent innovation and reliable service you've come to expect from Oldcastle BuildingEnvelope™.

ArmorProtect®: Forced-Entry Resistant

ArmorProtect® attack-resistant security glazing laminates contain the toughest plastics available, often containing multiple layers for maximum forced-entry resistance. Typically, these products are used in prisons, jails and other secure establishments.
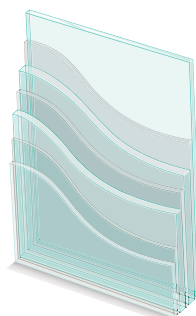
ArmorProtect® Plus is a family of multiply laminates containing one or more core layers of polycarbonate, often called glass-clad polycarbonates. Polycarbonate is the strongest available clear plastic and has 250 times the impact strength of glass. Both the inner and outer lites of the laminate are heat-strengthened glass, to provide the durability that the polycarbonate alone could not offer.

ArmorResist® Bullet-Resistant

ArmorResist® is designed to resist attacks by a wide range of weapons. All the standards throughout the world have two main requirements: (1) the glazing must resist penetration by a specified bullet and (2) the spall or flying fragments leaving the rear face, as a result of the impact, must be limited. ArmorResist® meets both of these requirements.

Note: ArmorResist® glazing materials are not classified as forced-entry resistant.

ArmorResist® Plus is a combination of glass, polycarbonate and advanced interlayers. The unit is designed to flex and absorb the energy of a bullet.

Oldcastle BuildingEnvelope®

Security Laminates for Use in Forced-Entry Applications

Trade name	Product #	HPW-TP-0500 FE	BR	WMFL	ASTM F1915	UL 752	Nominal Thickness inches	Weight lbs/ft²	Max Size inches	Assembly[1]
ArmorProtect® Plus	121000	1	A[2]	–	–	–	7/16	4.6	60 x 96	GCP
ArmorProtect® Plus	121100	1	A[2]	–	–	–	9/16	5.4	60 x 96	GCP
ArmorProtect® Plus	121200	1	B[2]	–	–	–	11/16	6.2	60 x 96	GCP
ArmorProtect® Plus	122000	2	B[2]	3	–	–	13/16	6.4	60 x 96	GCP
ArmorProtect® Plus	123000	3	B[2]	3	3[3]	–	3/4	6.3	60 x 96	GCP
ArmorProtect® Plus	123100	3	B[2]	2	–	–	7/8	7.1	60 x 96	GCP
ArmorProtect® Plus	123200	2	B[2]	2	2[3]	–	15/16	7.2	60 x 96	GCP
ArmorProtect® Plus	124100	–	–	1[2]	1[3]	–	1-1/4	10.8	60 x 96	GCP
ArmorProtect® Plus	124200	–	–	1	–	3	1-3/8	11.8	60 x 96	GP
ArmorProtect® Max	132000	2-step 14	A	–	–	–	3/8	2.5	60 x 96	LPC
ArmorProtect® Max	133000	3-step 16	A	–	–	–	1/2	3.4	60 x 96	LPC
ArmorProtect® Max	134000	4-step 38	B	–	–	–	3/4	5.0	60 x 96	LPC
ArmorProtect® Max	135000	5	B	–	–	2	1	6.6	60 x 96	LPC
ArmorProtect® Max	135100	5	C	2	–	3	1-1/4	8.2	60 x 96	LPC

All ArmorProtect® Max products tested to UL 752 will bear a permanent UL logo.
(1) **GCP**–glass-clad polycarbonate; **GP**–glass laminate with exposed mar-resistant polycarbonate; **LPC**–laminated polycarbonate.
(2) These products are designed to resist bullet penetration. They do not resist spalling.
(3) Reference test report for torch and small blunt impactor results.

Security Laminates for Use in Bullet-Resistant Applications

Trade name	Product #	UL 752	NIJ	Nominal Thickness inches	Weight lbs/ft²	Max Size	Assembly[3]
ArmorResist®	211000	1[1]	–	1-3/16	14.7	500 lbs[2]	AGL
ArmorResist®	211100	1[1]	–	1-5/16	15.5	500 lbs[2]	AGL
ArmorResist®	212000	2[1]	–	1-1/2	19.3	500 lbs[2]	AGL
ArmorResist®	213000	3[4]	–	2	25.8	500 lbs[2]	AGL
ArmorResist®	214000	4[1]	–	2	25.8	500 lbs[2]	AGL
ArmorResist®	215000	5[1]	–	2	25.8	500 lbs[2]	AGL
ArmorResist®	216000	6[1]	–	1-13/16	22.6	500 lbs[2]	AGL
ArmorResist®	212100	–	2A	1-3/16	14.7	500 lbs[2]	AGL
ArmorResist®	212200	–	2	1-1/2	19.1	500 lbs[2]	AGL
ArmorResist®	213100	–	3A	1-3/4	22.7	500 lbs[2]	AGL
ArmorResist® Plus	221000	1[1]	–	0.81	8.4	60 x 96	GP
ArmorResist® Plus	222000	2[1]	–	1.03	11.2	60 x 96	GP
ArmorResist® Plus	223000	3[1]	–	1.22	13.5	60 x 96	GP
ArmorResist® Plus	223100	3	–	0.93	11.2	60 x 96	GP
ArmorResist® Plus	224200	4[1]	–	1.22	13.5	60 x 96	GP
ArmorResist® Plus	225000	5[1]	–	1.28	13.6	60 x 96	GP
ArmorResist® Plus	226000	6[1]	–	1.04	10.0	60 x 96	GP
ArmorResist® Plus	227100	7[1]	–	1.64	18.5	60 x 96	GP
ArmorResist® Plus	228000	8[1]	–	2.17	25.1	60 x 96	GP
ArmorResist® Plus	223010	–	3	1.68	18.5	60 x 96	GP
ArmorResist® Plus	224100	–	4	2.27	26.6	60 x 96	GP

(1) indicates UL certification and permanent UL logo.
(2) maximum size is limited by the listed weight.
(3) **AGL**–all-glass laminate; **GP**–glass-clad polycarbonate with exposed polycarbonate.
(4) indicates UL certification and permanent UL logo - indoor only

Oldcastle BuildingEnvelope®

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