

Product Overview



Glazing and Product Care

Product Description

The **ESG Secure™** range comprises multilayer panels incorporating glass, polycarbonate and other specialist interlayers. Some products in the range combine high mechanical stability with tempered safety characteristics.

Installation

The use of compatible panel sizes, frames and glazing methods is essential to ensure that the products perform to the tested and approved parameters of the various test certificates. Panels within the **ESG Secure™** range must be ordered to the exact size as they cannot be altered after manufacture. All products are suitable for both internal and external applications.

Orientation: All panels are marked with the relevant quality stamp which must be glazed facing the attack side. In the case of **ESG Pyrotech™** the outer **Pyrotech™** leaf must be glazed away from the fire side. Customers must specify the attack and fire sides when ordering **ESG Pyrotech™ Secure** products.

Frame Types

To enable **ESG Pyrotech Secure™** to be easily used by a wide range of door and frame manufacturers, the products have been approved within the CERTIFIRE scheme.

(CERTIFIRE is a UKAS accredited approval and certification scheme - run by Exova Fire Research - which assesses the test evidence available for products and provides a field of application for their use.)

Site Storage and Handling

All panels must be stored in a dry environment and protected from the elements at an ambient temperature. Care should be taken to avoid damage to the edges of the panels when handling **ESG Secure™** products. The glass edges should be supported on timber blocks or other non abrasive materials and stacked at an angle of 5-7°.

Maintenance

ESG Secure™ products rated to EN356 and LPS1270 do not require special maintenance procedures.

Once installed the glass should be regularly cleaned simply with warm water, using a soft clean cloth, then rinsed with clean water and dried with a soft dry clean cloth. The use of abrasive cleaners and/or cleaning implements may damage or scratch the panels' exterior surface and should therefore be avoided.

Sealants

When sealants are used for glazing glass/polycarbonate composite panels, extreme caution must be taken in the type of sealant used. Sealants which are compatible with polycarbonate or glass may not be suitable for glazing glass/ polycarbonate composites.

Please refer to our website for further technical information on Glazing and Product Care: www.esg.glass/technical



Quality Standards



Certain **ESG Secure™** security glass products have been tested to Loss Prevention Standard 1270 (Requirements and testing procedures for the LPCB Approval and listing of intruder resistant security glazing units), while other **ESG Secure™** security glass products have been tested to BS EN356 : 2000 (Glass in Building – Security glazing – Testing and classification of resistance against manual attack).

ESG Pyrotech™ Secure LPS 1270, and **ESG Pyrotech™ Secure EN356** has also been approved to conform to BS476-22 : 1987 (Fire tests on building materials and structures) through Exova as pertained within ESG's Certificate CF628.

All laminating processes are conducted in accordance with our Kite Mark License as certificated by the British Standards Institute to BS EN 14449 : 2005, and tested for durability in accordance with BS EN 12543-4 : 1998, and which ESG undergoes regular auditing by the BSI for its Kite Mark License KM511207 and Quality Management System to BS EN 9001 : 2008 to ensure that quality systems continue to operate at an optimum.



ESG Secure™ Solutions

Protecting people and property with the most advanced security glass on the market

In recent years, the requirement for security in the built environment has increased to unprecedented levels. To meet this need, the research and development team at ESG have developed security glass composite panels that meet the increased threat of domestic terrorism and the sophistication, persistence and armoury of the serious 'professional' criminal in attacks against property.

ESG's range of secure products offer high levels of protection and utilise lightweight materials which have been established following extensive research by the in-house team and certified by Europe's leading accredited testing facilities. ESG's range includes the acclaimed **ESG Secure™ EN356** security glass, designed to withstand vandalism and opportunist crime; and **ESG Secure™** tested to LPS 1270.

A security glass which offers resistance against aggressive and sustained attempts to enter property by force. By testing to the latest standard, ESG can now provide a glass range which, when used in LPS 1175 compliant products, will provide a total intruder resistance solution, even if the door or frame manufacturer had originally tested their product with a different glass supplier - and without need for a whole system test. All these products carry the additional peace of mind which comes with being made to BS quality standards in the company's own manufacturing facility and independently tested and certified by the Loss Prevention Certification Board and British Standards Institution.

Ultimate Versatility

In addition to this, ESG has kept in mind the need to answer further challenges. ESG can combine **ESG Pyrotech™** fire resistant safety glass with **ESG Secure™** products to provide unparalleled security and fire resistance in a single product. **ESG Pyrotech™ Secure** products are also fire rated to E30 Ew15 in timber and steel doors and timber and steel screens, and to E60 Ew15 for use in steel screens and doors.



