



## ESG Secure Solutions

### *Protecting people and property with one of the leading ranges of 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. In addition, **ESG Secure Ballistic EN 1063** glass provides high level resistance against the firing of specified weapons and ammunition. ESG can now provide a complete glass range for use in virtually all glazed security applications. 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 the ESG secure range to provide unparalleled security and fire resistance in a single product. The ESG secure range is 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.



ESG has achieved approval for their ESG Secure Laminated Security Glazing to the LPCB Loss Prevention Standard LPS 1270: Issue 1.

The **ESG Secure Ballistic EN1063** and **ESG Secure LPS1270** range of products have been tested to EN1063 – resistance to ballistic attack, achieving the full range of threat levels of BR1 through to SG2 and AK47. **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. Please see our ballistic brochure for further information.

Committed to creating spaces with a sense of security without a siege mentality, ESG's full range of security glass products now afford blast protection in accordance with ISO 16933:2007.

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 in an instant. 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



Essex Safety Glass Ltd, Units 1-3 Moss Road, Witham, Essex CM8 3UQ

Tel: 01376 520061 Fax: 01376 521176 Web: [www.esguk.co.uk](http://www.esguk.co.uk) Email: [sales@esguk.co.uk](mailto:sales@esguk.co.uk)



ESG SECURE EN356 STANDARD PRODUCT RANGE

| Product          | Thickness (mm) | Weight (kg/m <sup>2</sup> ) | EN 356 Security Rating | LPS 1270 Security Rating | EN 1063 Ballistic Rating | Multi-Directional | Max Size    | Max Size    |
|------------------|----------------|-----------------------------|------------------------|--------------------------|--------------------------|-------------------|-------------|-------------|
| ESG Secure P1A   | 6.8            | 16                          | P1A                    | No Data                  | No Data                  | Yes               | 2000 X 2000 | 1200 X 3000 |
| ESG Secure P2A   | 6.8            | 16                          | P2A                    | No Data                  | No Data                  | Yes               | 2000 X 2000 | 1200 X 3000 |
| ESG Secure P3A   | 9.2            | 21                          | P3A                    | No Data                  | No Data                  | Yes               | 2000 X 2000 | 1200 X 3000 |
| ESG Secure P4A   | 9.5            | 21                          | P4A                    | No Data                  | No Data                  | Yes               | 2000 X 2000 | 1200 X 3000 |
| ESG Secure P5A   | 10.3           | 21                          | P5A                    | No Data                  | No Data                  | Yes               | 2000 X 2000 | 1200 X 3000 |
| ESG Secure P5AXS | 7.5            | 15.8                        | P5A                    | No Data                  | No Data                  | No                | 1800 X 1220 | 1200 X 1800 |
| ESG Secure P6BF  | 11             | 23                          | P6B                    | 001-                     | No Data                  | Yes               | 2000 X 2000 | 1200 X 3000 |
| ESG Secure P6BT  | 14.5           | 28                          | P6B                    | 001-                     | No Data                  | Yes               | 2000 X 2000 | 1200 X 3000 |
| ESG Secure P7BF  | 11             | 23                          | P7B                    | 001-                     | No Data                  | Yes               | 2000 X 2000 | 1200 X 3000 |
| ESG Secure P7BT  | 14.5           | 28                          | P7B                    | 001-                     | No Data                  | Yes               | 2000 X 2000 | 1200 X 3000 |
| ESG Secure P8BF  | 13             | 25                          | P8B                    | 001-                     | BR1                      | Yes               | 2000 X 2000 | 1200 X 3000 |
| ESG Secure P8BT  | 16.5           | 30                          | P8B                    | 001-                     | BR1                      | Yes               | 2000 X 2000 | 1200 X 3000 |

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 EN356 FIRE RESISTANT PRODUCT RANGE (CERTIFIRE APPROVED - CF628)

