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Agrément Certificate

86/1671

Product Sheet 2

ALUMASC RAINWATER SYSTEMS

ALUMASC OGEE GUTTER SYSTEMS

This Agrément Certificate Product Sheet⁽¹⁾ relates to Alumasc Ogee Gutter Systems, mill-finished or polyester-coated aluminium eaves guttering for conveying rainwater from roofs.

(1) Hereinafter referred to as 'Certificate'.

CERTIFICATION INCLUDES:

- factors relating to compliance with Building Regulations where applicable
- factors relating to additional non-regulatory information where applicable
- independently verified technical specification
- assessment criteria and technical investigations
- design considerations
- installation guidance
- regular surveillance of production
- formal three-yearly review.



KEY FACTORS ASSESSED

Performance of joints — joints between gutter sections and fittings are watertight under conditions of thermal movement in excess of those expected to occur in practice (see section 6).

Resistance to loading — gutters have adequate resistance to snow loading (see section 7).

Durability — the systems will have a life expectancy of 40 years in rural and suburban conditions and 25 years in industrial and coastal conditions (see section 10).



The BBA has awarded this Certificate to the company named above for the systems described herein. These systems has been assessed by the BBA as being fit for their intended use provided they are installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agreement

Date of Third issue: 28 September 2020

Originally certificated on 25 June 1986

Hardy Giesler
Chief Executive Officer

The BBA is a UKAS accredited certification body – Number 113.

The schedule of the current scope of accreditation for product certification is available in pdf format via the UKAS link on the BBA website at www.bbacerts.co.uk

Readers MUST check the validity and latest issue number of this Agrément Certificate by either referring to the BBA website or contacting the BBA directly.

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British Board of Agrément

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Regulations

In the opinion of the BBA, Alumasc Ogee Gutter Systems, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements of the following Building Regulations (the presence of a UK map indicates that the subject is related to the Building Regulations in the region or regions of the UK depicted):



The Building Regulations 2010 (England and Wales) (as amended)

Requirement:	H3	Rainwater drainage
Comment:		See section 8 of this Certificate.
Regulation:	7(1)	Materials and workmanship
Comment:		The systems are acceptable. See section 10 and the <i>Installation</i> part of this Certificate.



The Building (Scotland) Regulations 2004 (as amended)

Regulation:	8(1)(2)	Durability, workmanship and fitness of materials
Comment:		The systems can contribute to a construction satisfying this Regulation. See sections 9.1, 9.2 and 10 and the <i>Installation</i> part of this Certificate.
Regulation:	9	Building standards applicable to construction
Standard:	3.6	Surface water drainage
Comment:		The systems can satisfy the relevant requirements of this Standard. See section 8 of this Certificate.



The Building Regulations (Northern Ireland) 2012 (as amended)

Regulation:	23	Fitness of materials and workmanship
Comment:		The systems are acceptable. See section 10 and the <i>Installation</i> part of this Certificate.
Regulation:	82	Rainwater drainage
Comment:		See section 8 of this Certificate.

Construction (Design and Management) Regulations 2015

Construction (Design and Management) Regulations (Northern Ireland) 2016

Information in this Certificate may assist the client, designer (including Principal Designer) and contractor (including Principal Contractor) to address their obligations under these Regulations.

Additional Information

NHBC Standards 2020

In the opinion of the BBA, Alumasc Ogee Gutter Systems, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements in relation to *NHBC Standards, Part 7 Roofs* (Chapters 7.1.12 and 7.2.22).