ESG were the first company to achieve approval for their **ESG Secure™ Laminated Security Glazing** to the LPCB Loss Prevention Standard LPS 1270: Issue 1.

Various **ESG Secure™** products tested to LPS 1270 have also been tested to **EN1063** – resistance to ballistic attack from BR2 to BR7. **ESG Ballistic EN1063** bullet resistant glass has a vast array of potential applications including; military installations, government buildings and other secure institutions, personnel protection screens in banks, building societies, airports, post offices, betting shops, petrol filling stations and cash desks; as well as in armoured, cash transfer and private vehicles.

In addition, ESG can provide added features such as sound attenuation, or even decorative effects for corporate branding. ESG can also add a switchable LCD interlayer, **ESG Switchable™** which allows the panel to change from an opaque white to optically clear at the flick of a switch. Although this is commonly regarded as an aesthetic property, it also offers added security by masking vulnerable areas such as bank counters and jewellery stores by depriving the potential assailant of any view of the intended target.

ESG can create bespoke panels to answer the needs of virtually any application. Please speak to an ESG Secure Solutions Adviser to discuss your requirements.

Benefits

- Indistinguishable from monolithic glass of the same thickness
- Breaks safely with broken pieces of glass remaining bonded to the interlayer, reducing risk of injury to those nearby
- Excellent resistance to penetration by accidental or other forced means
- Improved level of noise reduction
- Provides increased protection from damaging UV light



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ESG Secure EN356 / ESG Secure LPS 1270 Rated Products Technical Specification

ESG SECURE™ EN356 STANDARD PRODUCT RANGE								
Product	Thickness (mm)	Weight (kg/ m²)	EN 356 Security Rating	LPS 1270 Security Rating	EN 1063 Ballistic Rating	Multi-Directional	Max Size (mm)	Max Size (m²)
ESG Secure™ P1A	6.8	16	P1A	No Data	No Data	Yes	3210 x 2550	8.1m²
ESG Secure™ P2A	6.8	16	P2A	No Data	No Data	Yes	3210 x 2550	8.1m²
ESG Secure™ P3A	9.2	21	P3A	No Data	No Data	Yes	1200 x 3000	3.6m²
ESG Secure™ P4A	9.5	21	P4A	No Data	No Data	Yes	1200 x 3000	3.6m²
ESG Secure™ P5A	10.3	21	P5A	No Data	No Data	Yes	1200 x 3000	3.6m²
ESG Secure™ P7BF Covers P6B	10.3	22	P7B	No Data	No Data	Yes	1250 x 2050	2.56m²
ESG Secure™ P7BF Covers P6B	11.3	23	P7B	001-	No Data	Yes	1200 x 3000	3.6m²
ESG Secure™ P7BT Covers P6B	11.5	23	P7B	No Data	No Data	Yes	1250 x 2050	2.56m²
ESG Secure™ P7BT Covers P6B	16.5	33	P7B	001-	No Data	Yes	1500 x 3000	4.5m²
ESG Secure™ P8BF	16.3	34	P8B	001-	No Data	Yes	1500 x 3000	4.5m²
ESG Secure™ P8BT	17.5	35	P8B	001-	No Data	Yes	1500 x 3000	4.5m²
ESG Secure™ P8BT	18.5	35	P8B	001-	BR1	Yes	1500 x 3000	4.5m²