| Product                         | EN 12600 Impact Resistance | EN 356 Security Rating | LPS 1270 Security Rating | EN 1063 Ballistic Rating | Thickness (mm) | Weight (Kg/m <sup>2</sup> ) | 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 Double Doors (IGU) |                      | Steel Screens        |                      | Steel Screens (IGU)  |                      |                      |                      |
|---------------------------------|----------------------------|------------------------|--------------------------|--------------------------|----------------|-----------------------------|-----------|-------------------|----------------|---------------------|----------------------|----------------------|----------------------|------------------------|--------------------------------|----------------------|----------------------|--------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
|                                 |                            |                        |                          |                          |                |                             |           |                   |                |                     | E30(m <sup>2</sup> ) | E30(m <sup>2</sup> ) | E30(m <sup>2</sup> ) | E30(m <sup>2</sup> )   | E30(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 1230L Secure P4A   | 1(C)1                      | P4A                    | No Data                  | No Data                  | 12.3           | 26                          | 39        | No                | Yes            | Yes                 | 1.36                 | 2.46                 | 4.29                 | 2.46                   | 4.5                            | 2.66                 | —                    | 2.46                     | —                    | 2.68                 | 2.46                 | 4.9                  | —                    | 3.85                 | —                    |
| ESG Pyrotech 1260L Secure P4A   | 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 1430L Secure P5A   | 1(C)1                      | P5A                    | No Data                  | No Data                  | 14.3           | 31                          | 40        | Yes               | Yes            | Yes                 | 1.36                 | 2.46                 | 4.29                 | 2.46                   | 4.5                            | 2.66                 | —                    | 2.46                     | —                    | 2.68                 | 2.46                 | 4.9                  | —                    | 3.85                 | —                    |
| ESG Pyrotech 1460L Secure P5A   | 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 P6B/E30/E60 | 1(C)1                      | P6B                    | 001-                     | No Data                  | 16.5           | 34                          | 40+       | Yes               | Yes            | Yes                 | 1.36                 | 2.46                 | 4.29                 | 2.46                   | 4.5                            | 2.66                 | 0.126                | 2.46                     | 0.126                | 2.68                 | 2.46                 | 4.9                  | 3.85                 | 3.85                 | 3.85                 |
| ESG Pyrotech Secure P7B/E30/E60 | 1(C)1                      | P7B                    | 001-                     | No Data                  | 16.5           | 34                          | 40+       | Yes               | Yes            | Yes                 | 1.36                 | 2.46                 | 4.29                 | 2.46                   | 4.5                            | 2.66                 | 0.126                | 2.46                     | 0.126                | 2.68                 | 2.46                 | 4.9                  | 3.85                 | 3.85                 | 3.85                 |
| ESG Pyrotech Secure P8B/E30/E60 | 1(C)1                      | P8B                    | 001-                     | BR1                      | 18.5           | 37                          | 40+       | Yes               | Yes            | Yes                 | 1.36                 | 2.46                 | 4.29                 | 2.46                   | 4.5                            | 2.66                 | 0.126                | 2.46                     | 0.126                | 2.68                 | 2.46                 | 4.9                  | 3.85                 | 3.85                 | 3.85                 |

ESG SECURE LPS1270 STANDARD PRODUCT RANGE

| Product                   | Thickness (mm) | Weight (kg/m <sup>2</sup> ) | EN 356 Security Rating | LPS 1270 Security Rating | EN 1063 Ballistic Rating | Multi-Directional | Max Size    | Max Size    |
|---------------------------|----------------|-----------------------------|------------------------|--------------------------|--------------------------|-------------------|-------------|-------------|
| ESG SECURE LPS1270 001/11 | 11             | 26                          | P7B                    | 001-                     | BR1                      | Yes               | 2000 X 2000 | 1200 X 3000 |
| ESG SECURE LPS1270 012/15 | 15             | 28                          | >P8B                   | 012-                     | BR2                      | Yes               | 2000 X 2000 | 1200 X 3000 |
| ESG SECURE LPS1270 013/17 | 17             | 30                          | >P8B                   | 013-                     | BR2                      | Yes               | 2000 X 2000 | 1200 X 3000 |
| ESG SECURE LPS1270 123/21 | 21             | 35                          | >P8B                   | 123                      | BR2                      | Yes               | 2000 X 2000 | 1200 X 3000 |
| ESG SECURE LPS1270 113/30 | 30             | 50                          | >P8B                   | 113                      | No Data                  | Yes               | 2000 X 2000 | 1200 X 3000 |
| ESG SECURE LPS1270 224/38 | 38             | 62                          | >P8B                   | 224                      | BR4                      | Yes               | 2000 X 2000 | 1200 X 3000 |
| ESG SECURE LPS1270 234/41 | 41             | 59                          | >P8B                   | 234                      | No Data                  | Yes               | 2000 X 2000 | 1200 X 3000 |
| ESG SECURE LPS1270 235/56 | 56             | 90                          | >P8B                   | 235                      | BR5                      | No                | 2000 X 2000 | 1200 X 3000 |

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.

At the time of going to print, ESG are the only manufacturer in the world with products tested and approved to meet the LPS1270 standard.

