



## 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 amazing 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, accidental damage and opportunist crime; and the new **ESG Secure 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 exacting 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 EN356** or **ESG Secure LPS 1270** to provide unparalleled security and fire resistance in a single product. **ESG Pyrotech™ Secure EN356** and **LPS 1270** 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.

Various **ESG Secure LPS 1270** products have also been tested



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

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 Polyvision™** 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 resistant 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 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. This is currently the only glass of its kind to be approved by Secured by Design, the initiative from ACPO -the Association of Chief Police Officers.

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 EN356 STANDARD PRODUCT RANGE				
Product	Thickness (mm)	Weight (Kg/m <sup>2</sup> )	Max. Size	IGU Capability
ESG SECURE EN356 P1A	6.8	15.8	3210 x 2550	✓
ESG SECURE EN356 P2A	8.1	18.7	3210 x 2550	✓
ESG SECURE EN356 P3A	8.5	19.1	3210 x 2550	✓
ESG SECURE EN356 P4A	9.5	22.4	2200 x 4300	✓
ESG SECURE EN356 P5A	7.5	16.6	1240 x 1840	✓
ESG SECURE EN356 P6B	11	23	2032 x 3050	✓
ESG SECURE EN356 P7B	11	23	2032 x 3050	✓
ESG SECURE EN356 P8B	13	25	2032 x 3050	✓

ESG SECURE EN356 FIRE RESISTANT PRODUCT RANGE (CERTIFIRE APPROVED - CF628)																						
Product	Thickness (mm)	Weight (Kg/m <sup>2</sup> )	Max. Size	IGU Capability	Timber Doors (IGU & Laminated)		Timber Screens (ESG Pyrotech 6mm)		Timber Screens (IGU & Laminated)		Steel Single Doors (ESG Pyrotech 6mm)		Steel Single Doors (IGU & Laminated)		Steel Double Doors (ESG Pyrotech 6mm)		Steel Double Doors (IGU & Laminated)		Steel Screens (ESG Pyrotech 6mm)		Steel Screens (IGU & Laminated)	
					E30 (m <sup>2</sup> )	E60 (m <sup>2</sup> )	E30 (m <sup>2</sup> )	E60 (m <sup>2</sup> )	E30 (m <sup>2</sup> )	E60 (m <sup>2</sup> )	E30 (m <sup>2</sup> )	E60 (m <sup>2</sup> )	E30 (m <sup>2</sup> )	E60 (m <sup>2</sup> )	E30 (m <sup>2</sup> )	E60 (m <sup>2</sup> )	E30 (m <sup>2</sup> )	E60 (m <sup>2</sup> )	E30 (m <sup>2</sup> )	E60 (m <sup>2</sup> )	E30 (m <sup>2</sup> )	E60 (m <sup>2</sup> )
ESG PYROTECH SECURE P3A/7/E30	7.5	15.8	N/A	✓	—	—	0.86	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
ESG PYROTECH SECURE P4A/10/E30	10.3	22.4	N/A	✓	—	—	0.86	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
ESG PYROTECH SECURE P4A/12/E30	12.3	27.4	N/A	✓	2.46	—	2.08	—	2.46	—	2.66	—	2.46	0.13	2.68	—	2.46	—	4.9	3.85	2.46	—
ESG PYROTECH P5A/ 14/E30/E60	14.3	32.4	N/A	✓	2.46	—	2.08	—	2.46	—	2.66	—	2.46	0.13	2.68	—	2.46	—	4.9	3.85	2.46	—
ESG PYROTECH SECURE P6B/15/E30/E60	15	33	N/A	✓	2.46	—	3.77	—	2.46	—	2.66	0.13	2.46	0.13	2.68	—	2.46	—	4.9	3.85	2.46	—
ESG PYROTECH SECURE P7B/15/E30/E60	15	33	N/A	✓	2.46	—	3.77	—	2.46	—	2.66	0.13	2.46	0.13	2.68	—	2.46	—	4.9	3.85	2.46	—
ESG PYROTECH SECURE P8B/17/E30/E60	17	35	N/A	✓	2.46	—	3.77	—	2.46	—	2.66	0.13	2.46	0.13	2.68	—	2.46	—	4.9	3.85	2.46	—

ESG SECURE LPS 1270 STANDARD PRODUCT RANGE					Bullet Resistance EN 1063	
Product	Thickness (mm)	Weight (Kg/m <sup>2</sup> )	Max. Size	IGU Capability	No Spall	Spall Allowed
ESG SECURE LPS1270 001	13	27	2032 x 3050	✓	—	—
ESG SECURE LPS1270 112	17	29	2032 x 3050	✓	—	BR2
ESG SECURE LPS1270 123	19	31	2032 x 3050	✓	—	BR2
ESG SECURE LPS1270 123	23	36	2032 x 3050	✓	—	BR2
ESG SECURE LPS1270 223	31	50	2032 x 3050	✓	—	—
ESG SECURE LPS1270 224	40	62	2032 x 3050	✓	—	BR4
ESG SECURE LPS1270 234	44	59	2032 x 3050	✓	—	—
ESG SECURE LPS1270 235	57	90	2032 x 3050	✓	—	BR5