ESG SECURE™ EN356 FIRE RESISTANT PRODUCT RANGE (CERTIFIRE APPROVED – CF628)																										
Product	Fire Resistance	EN 12600 Impact Resistance	EN 356 Security Rating	LPS 1270 Security Rating	EN 1063 Ballistic Rating	Thickness (mm)	Weight (Kg/m²)	dB Rating	Multi-Directional	IGU Capability	Available in Shapes	Timber Doors	Timber Doors (IGU)	Timber Screens	Timber Screens (IGU's)	Timber Screens in Plasterboard	Steel Single Doors		Steel Single Doors (IGU)		Steel Double Doors	Steel Double Doors (IGU)	Steel Screens		Steel Screens (IGU)	
												E30 (m²)	E30 (m²)	E30 (m²)	E30 (m²)	E30 (m²)	E30 (m²)	E60 (m²)	E30 (m²)	E60 (m²)	E30 (m²)	E30 (m²)	E30 (m²)	E60 (m²)	E30 (m²)	E60 (m²)
ESG Pyrotech™ Secure P4A/E30	E30	1(C)1	P4A	No Data	No Data	12.3	26	39	No	Yes	Yes	1.36	2.46	4.29	4.29	4.5	2.66	—	2.46	—	2.68	2.46	4.5	—	3.85	—
ESG Pyrotech™ Secure P4A/E60	E60	1(C)1	P4A	No Data	No Data	12.3	26	39	No	Yes	Yes	—	—	—	—	—	—	0.126	—	0.126	—	—	—	3.85	—	3.85
ESG Pyrotech™ Secure P5A/E30	E30	1(C)1	P5A	No Data	No Data	14.3	31	40	Yes	Yes	Yes	1.36	2.46	4.29	4.29	4.5	2.66	—	2.46	—	2.68	2.46	4.5	—	3.85	—
ESG Pyrotech™ Secure P5A/E60	E60	1(C)1	P5A	No Data	No Data	14.3	31	40	Yes	Yes	Yes	—	—	—	—	—	—	0.126	—	0.126	—	—	—	3.85	—	3.85
ESG Pyrotech™ Secure P7B/E30	E30	1(C)1	P7B	001-	No Data	16.5	34	40	Yes	Yes	Yes	1.36	2.46	4.29	4.29	4.5	2.66	—	2.46	—	2.68	2.46	4.5	—	3.85	—
ESG Pyrotech™ Secure P7B/E60	E60	1(C)1	P7B	001-	No Data	16.5	34	40	Yes	Yes	Yes	—	—	—	—	—	—	0.126	—	0.126	—	—	—	3.85	—	3.85
ESG Pyrotech™ Secure P8B/E30	E30	1(C)1	P8B	001-	BR1	18.5	37	40	Yes	Yes	Yes	1.36	2.46	4.29	4.29	4.5	2.66	—	2.46	—	2.68	2.46	4.5	—	3.85	—
ESG Pyrotech™ Secure P8B/E60	E60	1(C)1	P8B	001-	BR1	18.5	37	40	Yes	Yes	Yes	—	—	—	—	—	—	0.126	—	0.126	—	—	—	3.85	—	3.85

ESG SECURE™- LPS1270 STANDARD PRODUCT RANGE								
Product	Thickness (mm)	Weight (kg/ m²)	EN 356 Security Rating	LPS 1270 Security Rating	EN 1063 Ballistic Rating	Multi-Directional	Max Size (mm)	Max Size (m2)
ESG Secure™ 001/16T	16.5	37	P7B	001	BR1	Yes	1500 x 3000	4.5m²
ESG Secure™ 012/20T	20.5	38	>P8B	012	BR2	Yes	1500 x 3000	4.5m²
ESG Secure™ 013/22T	22.5	41	>P8B	013	BR2	Yes	1500 x 3000	4.5m²
ESG Secure™ 123/26T	26	46	>P8B	123	BR2	Yes	1500 x 3000	4.5m²
ESG Secure™ 224/42T	42	72	>P8B	224	BR4	Yes	1500 x 3000	4.5m²
ESG Secure™ 234/45T	45	71	>P8B	234	No Data	Yes	1500 x 3000	4.5m²
ESG Secure™ 235/60T	60	100	>P8B	235	BR5	No	1500 x 3000	4.5m²