Technical Specification

1 Description

1.1 Alumasc Ogee Gutter Systems comprise the items listed in Tables 1 to 4.

Table 1 Ogee gutters and fittings⁽¹⁾

Description	100 mm	113 mm	125 mm
	(4")	(4½")	(5")
	Code number	Code number	Code number
1830 mm length gutter	OG1/31	OG2/45	OG3/173
610 mm length gutter	OG1/156	OG2/157	OG3/176
90° angle external	OG1/34	OG2/48	OG3/177
90° angle internal	OG1/35	OG2/49	OG3/178
135° angle external	OG1/36	OG2/50	OG3/179
135° angle internal	OG1/37	OG2/51	OG3/180
81 mm diameter socket running outlet	—	OG2/368	OG3/181
67 mm diameter socket running outlet	OG1/38	OG2/52	OG3/181
72 mm x 72 mm socket running outlet	OG1/386	OG2/387	OG3/388
81 mm stop end outlet with socket	—	—	OG3/3/182
67 mm diameter stop end outlet with socket	OG1/39	OG2/53	OG3/182
81 mm stop end outlet with spigot	—	—	OG3/3/183
67 mm stop end outlet with spigot	OG1/40	OG2/54	OG3/183
Union clip	OG1/41	OG2/55	OG3/184
Stop end for internal socket	OG1/42	OG2/56	OG3/185
Stop end for external spigot	OG1/43	OG2/57	OG3/186
Fascia bracket	OG1/44	OG2/58	OG3/187
Universal drive-in rise and fall bracket	63.2919	63.2919	63.2919
Universal rafter arm (to be used with appropriate fascia bracket)			
— top fix 63.29.15(26°) 63.29.16(40°)			
— side fix 63.29.17(26°) 63.29.18(40°)			

(1) Brackets for different roof pitches are available.

Table 2 Moulded Ogee Number 46 gutters and fittings⁽¹⁾

Description	100 mm x 75 mm	125 mm x 100 mm	150 mm x 100 mm
	(4" x 3")	(5" x 4")	(6" x 4")
	Code number	Code number	Code number
1830 mm length gutter	MG2/217	MG1/196	MG3/259
610 mm length gutter	MG2/220	MG1/199	MG3/262
90° angle external	MG2/221	MG1/200	MG3/263
90° angle internal	MG2/222	MG1/201	MG3/264
135° angle external	MG2/223	MG1/202	MG3/272
135° angle internal	MG2/224	MG1/203	MG3/273
102 mm diameter socket running outlets	—	MG1/253	MG3/265
81 mm diameter socket running outlets	MG2/370	MG1/204	MG3/266
67 mm diameter socket running outlet	MG2/225	MG1/205	MG3/267
72 mm x 72 mm socket running outlet	MG2/356	MG1/358	MG3/361
102 mm x 76 mm socket running outlet	MG2/357	MG1/359	MG3/362
102 mm x 102 mm socket running outlet	—	MG1/360	MG3/363
Union clip	MG2/231	MG1/213	MG3/269
Stop end right-hand internal	MG2/232	MG1/214	
Stop end right-hand external			MG3/271
Fascia bracket	MG2/234	MG1/216	MG3/268
Stop end right-hand internal			MG3/270
Stop end right-hand external	MG2/233	MG1/215	
Universal drive-in rise and fall bracket	UNI632919	UNI632919	UNI632919
Universal rafter arm (to be used with appropriate fascia bracket)			
— top fix UNI63.29.15(26°) UNI63.29.16(40°)			
— side fix UNI63.29.17(26°) UNI63.29.18(40°)			

(1) Brackets for different roof pitches are available.

