BUtgb vzw - UBAtc asbl

ROOFS

SINGLE LAYER SYNTHETIC ROOF WATERPROOFING SYSTEM

EPDM

TECHNO RUBBER EPDM
TECHNO RUBBER EPDM FLEECEBACK

Valid from 30/05/2024 to 29/05/2029

Approval holder:

TECHNO RUBBER COMPANY LIMITED
Street 127, Building 6369, 2nd Industrial City
PO BOX 3508, SA – 63658 Dammam
Tel.: +966 (0) 13 812 3333
Fax: +966 (0) 13 812 3322
Website: www.technorubber.com.sa
E-mail: info@technorubber.com.sa

Dealer:

FRP EUROPE
Industriepark De Bruwaan 27D
9700 Oudenaarde
Tel.: +32 (0) 2 773 48 88
Website: www.frp-europe.com
E-mail: info@frp-europe.com

ATG 3236

A technical approval is a favourable assessment of a construction product by a competent, independent and impartial approval operator appointed by the UBAtc, for a specified intended use.

The technical approval documents the results of the approval examination. This examination is organised as follows:

- identification of the relevant product properties taking into account its intended use and method of installation (or execution),
- product conception,
- production reliability.

The technical approval provides a high level of reliability, due to the statistical interpretation of control results, recurrent monitoring, adjustments in order to keep abreast of the latest technical developments and quality control by the approval holder.

For technical approval to be maintained, the approval holder must continuously provide evidence that he is taking all necessary steps to demonstrate that the product is fit for the intended use. In this respect, monitoring the conformity of the product with the technical approval is essential. This monitoring is entrusted by the UBAtc to a competent, independent and impartial certification operator.

The technical approval and certification of conformity of the product with the technical approval are independent of individual construction works. The contractor and/or architect remain fully responsible for the conformity of the completed works with the provisions contained in works' specifications.

Apart from specifically introduced provisions, the technical approval does not cover site related safety provisions, health aspects and the sustainable use of raw materials. As a result, the UBAtc cannot be held responsible, under any circumstances, for any damage caused by the failure of the approval holder, contractor(s) and/or architect to respect provisions relating to site related safety, health aspects and the sustainable use of raw materials.

Approval operators

Buildwise

Kleine Kloosterstraat 23 1932 Sint-Stevens-Woluwe
info@buildwise.be - www.buildwise.be

SECO Belgium

Siège social : Cantersteen 47 1000 Bruxelles
Bureaux : Hermeslaan 9 1831 Diegem
mail@seco.be - www.groupseco.be

Certification operator*

BCCA

Siège social : Cantersteen 47 1000 Bruxelles
Bureaux : Hermeslaan 9 1831 Diegem
mail@bcca.be - www.bcca.be

* Certification Operator designated by UBAtc asbl operates in compliance with a system that is set to be accredited by BELAC (www.belac.be).

FOREWORD

This technical approval concerns a extension of ATG 3236, valid from 31/05/2022 to 30/05/2027. The modifications compared to the previous version are listed below:

Modifications compared to the previous version
– Addition of field of application B_{ROOF}(t1) – Editorial corrections

Technical approvals are updated regularly. It is recommended to always use the version published on the UBAtc website (www.butgb-ubatc.be).

The most recent version of the technical approval can be consulted by scanning the QR code on the front page.

NORMATIVE AND OTHER REFERENCES

AGCR-RGAC	30/06/2022	UBAtc General Regulations for Approval and Certification
NIT 280		Flat roofs (updated version of NIT 215) (Buildwise)
NIT 239		Mechanical fastening of insulation and waterproofing materials on profiled steel sheets" (Buildwise)
NIT 244		Building flat roofs: general principles (Buildwise)
	2001	UEAtc Technical Guide for the assessment non-reinforced, reinforced and/or backed Roof Waterproofing Systems made of EPDM
Information sheet UBAtc n° 2012/02	2012	Wind action on flat roofs according to the wind action standard NBN EN 1991-1-4
		Fitting instructions of the approval holder

1 Object

This approval relates to a waterproofing system for flat roofs whose area of application is indicated on the installation instruction sheets (see Table 23 and Table 24) and in Annex A[1].