ESG SECURE LPS1270 FIRE RESISTANT PRODUCT RANGE (CERTIFIRE APPROVED - CF628)																									
Product	Thickness (mm)	Weight (Kg/m <sup>2</sup> )	IGU Capability	No Spall	Spall Allowed	Timber Doors (ESG Pyrotech 6mm)		Timber Doors (IGU & Laminated)		Timber Screens (ESG Pyrotech 6mm)		Timber Screens (IGU & Laminated)		Steel Single Doors (ESG Pyrotech 6mm)		Steel Single Doors (IGU & Laminated)		Steel Double Doors (ESG Pyrotech 6mm)		Steel Double Doors (IGU & Laminated)		Steel Screens (ESG Pyrotech 6mm)		Steel Screens (IGU & Laminated)	
						E30 (m <sup>2</sup> )	E60 (m <sup>2</sup> )	E30 (m <sup>2</sup> )	E60 (m <sup>2</sup> )	E30 (m <sup>2</sup> )	E60 (m <sup>2</sup> )	E30 (m <sup>2</sup> )	E60 (m <sup>2</sup> )	E30 (m <sup>2</sup> )	E60 (m <sup>2</sup> )	E30 (m <sup>2</sup> )	E60 (m <sup>2</sup> )	E30 (m <sup>2</sup> )	E60 (m <sup>2</sup> )	E30 (m <sup>2</sup> )	E60 (m <sup>2</sup> )	E30 (m <sup>2</sup> )	E60 (m <sup>2</sup> )	E30 (m <sup>2</sup> )	E60 (m <sup>2</sup> )
ESG PYROTECH SECURE LPS1270 001/17/E30/E60	17	37	✓	—	—	1.36	—	2.46	—	3.77	—	2.46	—	2.66	0.13	2.46	0.13	2.68	—	2.46	—	4.9	3.85	2.46	—
ESG PYROTECH SECURE LPS1270 112/21/E30/E60	21	39	✓	—	BR2	1.36	—	2.46	—	3.77	—	2.46	—	2.66	0.13	2.46	0.13	2.68	—	2.46	—	4.9	3.85	2.46	—
ESG PYROTECH SECURE LPS1270 123/23/E30/E60	23	42	✓	—	BR2	1.36	—	2.46	—	3.77	—	2.46	—	2.66	0.13	2.46	0.13	2.68	—	2.46	—	4.9	3.85	2.46	—
ESG PYROTECH SECURE LPS1270 123/27/E30/E60	27	46	✓	—	BR2	1.36	—	2.46	—	3.77	—	2.46	—	2.66	0.13	2.46	0.13	2.68	—	2.46	—	4.9	3.85	2.46	—
ESG PYROTECH SECURE LPS1270 223/35/E30/E60	35	60	✓	—	—	1.36	—	2.46	—	3.77	—	2.46	—	2.66	0.13	2.46	0.13	2.68	—	2.46	—	4.9	3.85	2.46	—
ESG PYROTECH SECURE LPS1270 224/44/E30/E60	44	72	✓	—	BR4	1.36	—	2.46	—	3.77	—	2.46	—	2.66	0.13	2.46	0.13	2.68	—	2.46	—	4.9	3.85	2.46	—
ESG PYROTECH SECURE LPS1270 234/48/E30/E60	48	69	✓	—	—	1.36	—	2.46	—	3.77	—	2.46	—	2.66	0.13	2.46	0.13	2.68	—	2.46	—	4.9	3.85	2.46	—
ESG PYROTECH SECURE LPS1270 235/61/E30/E60	61	100	✓	—	BR5	1.36	—	2.46	—	3.77	—	2.46	—	2.66	0.13	2.46	0.13	2.68	—	2.46	—	4.9	3.85	2.46	—

## ESG Secure LPS 1270 and ESG Pyrotech™ Secure LPS 1270

LPS 1270 was developed to increase the current level of security offered by glass tested to European Standard BS EN 356:2000 (Glass in building, Security glazing, Testing and classification of resistance against manual attack) 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 / Aquaria / High Risk Built Environments/ Partitioning-Vehicles / Betting Shops / Domestic Premises / Viewing Panels

## 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™ Secure** 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 panels do not require any special maintenance procedures. Once installed the glass should be cleaned regularly with warm water and a mild liquid detergent, 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 website for further technical information on Glazing and Product Care: [www.esgsecurityglass.co.uk](http://www.esgsecurityglass.co.uk)



### Quality Standards



**ESG Secure LPS 1270** security glass has been tested to Loss Prevention Standard 1270 (Requirements and testing procedures for the LPCB Approval and listing of intruder resistant security glazing units), and **ESG Secure EN356** security glass has 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.



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