Table 3 Extruded round downpipes and die-cast fittings

Description	Standard 1.2 mm	Standard 1.2 mm	Standard 1.6 mm	Standard 1.6 mm
	(18 SWG)	(18 SWG)	(16 SWG)	(16 SWG)
	63 mm (2½")	75 mm (3")	100 mm (4")	150 mm (6")
	Code number	Code number	Code number	Code number
3000 mm pipe with socket	RW1/3M	RW2/3M	RW3/3M	RW60/3M
2000 mm pipe with socket	RW1/2M	RW2/2M	RW3/2M	RW60/2M
1000 mm pipe with socket	RW1/1M	RW2/1M	RW3/1M	RW60/1M
Eared pipe socket	RW1/240	RW2/241	RW3/242	RW60/PS
76 mm projecting offset	RW1/87	RW2/90	RW3/118	RW60/PO/3
114 mm projecting offset	RW1/163	RW2/168	RW3/171	
152 mm projecting offset	RW1/62	RW2/76	RW3/119	RW60/PO/6
229 mm projecting offset	RW1/63	RW2/77	RW3/120	RW60/PO/9
305 mm projecting offset	RW1/64	RW2/78	RW3/121	RW60/PO/12
381 mm projecting offset	RW1/65	RW2/79	RW3/122	RW60/PO/15
457 mm projecting offset	RW1/88	RW2/91	RW3/123	RW60/PO/18
533 mm projecting offset	RW1/89	RW2/92	RW3/124	RW60/PO/21
610 mm projecting offset	RW1/164	RW1/169	RW3/172	RW60/PO/24
686 mm projecting offset	RW1/190	RW2/192	RW3/194	
762 mm projecting offset	RW1/191	RW2/193	RW3/195	
229 mm two-part offset	RW1/350	RW2/343		
381 mm two-part offset	RW1/351	RW2/344		
457 mm two-part offset	RW1/352	RW2/345		
685 mm two-part offset	RW1/353	RW2/346		
914 mm two-part offset	RW1/354	RW2/347		
Eared shoe	RW1/66	RW2/80	RW3/125	RW60/SH
92½° single branch	RW1/67	RW2/81	RW3/126	RW60/BR/92
112½° single branch	RW1/68	RW2/82	RW3/127	RW60/BR/112
135° branch	RW1/BR/135	RW2/BR/135	RW3/BR/135	RW60/BR/135
92½° bend	RW1/69	RW2/83	RW3/128	RW60/BR/92
112½° bend	RW1/70	RW2/84	RW3/129	RW60/B/112
135° bend	RW1/165	RW2/327	RW3/328	RW60/B/135
Rain-water head flat back	RW1/72	RW1/86	RW3/131	
Rain-water head rectangular	RW1/111	RW2/112	RW3/113	
Rain-water head ornamental	RWOH/25	RWOH/30	RWOH/40	
Pipe clip standard base	RW1/236	RW2/237	RW3/238	RW60/PC
Pipe clip small base	RW1/SB/PC	RW2/SB/PC	RW3/SB/PC	
Pipe clip with galvanized extension base	RW1/364	RW2/365	RW3/366	
Access pipe	RW1/256	RW2/257	RW3/258	RW60/ACP

Table 4 Extruded square/rectangular downpipes and die-cast fittings

Description	Standard 1.2 mm	Standard 1.2 mm	Standard 1.6 mm
	(18 SWG) 72 mm x 72 mm	(18 SWG) 102 mm x 76 mm	(16 SWG) 102 mm x 102 mm
	Code number	Code number	Code number
1000 mm pipe with socket	RW33/1M	RW43/1M	RW44/1M
2000 mm pipe with socket	RW33/2M	RW43/2M	RW44/2M
3000 mm pipe with socket	RW33/3M	RW43/3M	RW44/3M
Eared pipe socket	RW33/PS	RW43/PS	RW44/PS
92½° bend right hand	RW33/B/92R	RW43/B/92R	RW44/B/92R
112½° bend right hand	RW33/B/112R	RW43/B/112R	RW44/B/112R
135° bend right hand	RW33/B/135R	RW43/B/135R	RW44/B/135R
92½° single branch	RW33/BR/92	RW43/BR/92	RW44/BR/92
112½° single branch	RW33/BR/112	RW43/BR/112	RW44/BR/112
135° branch	RW33/BR/135	RW43/BR/135	RW44/BR/135
76 mm one-part offset	RW33/PO/3	RW43/PO/3	RW44/PO/3
305 mm two-part offset	RW33/AO/12	RW43/AO/12	RW44/AO/12
533 mm two-part offset	RW33/AO/21	RW43/AO/21	RW44/AO/21
762 mm two-part offset	RW33/AO/30	RW43/AO/30	RW44/AO/30
Access pipe	RW33/ACP	RW43/ACP	RW44/ACP
Eared shoe	RW33/SH	RW43/SH	RW44/SH
Rain-water head rectangular	RW33/RH	RW43/RH	RW44/RH
Rain-water head ornamental	RWOH/33	RWOH/43	RWOH/44
Pipe clip standard base	RW33/PC	RW43/PC	RW44/PC
Pipe clip small base	RW33/SB/PC	RW43/SB/PC	RW44/SB/PC
Pipe clip with galvanized extension base	RW33/EX/PC	RW43/EX/PC	RW44/EX/PC

