

FIRE - ROOF APPLICATION: WALES

Filon Products Ltd manufacture three Fire Grades to meet the requirements of The Building Regulations Wales 2010, Approved Document B, Fire safety: Volume 2 - Buildings Other Than Dwellingshouses.

Filon sheets are tested and classified in accordance with the following standards:

BS EN 13501 Part 5 - Classification using data from external fire exposure to roofs tests.

BS 2782-0 Annex B Method 508A - Classification for TP(a) assessment rating of plastics.

BS 476 Part 3 - Classification and method of test for external fire exposure to roofs.

BS 476 Part 6 - Method of test for fire propagation of products.

BS 476 Part 7 - Method of test to determine the classification of the surface spread of flame of products.

Filon fire grades and test ratings are as follows:

Grade 300 - B_{ROOF}(t4) to BS EN 13501 Part 5
SAB to BS 476 Part 3
Class 3 to BS 476 Part 7

Grade 104 - B_{ROOF}(t4) to BS EN 13501 Part 5
TP(a) to BS 2782-0 Method 508A
SAA to BS 476 Part 3
Class 1 to BS 476 Part 7

Grade 101 - B_{ROOF}(t4) to BS EN 13501 Part 5
TP(a) to BS 2782-0 Method 508A
SAA to BS 476 Part 3
Class 1 to BS 476 Part 7
Class 0 to BS 476 Part 6

Our recommendations are provided in good faith, but approval from the appropriate local government authority may be required in certain circumstances or if there is any uncertainty regarding the correct material to use. The following references are taken from the abovementioned document.

Internal Liners and Single Skin

Section B2 - Section 7: *Wall and ceiling linings*, provides classifications to BS EN 13501 Part 1 and BS 476 Part 7. Clause 7.1, Table 10: *Classification of linings*, lists the requirements for various building types and room size.

Class 3 - Grade 300 for rooms not more than 30m² in non-residential accommodation.

Class 1 - Grade 104 for other rooms including garages: Note that this covers the majority of industrial applications.

Class 0 - Grade 101 for a circulation space, subject to Building Control approval.

Please note that Building Control approval is strongly recommended for large area applications.

There are limitations stated in Section 7 for a rooflight liner or single skin rooflight that is rated Class 3 and for certain thermoplastic rooflights, these restrictions do not apply to Grades 101 & 104. Table 11, along with Diagrams 27 and 27A, outlines the criteria for using rooflights with a Class 3 inner surface as follows:

Diagram 47 provides the same restrictions for rooflights with a Class D-s3,d2 or Class 3 inner surface as Diagram 27 in terms of area and space separation.

Each rooflight area or rooflight group must not exceed 5m² area. The minimum space separation in any direction between rooflight areas is 3m. For industrial and other non-residential purpose groups this may be reduced to a minimum of 1.8 metres, but the rooflights should be evenly distributed and not exceed 20% of the floor area of the room.

Note that GRP roof liners and single skin sheets **must not** be used within 1.5m of a compartment wall.

External Roofs

Section B4 Section 15: *Roof Coverings*, provides classifications to BS EN 13501 Part 5 and BS 476 Part 3. Table 16, *Limitations on roof coverings*, lists the designation for a roof covering in relation to the minimum distance from any point on a relevant boundary.

Using the information listed in Table 16, the following recommendations apply:

There are no boundary restrictions on the use of **any** Filon Fire Grade roof covering, but the requirements for a liner still apply.

Table 17 provides guidance for the permissible use of rooflights having a Class 3 lower surface; therefore, **Filon Grade 300** may be used in the following applications:

- A balcony, veranda, carport, covered way or loading bay, which has at least one longer side wholly or permanently open.
- Detached swimming pool.
- Conservatory, garage, or outbuilding, with a maximum floor area of 40m².

External Walls

Section B4 Section 13: *Construction of external walls*, lists the classifications for an external wall surface depending on building height and proximity to a relevant boundary.

Using the information in Diagram 40, the following recommendations for walls are based upon current requirements for industrial, storage and other non-residential buildings. It is strongly recommended that Building Control approval is sought if there is any concern or doubt regarding the correct use of materials.



External Wall Surfaces

Distance From Boundary	Building Height	Required Filon Fire Grade
Less than 1m	Less than 18m	Grade 101
Less than 1m	More than 18m	Grade 101
More than 1m	Less than 18m	Grade 300
More than 1m	Ground level to 18m	Grade 104 (1)
More than 1m	From 18m and over	Grade 101

(1) In practical terms it would be prudent to use **Filon Grade 101** for the complete wall to ensure consistency of appearance and to reduce the risk of site error.



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