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Agrément Certificate
17/5429
Product Sheet 1

MONIER JACKETING MATERIAL

WRAPTEC

This Agrément Certificate Product Sheet[1] relates to Wraptec[2], for use as a weatherproof jacketing material around insulated heating, ventilation and air conditioning ducts and pipes.

(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

Weathertightness — the product will resist the passage of moisture into the structure (see section 6).

Strength — the product has adequate strength to resist the loads associated with installation and while in-service (see section 8).

Durability — under normal service conditions, the product will have a service life of at least 10 years (see section 10).

The BBA has awarded this Certificate to the company named above for the product described herein. This product has been assessed by the BBA as being fit for its intended use provided it is installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agrément

Date of First issue: 22 May 2017

John Albon – Head of Approvals Construction Products

Claire Curtis-Thomas
Chief Executive

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 are advised to check the validity and latest issue number of this Agrément Certificate by either referring to the BBA website or contacting the BBA direct.

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Regulations

In the opinion of the BBA, the use of Wraptec is not subject to the national Building Regulations.

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.

See sections: 1 *Description* (1.2) and 3 *Delivery and site handling* (3.3) of this Certificate.

Technical Specification

1 Description

1.1 Wraptec is a self-welding polyisobutylene jacketing material used for wrapping around insulated heating, ventilation and air conditioning (HVAC) pipes and ducts to weatherproof and so reduce the risk of corrosion of the pipework.

1.2 The product is supplied in rolls with the following nominal characteristics:

Thickness (mm)	1.05			
Length (m)	10			
Width (mm)	70	140	280	560
Weight / roll (kg)	1.31	2.63	5.25	10.5
Colours	anthracite, light grey.			

1.3 Other items or components which may be used with the product, but which are outside the scope of this Certificate, include a specialist adhesive.

2 Manufacture

2.1 The product is manufactured by an extrusion process.

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 systems of Monier Roofing Components GmbH have been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2015 by TÜV Hessen (Certificate 73 100 176-1).

3 Delivery and site handling

3.1 The product is supplied in cardboard boxes labelled with the product name, length, colour, article number, number of rolls per box and the manufacturer's name and address. In addition, each roll is labelled with a barcode that identifies the colour, width, length and product branding.

3.2 The product must be protected from direct exposure to the elements and stored at temperatures between 5°C and 40°C.

3.3 The Certificate holder has the responsibility of classifying and labelling the product under the *CLP Regulation (EC) No 1272 / 2008 on the classification, labelling and packaging of substances and mixtures.* Users must refer to the relevant Safety Data Sheet(s).

Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on Wraptec.

Design Considerations

4 Use

4.1 Wraptec is suitable for use as a weatherproof jacketing material around insulated heating, ventilation and air conditioning (HVAC) ducts and pipes, to protect the insulation from UV light and the weather, therefore reducing the risk of corrosion of the pipework due to infiltration by moisture.

4.2 Existing pipes, ducts and insulation must be in sound condition, securely fixed and airtight prior to the application of the product.

4.3 Pipe or duct insulation should be metal foil faced. Where non-faced insulation is to be covered, the Certificate holder must be consulted on the product's compatibility with the insulation material.

5 Practicability of installation

The product should only be installed by installers who have been trained and approved by the Certificate holder.

6 Weathertightness

6.1 The product, including properly sealed and consolidated joints (see section 13.2), will resist the passage of liquid water and water vapour into pipework or ducts and so minimise the risk of corrosion due to the infiltration of moisture.

6.2 The product has a high resistance to the transmission of water vapour. For design purposes the equivalent air thickness (s_d) is >400 m.

7 Properties in relation to fire

The product, when tested in accordance with EN ISO 11925-2 : 2010 and assessed in accordance with DIN EN 13501-1 : 2010, achieved a Class E rating.

8 Strength

8.1 The product has adequate strength to resist the normal loads associated with installation and use.

8.2 The product can be punctured by sharp objects and concentrated loads but can easily be repaired (see sections 13.5 and 13.6).

9 Maintenance

Installations should be periodically checked for damage and, where necessary, repaired in accordance with section 13.

10 Durability

The product, when subject to normal conditions of use, will have a service life of at least 10 years, assuming the insulation or ducting does not fail before the product.

11 Reuse and recyclability

The product is manufactured from polyisobutylene, which can be recycled.

Installation

12 General

12.1 Installation of the product must only be carried out under dry conditions when the air temperature is between 5°C and 40°C, in accordance with the Certificate holder's instructions and this Certificate.

12.2 Surfaces over which the product is applied must be dry, dust free and free from other contamination such as grease.

12.3 Existing moisture must be removed and the structure allowed to dry prior to application of the product to avoid entrapment of moisture.

12.4 The product is not compatible with bitumen fuels or oils and contact with these materials must be avoided. Compatibility with other materials must be confirmed with the Certificate holder.

12.5 The product must be fully supported by the insulated ducting.

13 Procedure

13.1 On small diameter pipes and where conditions allow, the product should be helically wound around the pipe or duct ensuring an overlap of at least 20 mm over adjacent windings and ensuring that the joints are pressed together.

13.2 On larger diameter pipes or where helical winding is not possible, lengths of the product are cut and applied so that the pipe circumference is totally covered. Joints between adjacent lengths must overlap by at least 20 mm.

13.3 In all cases, during winding, adequate tension must be applied to the product to ensure the jacketing material amalgamates to itself at the joints and, where possible, joints should be wound to direct water away.

13.4 At elbows and T-junctions, template designs are available from the Certificate holder to allow efficient use of material when covering these details. Users should refer to the Certificate holder's technical literature for details.

Repair

13.5 Damaged areas should be thoroughly cleaned of contamination using a suitable cleaning agent.

13.6 The product is then repaired by applying one or more additional windings over the damaged section as described in sections 12.1 to 12.4, ensuring the area is covered by at least 20 mm of the new material.

Technical Investigations

14 Tests

Tests were carried out to establish:

- effect of water soak (28 days) on the product including joints
- effect of freeze-thaw on the product including joints (20 cycles)
- effect of high temperature (100°C) on the product including joints
- effect of extreme low temperature (-40°C) on the product including joints
- effect of exposure to UV-A radiation (500 $MJ \cdot m^{-2}$ at 60°C) on product including joints
- dimensions (thickness and width)
- tensile properties (control and after UV ageing 500 $MJ \cdot m^{-2}$ UV-A at 60°C)
- thermogravimetric analysis.

15 Investigations

15.1 Test data relating to the issue of BBA Certificate 09/4622 was reviewed to establish:

- fines content (ash)
- water absorption
- water vapour permeability
- low temperature foldability.

15.2 A test report from an independent laboratory relating to the product's performance in relation to reaction to fire was assessed.

15.3 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.

Bibliography

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

DIN EN 13501-1 : 2010 *Fire classification of construction products and building elements – Classification using test data from reaction to fire tests*

EN ISO 11925-2 : 2010 *Reaction to fire tests – Ignitability of building products subjected to direct impingement of flame – Single-flame source test*

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 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.

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