1.2 The half round gutter systems are available in the profiles and sizes listed in Table 5.

Table 5 Profiles and sizes

Profile	Size (mm)
Ogee	100, 113 and 125
Moulded Ogee	100 x 75, 125 x 100 and 150 x 100

1.3 All components are manufactured from aluminium (see Table 6) and are available mill finished or polyester coated (see Product Sheet 4). The gutter lengths have a minimum wall thickness of 3.2 mm. Downpipes are available in nominal diameters of 63, 75 and 100 mm or in sections of 75 and 100 mm square and 100 by 75 mm rectangular. Screws, nuts and washers are supplied on request.

Table 6 Specifications of aluminium components

Component	Type of aluminium	Standard
Gutter lengths and fittings	EN AC 46-100 (LM2) EN AC 44-100 (LM6)	BS EN 1706, BS 8530
Downpipes	6063	BS EN 573 ⁽¹⁾ , BS EN 755 ⁽²⁾ , BS EN 12020 ⁽³⁾

(1) Parts 1 to 3.

(2) Parts 1 to 3 and 7.

(3) Parts 1 and 2.

1.4 One end of a gutter section is recessed to receive the mating end of the adjacent section by overlapping on a spigot/socket arrangement. Slots are provided for fixing with screws, nuts and washers. Fittings also use this jointing system.

1.5 Joints in downpipes are made using the loose sockets supplied and are normally unsealed but, if required, they can be sealed using a suitable silicone sealant (see section 13.2).

2 Manufacture

2.1 The system components are manufactured from aluminium to the required specifications and dimensions and powder coated to BS EN 12206-1 : 2004, if required. Gutter lengths are gravity cast and fittings are pressure cast. Downpipes are extruded and bought in to the required specification.

2.2 As part of the assessment and ongoing surveillance of product quality, the BBA has:

- agreed with the manufacturer the quality control procedures and product testing to be undertaken
- assessed and agreed the quality control operated over batches of incoming materials
- monitored the production process and verified that it is in accordance with the documented process
- evaluated the process for management of nonconformities
- checked that equipment has been properly tested and calibrated
- undertaken to carry out the above measures on a regular basis through a surveillance process, to verify that the specifications and quality control operated by the manufacturer are being maintained.

2.3 The management system of Alumasc Building Products Ltd has been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2015 by Centre for Assessment Ltd (Certificate 02/1832).

3 Delivery and site handling

3.1 Mill-finished gutters, downpipes and fittings are delivered to site unprotected, and coated components are wrapped in polythene. Reasonable care should be taken to avoid damage during storage, handling and installation.

3.2 In accordance with normal good practice, the components should be stored under cover and away from the risk of impact and the effects of weather.

Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on Alumasc Ogee Gutter Systems.

Design Considerations

4 General

Alumasc Ogee Gutter Systems are satisfactory for use as eaves guttering for conveying rainwater from roofs.

5 Practicability of installation

The systems are designed to be installed by a competent general builder, or a contractor, experienced with these types of systems.

6 Performance of joints

Correctly made joints between adjacent gutter sections, and between gutter sections and fittings, are watertight under conditions of thermal movement in excess of those expected to occur in practice.

7 Resistance to loading

The systems have adequate resistance to impacts and snow, water and other loads likely to occur during and after installation.

