

## Contour GRP Rooflights

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#### Product weights – single skin applications

Trapezoidal profiles 3.06 kg/m<sup>2</sup> or greater HSE Category B.

Sinusoidal profiles 2.44 kg/m<sup>2</sup> HSE Category C.

**In certain built-up system applications, and when used in conjunction with StepSafe products, Contour will have an HSE Category B, as detailed on page 3.12.**

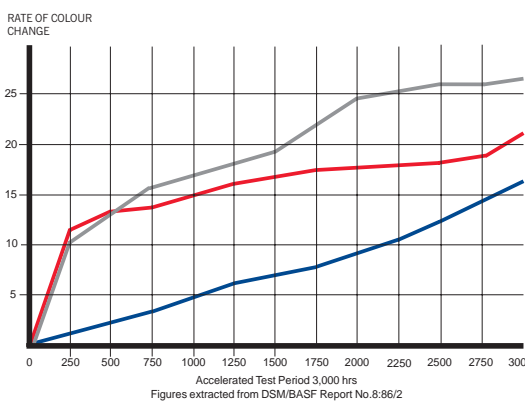
Like StepSafe, the advanced composite profiled sheet, Hambleside Danelaw's range of Contour traditional GRP profiled sheeting is available in over 600 different profile formats.

The GRP profiled sheeting is manufactured on a continual process and complies with BS4154 using thermosetting polyester resins containing curing agents, light stabilisers and glass fibre rovings or glass fibre mat with Melinex 389 for surface weathering protection. This film gives enhanced UV protection better than some traditional gel coats, which may be used in rooflight production.

**Contour GRP sheeting** – 1.53 kg/m<sup>2</sup> and 1.83 kg/m<sup>2</sup> HSE category C.

We do not recommend the use of 1.53 kg/m<sup>2</sup> in roof construction, however, it is ideal for use in wall cladding. We would not recommend the use of 1.83 kg/m<sup>2</sup> in single skin roofing applications and we would offer advice to its use in built-up system applications. We would always recommend the use of a weight of 2.44 kg/m<sup>2</sup> as a minimum rooflight specification. Please see page 1.3 for further information on Contour GRP rooflight applications.

The translucent glass reinforced polyester (GRP) sheeting when used as a rooflight is designed to admit controlled daylight into industrial, recreational, agriculture, commercial and other buildings. Contour is easy to fix, readily available and suitable for use in most climatic conditions. The sheets are easily handled and transported.



## Contour GRP Rooflights and Cladding Panels

### Fire Ratings

All Contour sheets are available in Grades SAB 3, SAA 1 and SAA 0 and may be identified by means of a coloured thread.

### Fire Performance

Contour GRP products are available in grades SAB 3, SAA 1 and SAA 0. Fire rating identification is by means of coloured thread inserted into the product during manufacture.

	BS 476 : Part 3 : 1958	BS 476 : Part 7 : 1997	Identification thread
SAA 0	AA	Class 1	Blue
SAA 1	AA	Class 1	Green
SAB 3	AB	Class 3	Red

Contour GRP SAA 0 sheets tested in accordance with BS 476: part 6: 1989 'Fire propagation test for materials' have an index of performance (i) not exceeding 12 and a sub index (ii) not exceeding 6.

By definition under part E15 Building Regulations 1976, Contour GRP grade SAA 0 sheets are designated Class 0.

Where GRP is being used in a double skin rooflight application, the bottom sheet must meet fire retardance class 1 BS 476 Part 7 requirements. GRP must not be used where the original roof surface is used as an escape route in case of a fire, or is below the level of an existing fire escape.

### Technical Information

#### Effect of Chemicals

Certain acids, alkalis, and solutions of water-soluble gases may in general attack GRP sheets. For further information, please contact our sales office.

#### Liquids Water Absorption

0.3% after 24 hours at 20°C.

#### Biological

Resistant to attack by micro organisms, fungi, larvae, insects, and mildew. Wash with mild detergents to remove deposits.

### Thermal Transmittance ('U' Value of design purposes)

Single glazing 5.7 w/m<sup>2</sup>°C  
Double glazing 2.8 w/m<sup>2</sup>°C based on a recommended air space of 30mm.

### Thermal Movement

Coefficient of linear expansion:  
22 × 10<sup>-8</sup> m/m per °C

### Operating Temperature

Temperature range over which sheets may be used in construction is from 20°C to 80°C. GRP sheets do not become brittle at low temperatures. Some discolouration may occur at temperatures above 65°C.

### Light Diffusion/Transmission

Grade	Diffusion	Transmission
SAA 0	Moderate	= 83 per cent
SAA 1	Moderate	= 83 per cent
SAB 3	Moderate	= 83 per cent

The addition of pigments to obtain varying levels of diffusion will result in a reduction in the light transmission values stated in the table above. For example:

Grade	Diffusion	Transmission
SAB 3	Very heavily	= 60
Opal white	diffused	per cent

### Shading Coefficient

Natural translucent: coefficient 0.8  
Snow or ivory tinted: coefficient 0.51

### Compatibility

No chemical reaction with other established constructional materials.

Contour rooflights are shatterproof and can be cut and drilled with normal hand or power tools.

### Contour GRP Profiled Sheets – Guarantee

Contour sheeting is guaranteed to have a service life of 25 years when used in Northern European Union Countries, providing it was correctly stored, handled, installed and maintained in accordance with the instructions contained within this manual. For full guarantee terms and conditions see page 1.7. For non-fragility status please see page 3.12.

### Contour under HSE Testing

At our testing centre in Daventry, Contour GRP top sheets and liner panels were subjected to a series of tests to comply with HSE guidelines. All products were taken from standard production samples of weights of 3.06 kg/m<sup>2</sup>, 2.44 kg/m<sup>2</sup> and 1.83 kg/m<sup>2</sup>.

These tests were conducted in the presence of representatives of the HSE, Rapra Technology and independent consultants. Photographs and video footage were taken of the test procedures.

### Fixings

5 (number) primary fixings (fixed in every trough) with a minimum 29 mm washer dependent upon profile.

Side laps sealed with 9 mm × 3 mm cross linked Butyl type sealant with sidelap stitches at 300 mm centres.

Heads and tail laps to be a minimum of 150 mm long and sealed with 18-4v cross linked Butyl type sealant or two rows of 9 mm × 3 mm sealant.

The sheets were fixed directly on to purlins at 1800 mm purlin centres.

### Results

The Contour rooflight top sheet, at a weight of 3.06 kg/m<sup>2</sup> passed with an HSE Category B when used in a single skin application.

Contour liner panels at a weight of 2.44 kg/m<sup>2</sup>, when used in conjunction with a Contour 3.06 kg/m<sup>2</sup> top sheet, are also HSE Category B.

When Contour 2.44 kg/m<sup>2</sup> weight product is used in conjunction with a StepSafe product then the HSE classification for built-up systems would be classified as Category B.

Contour top sheets and liner panels at a weight of 1.83 kg/m<sup>2</sup> obtained HSE classification C. We do not recommend that Category C panels be used as rooflights, although in certain conditions they may be used as liner panels in Factory Assembled Rooflight construction.



*Lining up for the first drop on to the unfixed and untaped side laps of the Contour Class 1 fire rated Liner Panel 2.44 kg/m<sup>2</sup> from a height of 1.2 metres.*



*After the second drop in the test sequence from a height of 1.2 metres the Contour Liner Panel shows minimal deflection.*