

Installation of sheet roof and wall coverings — Profiled fibre cement — Code of practice

ICS 91.060.10; 91.060.20

Committees responsible for this British Standard

The preparation of this British Standard was entrusted by Technical Committee B/542, Roofing and cladding products for discontinuous laying, to Subcommittee B/542/4, Fibre reinforced cement sheeting for roofing, upon which the following bodies were represented:

Association of Building Component Manufacturers

Association of Building Engineers

Consumer Policy Committee of BSI

Department of the Environment, Transport and the Regions
(British Board of Agrément)

Department of the Environment, Transport and the Regions
[Building Research Establishment (BRE)]

Fibre Cement Manufacturers Association Ltd.

Glassfibre Reinforcement Cement Association

National Federation of Roofing Contractors

This British Standard, having been prepared under the direction of the Sector Policy and Strategy Committee for Building and Civil Engineering, was published under the authority of the Standards Policy and Strategy Committee and comes into effect on 2 October 2001

© The British Standards Institution 2013
Published by BSI Standards Limited 2013

The following BSI references relate to the work on this standard:

Committee reference B/542/4
Drafts for comment
00/101868 DC
13/30271501 DC

ISBN 978 0 580 80703 9

Amendments issued since publication

Amd. No.	Date	Comments
A1	October 2013	See Foreword

Contents

	Page
Committees responsible	Inside front cover
Foreword	ii
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Classification	2
5 Checking, handling and working, site storage of materials and preparation	2
6 Installation of sheets	4
7 Safety and general precautions	14
Bibliography	15
Figure 1 — Mitring guide	5
Figure 2 — Method for checking tightness of fastener	6
Figure 3 — Exposure to wind driven rain	8
Figure 4 — Lap seal positions	10
Table 1 — Acceptance characteristics (BS EN 494:1994, Table 5)	2
Table 2 — Sheltered and moderate exposure sites (less than 56.5 l/m ² per spell)	9
Table 3 — Moderate and severe exposure sites (greater than or equal to 56.5 l/m ² per spell)	9

Foreword

This British Standard is published by BSI Standards Limited, under licence from The British Standards Institution.

BS 8219:2001+A1:2013 supersedes BS 8219:2001, which is withdrawn.

Text introduced or altered by Amendment No. 1 is indicated in the text by tags **A1** and **A1**. Minor editorial changes are not tagged.

This British Standard has been prepared by Technical Committee B/542/4.

This code of practice takes into account the change to non asbestos reinforced fibre cement profiled sheets and accessories together with the introduction of proprietary self-drilling fastener systems.

It has been assumed in the preparation of this code of practice that the execution of its provisions is entrusted to appropriately experienced and competent people, that the design of external sheet roof and wall coverings is entrusted to suitably qualified designers and that installation is carried out by competent operatives and supervisors. **A1** It has also been assumed that the structure to which the profiled sheets and fittings are being fixed has been correctly designed, fabricated and erected. **A1**

Acknowledgement is given to Marley Eternit Ltd. for permission to use the drawings in this code of practice and to the National Federation of Roofing Contractors (NFRC) for permission to reproduce them from *Profiled sheet roofing and cladding — A guide to good practice* [1].

As a code of practice this British Standard takes the form of guidance and recommendations. It should not be quoted as if it were a specification and particular care should be taken to ensure that claims of compliance are not misleading.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

Attention is drawn to the following statutory regulations: Control of Substances Hazardous to Health (COSHH) Regulations 1994 [2], Lifting Operations and Lifting Equipment Regulations 1998 [3], Health and Safety at Work etc. Act 1974 [4], Special Waste Regulations 1996 [5], and the Construction (Design and Management) Regulations 1994 [6].

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 15 and a back cover.

The BSI copyright notice displayed in this document indicates when the document was last issued.

1 Scope

This British Standard code of practice gives recommendations for basic workmanship and tasks carried out in relation to the installation of profiled fibre cement sheets for roofing and external wall cladding including associated fittings and accessories.