8 Flow characteristics



The flow capacities, when calculated in accordance with BS EN 12056-3 : 2000, are given in Table 7 of this Certificate.

Table 7 Freeflow capacities⁽¹⁾

Gutter	Flow capacity (litres per second)
100 mm (4") Ogee	0.46
113 mm (4½") Ogee	0.62
125 mm (5") Ogee	0.80
100 mm x 75 mm (4" x 3") moulded Ogee	1.14
125 mm x 100 mm (5" x 4") moulded Ogee	2.20
150 mm x 100 mm (6" x 4") moulded Ogee	2.73

(1) The flow capacity of downpipes can be found in Table 8 in BS EN 12056-3 : 2000.

9 Maintenance



9.1 The systems can be supplied uncoated or painted as required.

9.2 The gutters can be cleared easily of debris

9.3 Damaged sections may be removed and replaced.

10 Durability



In the opinion of the BBA, the gutter systems will have a minimum maintenance-free life of 40 years in rural and suburban conditions and 25 years in industrial and coastal conditions. However, when in contact with some materials, corrosion may occur (see sections 12.2 and 12.3).

11 Reuse and recyclability

The systems components contain polyester coated aluminium, which can be recycled.

Installation

12 General

12.1 Installation must be carried out in accordance with the Certificate holder's instructions and BS EN 12056-3 : 2000 where applicable.

12.2 The guttering system will be corroded by contact with copper, or water run-off from copper, in any environment and should not be installed on a building with a copper roof. Other contact with copper and its alloys must also be avoided.

12.3 The contact areas should be coated with bitumen paint if the product will be:

- embedded in concrete or mortar, or

- in contact with lead and stainless steel in a marine environment.

13 Procedures

13.1 The rafter arms for the gutters or fascia arms should be fitted with round-head zinc- or cadmium-plated or sherardized 38 mm long, No 12 fully threaded wood screws with the same corrosion resistance as the jointing screws, and at a maximum of 915 mm (zinc-/cadmium-plated) and 600 mm (sherardized) centres.

13.2 To make the joint watertight, sufficient suitable silicone sealant should be applied between the spigot and socket onto clean and dry surfaces so that some of the sealant is squeezed out of the joint as the pieces are brought together. The excess sealant should be removed and the surrounding area cleaned. Aluminium nuts and bolts should be bedded in sealant (the head covered but the nut visible).

13.3 The aluminium screws, nuts and washers are fitted using the overlapping slots in the spigot and socket of the gutter lengths; overtightening should be avoided.

13.4 If the gutter has to be trimmed to length, it can be cut with normal metalworking tools. Slots must then be formed to match the socket to which the gutter is to be fixed.

13.5 Circular downpipes are supplied with loose drive-fit sockets; square and rectangular cross-section downpipes have welded sockets. If a watertight joint is required, sealant should be applied to the lower part of the socket and the pipe pushed home. The pipe socket should then be packed with suitable caulking, eg polyethylene foam and a small bead of sealant introduced at the top of the joint.

13.6 Two-part offsets are available which can be cut to the required length on site. Minimum projections are 94 mm (for 65 mm diameter offset) and 103 mm (for 76.5 mm diameter offset); maximum projections are detailed in Table 6.

Technical Investigations

14 Tests

Tests were conducted and the results assessed to determine:

- dimensional accuracy
- watertightness of joints
- flow capacity
- resistance to impact and loading
- ease of cleaning
- thermal movement.

15 Investigations

15.1 The manufacturing process was evaluated, including the methods adopted for quality control, and details were obtained of the quality and composition of the materials used.

15.2 Site visits were conducted to existing sites to assess the practicability of installation and the performance in use.