ESG SECURE™ - LPS1270 FIRE RESISTANT PRODUCT RANGE (CERTIFIRE APPROVED – CF628)																										
Product	Fire Resist- ance	EN 12600 Impact Resistance	EN 356 Security Rating	LPS 1270 Security Rating	EN 1063 Ballistic Rating	Thickness (mm)	Weight (Kg/m²)	dB Rating	Multi- Directional	IGU Capability	Available in Shapes	Timber Doors	Timber Doors (IGU)	Timber Screens	Timber Screens (IGU's)	Timber Screens in Plasterboard	Steel Single Doors		Steel Single Doors (IGU)		Steel Double Doors	Steel Double Doors (IGU)	Steel Screens		Steel Screens (IGU)	
												E30 (m²)	E30 (m²)	E30 (m²)	E30 (m²)	E30 (m²)	E30 (m²)	E60 (m²)	E30 (m²)	E60 (m²)	E30 (m²)	E30 (m²)	E30 (m²)	E60 (m²)	E30 (m²)	E60 (m²)
ESG Pyrotech™ Secure 001/17/E30	E30	1(C)1	P7B	001-	BR1	17	37	40	Yes	Yes	Yes	1.36	2.46	4.29	4.29	4.5	2.66	—	2.46	—	2.68	2.46	4.86	—	3.85	—
ESG Pyrotech™ Secure 001/17/E60	E60	1(C)1	P7B	001-	BR1	17	37	40	Yes	Yes	Yes	—	—	—	—	—	—	0.126	—	0.126	—	—	—	3.85	—	3.85
ESG Pyrotech™ Secure 012/21/E30	E30	1(C)1	>P8B	012-	BR2	21	39	40	Yes	Yes	Yes	1.36	2.46	4.29	4.29	4.5	2.66	—	2.46	—	2.68	2.46	4.73	—	3.85	—
ESG Pyrotech™ Secure 012/21/E60	E60	1(C)1	>P8B	012-	BR2	21	39	40	Yes	Yes	Yes	—	—	—	—	—	—	0.126	—	0.126	—	—	—	3.85	—	3.85
ESG Pyrotech™ Secure 013/23/E30	E30	1(C)1	>P8B	013-	BR2	23	42	>40	Yes	Yes	Yes	1.36	2.46	4.29	4.29	4.5	2.66	—	2.46	—	2.68	2.46	4.39	—	3.85	—
ESG Pyrotech™ Secure 013/23/E60	E60	1(C)1	>P8B	013-	BR2	23	42	>40	Yes	Yes	Yes	—	—	—	—	—	—	0.126	—	0.126	—	—	—	3.85	—	3.85
ESG Pyrotech™ Secure 123/27/E30	E30	1(C)1	>P8B	123-	BR2	27	46	>40	Yes	Yes	Yes	1.36	2.46	4.29	4.29	4.5	2.66	—	2.46	—	2.68	2.46	4.39	—	3.85	—
ESG Pyrotech™ Secure 123/27/E60	E60	1(C)1	>P8B	123-	BR2	27	46	>40	Yes	Yes	Yes	—	—	—	—	—	—	0.126	—	0.126	—	—	—	3.85	—	3.85
ESG Pyrotech™ Secure 224/42/E30	E30	1(C)1	>P8B	224-	BR4	42	72	>40	Yes	Yes	Yes	1.36	2.46	2.5	2.5	2.5	2.5	—	2.46	—	2.5	2.46	2.5	—	2.5	—
ESG Pyrotech™ Secure 224/42/E60	E60	1(C)1	>P8B	224-	BR4	42	72	>40	Yes	Yes	Yes	—	—	—	—	—	—	0.126	—	0.126	—	—	—	2.5	—	2.5
ESG Pyrotech™ Secure 234/46/E30	E30	1(C)1	>P8B	234-	No Data	46	69	>40	Yes	Yes	Yes	1.36	2.46	2.53	2.53	2.53	2.53	—	2.46	—	2.53	2.46	2.53	—	2.53	—
ESG Pyrotech™ Secure 234/46/E60	E60	1(C)1	>P8B	234-	No Data	46	69	>40	Yes	Yes	Yes	—	—	—	—	—	—	0.126	—	0.126	—	—	—	2.53	—	2.53
ESG Pyrotech™ Secure 235/60/E30	E30	1(C)1	>P8B	235-	BR5	60	100	>40	No	Yes	Yes	1.36	1.8	1.8	1.8	1.8	1.8	—	1.8	—	1.8	1.8	1.8	—	1.8	—
ESG Pyrotech™ Secure 235/60/E60	E60	1(C)1	>P8B	235-	BR5	60	100	>40	No	Yes	Yes	—	—	—	—	—	—	0.126	—	0.126	—	—	—	1.8	—	1.8

NB: Please note our ESG Pyrotech™ Secure E60 Laminates can achieve up to 1.60m² with an increase of 4mm on overall thickness

ESG Secure™ EN356 and ESG Pyrotech™ Secure EN356

Approved to the latest BS EN356 standards for resistance against manual attack, **ESG Secure EN356** is a highly secure glass created to provide high protection against deliberate and opportunist attack.

Designed to protect both people and property against harm from vandals, **ESG Secure EN356** will also resist intrusion by professional burglars and thieves. By combining laminated panels bonded together, with one or more specialist interlayers, ESG can create

the exact specification of glass required, in accordance with the level of security required for most domestic and commercial applications.

ESG has developed **ESG Pyrotech™ Secure EN356**, part of its highly acclaimed fire resistant security glass range, to provide resistance to fire and attack in a single highly technical product.

Applications

Security Screens and Counters / Vision Panels / Security Doors / Display Counters / Art Galleries / Domestic Premises / Viewing Panels / Display Counters

ESG Secure™ and ESG Pyrotech™ Secure LPS 1270 Rated Products

LPS 1270 was developed to increase the current level of security offered by glass tested to European Standard BS EN 356:2000, enabling glazing systems to offer the independently proven higher levels of security which are also compatible with LPS 1175, LPCB's leading standard used for medium and high level physical security products and systems.

Applications

Banks / Jewellers / Secure Units / Detention Centres / Government Buildings / High Risk Environments / Partitioning / Vehicles / Betting Shops / Domestic Premises / Viewing Panels