



Daylight Systems

Product data sheet - Trilite 2.4 Energysaver FAIR

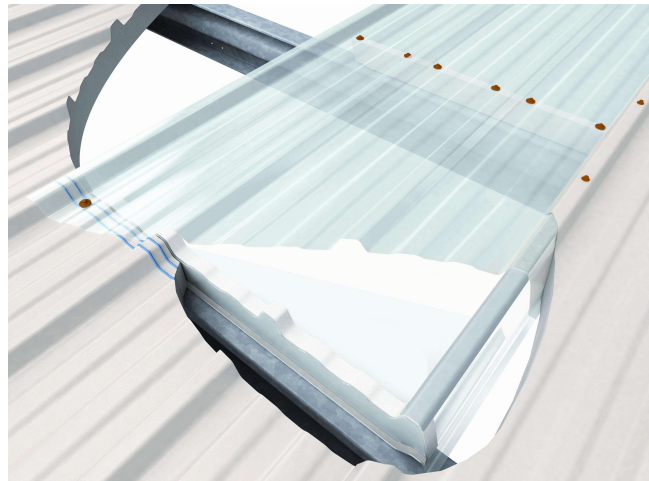
Product Description

Trilite 2.4 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 2.4 kg/m², and is approximately 1.3mm 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 2.4 Energysaver FAIRs have full BBA approval and is certified under 04/4114.



Safety Requirements / CDM Regulations

Trilite 2.4 Energysaver FAIRs achieve Class B non-fragility to ACR[M]001:2005 when fully installed. They meet minimum industry guidelines (as defined in NARM Guidance Note 2006/1):

	Classification ^a	Expected period of non-fragility
Trilite 2.4 Energysaver	Class B	5 - 20 years

^a when installed with a roof system of equal or better non-fragility classification on purlin centres of 0.6m to 2.0m

Trilite 2.4 Energysaver FAIRs when fully fixed will resist loads typically created by foot-traffic or a falling person without failure, although such impacts may result in damage. Crawling boards should be used at all times and rooflights should not be subjected to impact or foot traffic. Damaged rooflights, whether from impact, foot traffic or other cause, must be replaced.

Durability

Trilite 2.4 Energysaver FAIRs have a life span in excess of 25 years. They have Superlife™ surface protection and UV stabilised resin system to protect against discolouration and degradation caused by UV exposure and will prevent significant discolouration for at least 20 years.

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 2.4 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.

Outer sheets also incorporate our Superlife UV protective surface developed in association with Dupont Melinex™, to resist the discoloration and degradation caused by UV exposure.

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, minimising risk of damage during transport and on site and allowing outdoor storage whilst minimizing use of packaging materials reducing waste and enhancing sustainability.

Coloured Sheet

Trilite 2.4 Energysaver FAIRs are available as translucent coloured sheet for specific applications.

Manufacture

Trilite 2.4 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 125 or CAD drawing HC222.

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 (typical 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:

	<i>BS476 pt3</i>	<i>BS476 pt7</i>
Outer sheet	SAB	Class3
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	T _v visible light transmission	G-value total solar transmittance	Shading Coefficient
- Energysaver 1.9 (internal layer - thermal membrane)	1.9 W/m ² K	0.64	0.59	0.67
- Energysaver 1.3 (internal layer - Cleartherm)	1.3 W/m ² K	0.58	0.55	0.63
- Energysaver 1.0 (internal layer - 2 x Cleartherm)	1.0 W/m ² K	0.52	0.49	0.57
- Energysaver 0.9 (internal layer - 2 x Cleartherm + gap)	0.9 W/m ² K	0.52	0.47	0.54

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: 930 N	GLASS CONTENT 33%	

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



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