Bibliography

BS 8530 : 2010 *Traditional-style half round, beaded half round, Victorian ogee and moulded ogee aluminium rainwater systems — Specification*

BS EN 573-1 : 2004 *Aluminium and aluminium alloys — Chemical composition and form of wrought products — Numerical designation system*

BS EN 573-2 : 1995 *Aluminium and aluminium alloys — Chemical composition and form of wrought products — Chemical symbol based designation system*

BS EN 573-3 : 2019 *Aluminium and aluminium alloys — Chemical composition and form of wrought products — Chemical composition and form of products*

BS EN 755-1 : 2016 *Aluminium and aluminium alloys — Extruded rod/bar, tube and profiles — Technical conditions for inspection and delivery*

BS EN 755-2 : 2016 *Aluminium and aluminium alloys — Extruded rod/bar, tube and profiles — Mechanical properties*

BS EN 755-3 : 2008 *Aluminium and aluminium alloys — Extruded rod/bar, tube and profiles — Round bars, tolerances on dimensions and form*

BS EN 755-7 : 2016 *Aluminium and aluminium alloys — Extruded rod/bar, tube and profiles — Seamless tubes, tolerances on dimensions and form*

BS EN 1706 : 2020 *Aluminium and aluminium alloys — Castings — Chemical composition and mechanical properties*

BS EN 12020-1 : 2008 *Aluminium and aluminium alloys — Extruded precision profiles in alloys EN AW-6060 and EN AW-6063 — Technical conditions for inspection and delivery*

BS EN 12020-2 : 2016 *Aluminium and aluminium alloys — Extruded precision profiles in alloys EN AW-6060 and EN AW-6063 — Tolerances on dimensions and form*

BS EN 12056-3 : 2000 *Gravity drainage systems inside buildings — Roof drainage, layout and calculation*

BS EN 12206-1 : 2004 *Paints and varnishes — Coating of aluminium and aluminium alloys for architectural purposes — Coatings prepared from coating powder*

BS EN ISO 9001 : 2015 *Quality management systems — Requirements*

16 Conditions

16.1 This Certificate:

- relates only to the product/system that is named and described on the front page
- is issued only to the company, firm, organisation or person named on the front page – no other company, firm, organisation or person may hold or claim that this Certificate has been issued to them
- is valid only within the UK
- has to be read, considered and used as a whole document – it may be misleading and will be incomplete to be selective
- is copyright of the BBA
- is subject to English Law.

16.2 Publications, documents, specifications, legislation, regulations, standards and the like referenced in this Certificate are those that were current and/or deemed relevant by the BBA at the date of issue or reissue of this Certificate.

16.3 This Certificate will remain valid for an unlimited period provided that the product/system and its manufacture and/or fabrication, including all related and relevant parts and processes thereof:

- are maintained at or above the levels which have been assessed and found to be satisfactory by the BBA
- continue to be checked as and when deemed appropriate by the BBA under arrangements that it will determine
- are reviewed by the BBA as and when it considers appropriate.

16.4 The BBA has used due skill, care and diligence in preparing this Certificate, but no warranty is provided.

16.5 In issuing this Certificate the BBA is not responsible and is excluded from any liability to any company, firm, organisation or person, for any matters arising directly or indirectly from:

- the presence or absence of any patent, intellectual property or similar rights subsisting in the product/system or any other product/system
- the right of the Certificate holder to manufacture, supply, install, maintain or market the product/system
- actual installations of the product/system, including their nature, design, methods, performance, workmanship and maintenance
- any works and constructions in which the product/system is installed, including their nature, design, methods, performance, workmanship and maintenance
- any loss or damage, including personal injury, howsoever caused by the product/system, including its manufacture, supply, installation, use, maintenance and removal
- any claims by the manufacturer relating to CE marking.

16.6 Any information relating to the manufacture, supply, installation, use, maintenance and removal of this product/system which is contained or referred to in this Certificate is the minimum required to be met when the product/system is manufactured, supplied, installed, used, maintained and removed. It does not purport in any way to restate the requirements of the Health and Safety at Work etc. Act 1974, or of any other statutory, common law or other duty which may exist at the date of issue or reissue of this Certificate; nor is conformity with such information to be taken as satisfying the requirements of the 1974 Act or of any statutory, common law or other duty of care.