Applications

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

ESG SECURE LPS1270 FIRE RESISTANT PRODUCT RANGE (CERTIFIRE APPROVED - CF628)

| Product                                  | EN 12600 Impact Resistance | EN 356 Security Rating | LPS 1270 Security Rating | EN 1063 Ballistic Rating | Thickness (mm) | Weight (Kg/m <sup>2</sup> ) | 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 Double Doors (IGU) |                       | Steel Screens         |                       | Steel Screens (IGU)   |                       |      |      |
|--|----------------------------|------------------------|--------------------------|--------------------------|----------------|-----------------------------|-----------|-------------------|----------------|---------------------|-----------------------|-----------------------|-----------------------|------------------------|--------------------------------|-----------------------|-----------------------|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------|------|
|  |                            |                        |                          |                          |                |                             |           |                   |                |                     | E30 (m <sup>2</sup> ) | E30 (m <sup>2</sup> ) | E30 (m <sup>2</sup> ) | E30 (m <sup>2</sup> )  | E30 (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 LPS 1270/001/E30/E60 | 1(C)1                      | P7B                    | 001-                     | BR1                      | 17             | 37                          | 40        | Yes               | Yes            | Yes                 | 1.36                  | 2.46                  | 4.29                  | 2.46                   | 4.5                            | 2.66                  | 0.126                 | 2.46                     | 0.126                 | 2.68                  | 2.46                  | 4.9                   | 3.85                  | 3.85 | 3.85 |
| ESG Pyrotech Secure LPS 1270/012/E30/E60 | 1(C)1                      | >P8B                   | 012-                     | BR2                      | 21             | 39                          | 40        | Yes               | Yes            | Yes                 | 1.36                  | 2.46                  | 4.29                  | 2.46                   | 4.5                            | 2.66                  | 0.126                 | 2.46                     | 0.126                 | 2.68                  | 2.46                  | 4.9                   | 3.85                  | 3.85 | 3.85 |
| ESG Pyrotech Secure LPS 1270/013/E30/E60 | 1(C)1                      | >P8B                   | 013-                     | BR2                      | 23             | 42                          | >40       | Yes               | Yes            | Yes                 | 1.36                  | 2.46                  | 4.29                  | 2.46                   | 4.5                            | 2.66                  | 0.126                 | 2.46                     | 0.126                 | 2.68                  | 2.46                  | 4.9                   | 3.85                  | 3.85 | 3.85 |
| ESG Pyrotech Secure LPS 1270/123/E30/E60 | 1(C)1                      | >P8B                   | 123                      | BR2                      | 27             | 46                          | >40       | Yes               | Yes            | Yes                 | 1.36                  | 2.46                  | 4.29                  | 2.46                   | 4.5                            | 2.66                  | 0.126                 | 2.46                     | 0.126                 | 2.68                  | 2.46                  | 4.9                   | 3.85                  | 3.85 | 3.85 |
| ESG Pyrotech Secure LPS 1270/113/E30/E60 | 1(C)1                      | >P8B                   | 113                      | No Data                  | 34             | 60                          | >40       | Yes               | Yes            | Yes                 | 1.36                  | 2.46                  | 4.29                  | 2.46                   | 4.5                            | 2.66                  | 0.126                 | 2.46                     | 0.126                 | 2.68                  | 2.46                  | 4.9                   | 3.85                  | 3.85 | 3.85 |
| ESG Pyrotech Secure LPS 1270/224/E30/E60 | 1(C)1                      | >P8B                   | 224                      | BR4                      | 42             | 72                          | >40       | Yes               | Yes            | Yes                 | 1.36                  | 2.46                  | 4.29                  | 2.46                   | 4.5                            | 2.66                  | 0.126                 | 2.46                     | 0.126                 | 2.68                  | 2.46                  | 4.9                   | 3.85                  | 3.85 | 3.85 |
| ESG Pyrotech Secure LPS 1270/234/E30/E60 | 1(C)1                      | >P8B                   | 234                      | No Data                  | 46             | 69                          | >40       | Yes               | Yes            | Yes                 | 1.36                  | 2.46                  | 4.29                  | 2.46                   | 4.5                            | 2.66                  | 0.126                 | 2.46                     | 0.126                 | 2.68                  | 2.46                  | 4.9                   | 3.85                  | 3.85 | 3.85 |
| ESG Pyrotech Secure LPS 1270/235/E30/E60 | 1(C)1                      | >P8B                   | 235                      | BR5                      | 60             | 100                         | >40       | No                | Yes            | Yes                 | 1.36                  | 2.46                  | 4.29                  | 2.46                   | 4.5                            | 2.66                  | 0.126                 | 2.46                     | 0.126                 | 2.68                  | 2.46                  | 4.9                   | 3.85                  | 3.85 | 3.85 |

## 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.

For full instructions on maintenance, cleaning and handling please visit [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).

The **ESG Secure** range of products have been assessed in accordance with ISO Standard 16933 : 2007 – Glass in building – Explosion-resistant security glazing – Test and classification for arena air-blast loading.

The **ESG secure** range of products have 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.

The **ESG Secure** range has been CE marked in accordance with the Construction Products Regulations 2011.



Essex Safety Glass Ltd, Units 1-3 Moss Road, Witham, Essex CM8 3UQ

Tel: 01376 520061 Fax: 01376 521176 Web: [www.esguk.co.uk](http://www.esguk.co.uk) Email: [sales@esguk.co.uk](mailto:sales@esguk.co.uk)