

Product Data Sheet - Trilite Ultra 45 Energysaver FAIR

Product Description

Trilite Ultra 45 Energysaver FAIRs are Factory Assembled Insulating Rooflights specifically intended for use with composite panel cladding systems and are available to match most systems.

They comprise of a corrugated translucent GRP outer; intermediate layer and flat GRP liner bonded together with Hardpak internal spacers positioned to align with the purlins when they are installed. The outer weighs 4.5 kg/m², and is approximately 2.5mm thick. Typically supplied with an outer fire rating of SAB to BS476 part 3 and liner of Class 1 to BS476 part 7.

BBA Approval

Trilite Ultra 45 Energysaver FAIRs have full BBA approval and is certified under 04/4114.



Safety Requirements / CDM Regulations

Trilite Ultra 45 Energysaver FAIRs achieve Class B non-fragility to ACR[M]001 when fully installed. They meet exceed industry guidelines (as defined in NARM Technical Document NTD03):

	Classification ^a	Expected period of non-fragility ^b
Trilite Ultra 45 Energysaver	Class B	25 years

^a when installed at purlin centres of 0.6 - 2.0m with a roof system which has been determined (without rooflights) to achieve an equal or better non-fragility classification

^b when all other components have been specified accordingly and it has been demonstrated that the roof system (without rooflights) will retain the same non-fragile classification for the same period
PLEASE REFER TO NARM NTD03 FOR FULL DETAILS AND CONDITIONS

Trilite Ultra 45 Energysaver FAIRs when fully fixed will resist loads typically created by foot-traffic or a falling person without damage. For access, crawling boards should be used at all times and rooflights should not be subjected to impact or foot traffic.

Durability

Trilite Ultra 45 Energysaver FAIRs have a life span in excess of 30 years. They have Superlife™ surface protection and UV stabilised resin system to protect against discolouration (yellowing)^c and degradation which would otherwise be caused by UV exposure and will prevent significant discolouration for at least 20 years.

^c performance proven by accelerated weathering test showing delta E less than 10 and light transmission reduced by less than 12% after 3000 hours exposure to QUV testing, comprising cycles of 4 hours of UVA340nm at 60°C and 4 hours condensation at 40°C

Composition & Appearance

Trilite Ultra 45 GRP is manufactured from polyester based resins (containing UV inhibitors, fire retardant and process additives) and chopped strand glass fibre reinforcement, with 33% glass content and are classified CE24^d. Outer sheets also incorporate our Superlife UV protective surface and are classified CE24E^d.

^d as defined in National Annex to BS EN 1013

Design features

All Energysaver FAIRs include Hardpak fillers at each end and every intermediate purlin position, providing much greater support for fasteners to ensure more reliable installation. Hardpak fillers have a bulk compressive modulus of 8MPa, ensuring an 80mm deep filler will compress by less than 0.2mm when subjected to the weight of a 90kg man (applied evenly).

All Energysaver FAIRs include Underlap Strip as standard, specially profiled to match the underlap corrugation and fitted in a single piece to match the full length of the FAIR, allowing use of standard sidelap fasteners to ensure more reliable installation on site.

All Energysaver FAIRs are supplied in Ecopac packaging, All Energysaver FAIRs are supplied in Ecopac packaging, allowing outdoor storage whilst minimizing use of packaging materials reducing waste and enhancing sustainability.

Coloured Sheet

Trilite Ultra 45 Energysaver FAIRs are available as translucent coloured sheet for specific applications^e.

^e please note: some colour pigments can fade over time particularly in translucent sheets, and long term colour stability cannot be guaranteed; please consult BMDS for full details

Manufacture

Trilite Ultra 45 GRP is manufactured to EN 1013 under ISO 9001 Quality Management System.

Tolerances

Sheet weight:	± 10%
Sheet length:	-0 +20mm (for sheets <2.5m) -0% +0.8% (for sheets >2.5m)
Cover width:	± 0.8%
Squareness:	0.5% of cover width

Installation

Full installation details can be found in Technical Bulletin 124 or CAD drawing HC223.

Maintenance, Handling & Storage

For full maintenance, handling and site storage details see separate data sheet - COSHH Data Sheet 02.

Fire Ratings

Building Regulations Approved Document B (2006 edition, amended 2007) sets out the rules for fire safety of buildings, which can be met by achieving specific fire ratings to either British (BS476) or European BS EN 13501) test standards.

Section B2 covers internal fire spread (typically to BS476 pt7) and applies to the linings of both roof and wall, Section B4 covers external fire spread (typically to BS476 part 3) and applies to external roof and wall coverings.

Standard Energysaver rooflights are supplied with the following fire ratings:

	BS476 pt3	BS476 pt7
Outer sheet	SAB	Class 3
Liner panel	SAA	Class 1

Optionally, the fire rating of the outer sheet can be enhanced to match the liner (or the fire rating of the liner can be reduced to match the outer), or the fire rating of either or both sheets can be enhanced to achieve Class 0 as defined by BS476 pt6 and the Building Regulations.

(Certificates from independent laboratories are available to confirm these fire ratings)

For full details see Technical Bulletin 106.

The fire rating of Trilite GRP rooflight sheets is printed on each rooflight; in addition a coloured tracer is incorporated to identify the fire rating:

- SAB Class 3 are identified with a blue tracer
- SAA Class 1 are identified with a red tracer
- SAA Class 0 are identified with a red and yellow tracer

Transmission values

Rooflight application	U value	Tv visible light transmission	G value total solar transmittance	Shading Coefficient
- Energysaver 1.9 (internal layer - thermal membrane)	1.9 W/m ² K	0.56	0.52	0.59
- Energysaver 1.3 (internal layer - Cleartherm)	1.3 W/m ² K	0.51	0.46	0.53
- Energysaver 1.0 (internal layer - 2 x Cleartherm)	1.0 W/m ² K	0.46	0.41	0.47
- Energysaver 0.9 (internal layer - 2 x Cleartherm + gap)	0.9 W/m ² K	0.46	0.38	0.44

Physical Properties

TENSILE STRENGTH 90 MPa	BARCOL HARDNESS 40 - 50	COEFFICIENT OF LINEAR EXPANSION 22 X 10 ⁻⁶ /°C
FLEXURAL STRENGTH 180 MPa	FLEXURAL MODULUS 6600 MPa	SERVICE TEMPERATURE -20°C TO 80°C
FIXING PULL-OUT LOAD 29mm washer: 1710 N	GLASS CONTENT 33%	



Daylight Systems



TECHNICAL SUPPORT:

The manufacturer operates a policy of continuous product improvement, and reserves the right to alter specifications at any time without notice. Every effort has been taken to ensure all details contained in this document are correct at the time of going to press but this document should be used only as a guide and does not in any way form part of a contract or warranty. It is the customer's responsibility to ensure that the product is suitable for the actual conditions of use, which are beyond the control of the manufacturer.