This code of practice also gives recommendations for design specific to the use of profiled fibre cement sheets for roof and wall cladding on buildings.

NOTE 1 For design aspects of profiled fibre cement sheeting reference should be made to BS 5427-1.

NOTE 2 This code of practice makes no reference to asbestos cement.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this British Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. For undated references, the latest edition of the publication referred to applies.

BS 5427-1:1996, *Code of practice for the use of profiled sheet for roof and wall cladding on buildings — Part 1: Design*.

BS 6100-1.3.2, *Glossary of building and civil engineering terms — Part 1: General and miscellaneous — Section 1.3: Parts of construction works — Subsection 1.3.2: Roofs and roofing*.

NA to BS EN 1991-1-1, *Eurocode 1 – Actions on structures – Part 1-1: General actions – Densities, self-weight, imposed loads for buildings*

NA to BS EN 1991-1-3, *Eurocode 1 – Actions on structures – Part 1-3: General actions – Snow loads*

NA to BS EN 1991-1-4, *Eurocode 1 – Actions on structures – Part 1-4: General actions – Wind actions*

BS EN 494, *Fibre-cement profiled sheets and fittings for roofing — Product specification and test methods*.

3 Terms and definitions

For the purposes of this British Standard the terms and definitions given in BS 6100-1.3.2 and the following apply.

3.1

cladding assembly

roof or wall covering system, which may be a site assembly of liner, spacer and profiled sheeting elements together with insulation and vapour control layers

3.2

profiled sheet

sheet, longitudinally formed, with regularly spaced shapes or sinusoidal cross-sections, which can support load over a span

3.3

short sheet

sheet having a length less than or equal to 0.9 m

3.4

long sheet

sheet having a length greater than 0.9 m

3.5

primary fastener

fastener that secures profiled sheeting and/or lining to the supporting structure sheeting to purlin or spacer, or spacer to purlin

3.6**secondary fastener**

fastener that secures the side laps of translucent sheets to side laps of profiled sheets but not to the supporting structure and which is used to attach accessories such as flashings to sheets

3.7**fibre cement**

cement reinforced with natural or man-made fibres excluding reinforcement by asbestos fibres

3.8**lap**

amount one sheet overlaps another at either the end (end lap) or the side (side lap)

3.9**pitch**

degree to which the roof covering slopes from the horizontal

4 Classification

Fibre reinforced profiled sheets should be classified in accordance with BS EN 494. The characteristics of profile shapes and longitudinal and cross breaking strengths should be in accordance with Table 1.

Table 1 — Acceptance characteristics (BS EN 494:1994, Table 5)

Category	Height of corrugations mm	Long sheets					Short sheets	
		Minimum thickness mm	Breaking load		Bending moment at rupture		Minimum thickness mm	Bending movement at rupture N·m/m
			Class 1 N/m	Class 2 N/m	Class X N m/m	Class Y N m/m		
A	15 to 30	4.0	1 400	1 250	40	30	3.5	25
B	25 to 45	5.0	2 500	2 000	55	40	4.0	30
C	40 to 80	5.2	4 250	3 500	55	40	4.0	30
D	60 to 120	5.5	7 000	5 500	55	45	5.0	40
E	90 to 150	6.0	12 500	8 500	55	45	—	—

NOTE A special class 3 with a minimum breaking load per metre width of 2 200 N/m in category C for sheets of length greater than 0.90 m and less than 1.25 m is also available.

Class 1 sheets are recommended, as breaking load levels are similar to asbestos fibre reinforced sheet strengths, that have proven experience in the UK.

5 Checking, handling and working, site storage of materials and preparation**5.1 Checking****5.1.1 Delivery note**

Delivery notes and any certificates of quality and origin should be checked together with product identification marks and/or labels before materials are accepted on site.

5.1.2 Condition

The quantities and condition of all products, fittings and accessories should be checked. If they are not satisfactory the supplier should be contacted immediately. No unsatisfactory products, fittings and accessories should be used.

5.1.3 Painted sheets

Painted sheets and fittings should be checked to ensure that they have been painted to the colour as ordered.