The system consists of TECHNO RUBBER EPDM and TECHNO RUBBER EPDM FLEECEBACK waterproof roof membranes, which are fitted with the auxiliary products described in this approval, according to the instructions described in § 4.

The waterproof roof membranes are subject to product certification, according to the applicable ATG certification regulation. This certification procedure takes the form of continuous production monitoring by the manufacturer, in addition to regular monitoring of production by the certification body designated by the UBAtc.

This approval for the entire system is also based on the use of auxiliary components. A certificate guarantees that these components fulfil the performance characteristics or identification criteria listed in § 2.2.

2 Materials and roof waterproofing system components

2.1 Roof waterproofing membranes

Table 1 – Roof Waterproofing membranes

Trade name	Description
TECHNO RUBBER EPDM	EPDM-based membrane, compatible with bitumen, non-reinforced
TECHNO RUBBER EPDM FLEECEBACK	EPDM-based membrane, compatible with bitumen, non-reinforced, and covered with layer of 300 g/m^2 non-woven polyester fleece.

These membranes are applied as a monolayer. They are waterproof provided they are fitted according to the instructions in § 4 and the installation sheet.

2.1.1 Description of the membranes

TECHNO RUBBER EPDM and TECHNO RUBBER EPDM FLEECEBACK membranes are made from ethylene and propylene copolymers, unsaturated diene monomers (EPDM), oils, mineral fillers and additives. They are non-reinforced. TECHNO RUBBER EPDM FLEECEBACK includes a non-woven polyester fleece on its underside.

The membranes are obtained by extrusion and calendering followed by vulcanisation.

The certification body is aware of the composition and characteristics of the different layers.

The characteristics of the membranes are shown in Table 2.

TECHNO RUBBER EPDM membranes are available in two thicknesses (1.20 mm and 1.50 mm), while TECHNO RUBBER EPDM FLEECEBACK membranes are available in a single thickness (1.20 mm) (effective thickness).

TECHNO RUBBER EPDM FLEECEBACK membranes can be obtained with a pre-applied self-adhesive tape (see § 2.2.4) for the realisation of longitudinal connections between the strips. These membranes can be identified by the suffix PT.

Table 2 – TECHNO RUBBER EPDM

Identification characteristics	TECHNO RUBBER EPDM	
	1.20	1.50
Framework type	-	-

[1]Annex A is an integral part of the technical approval ATG.

Cladding type	-	-
Membrane		
Effective thickness [mm]-5 %, +10 %	1.20	1.50
Mass per unit area [kg/m²]-5 %, +10%	1.54	1.92
Nominal length [m]-0 %, +5 %	30.50 / 61.00 (1)	
Nominal width [m]-0,5 %, +1 %	3.050 (1)	
Upper side colour	Black	
Lower side colour	Black	
Use (suitable membranes)		
Loosely laid	X	X
Fully adhered		
With cold adhesive	X	X
Mechanically fastened (in the joint)	-	-

(1):Other lengths and widths available on request

Table 3 – TECHNO RUBBER EPDM FLEECEBACK

Identification characteristics	TECHNO RUBBER EPDM FLEECEBACK
	1.20
Framework type	-
Cladding type	PY 300
Membrane	
Effective thickness [mm]-5 %, +10 %	1.20
Mass per unit area [kg/m²]-5 %, +10%	1.86
Nominal length [m]-0 %, +5 %	15.50 / 31.00 (1)
Nominal width [m]-0,5 %, +1 %	1.500 (1)
Upper side colour	Black
Lower side colour (membrane)	Black
Use (suitable membranes)	
Loosely laid	X
Fully adhered	
With cold adhesive	X
Partially bonded	
With cold adhesive	X
Mechanically fastened (in the joint)	-

(1):Other lengths and widths available on request

The characteristics of the backing used with TECHNO RUBBER EPDM FLEECEBACK membranes are listed in Table 4.

Table 4 – Backing

Identification characteristics	PY 300
Type	Polyester fleece
Mass per unit area [g/m²]±15 %	300

2.1.2 Performance characteristics of the membranes

The performance characteristics of the TECHNO RUBBER EPDM and TECHNO RUBBER EPDM FLEECEBACK MEMBRANES are listed in § 5.1 of Table 21 AND IN § 5.3 of Table 22.

2.2 Auxiliary products

2.2.1 Synthetic cold adhesives

The cold adhesives described below are subject, within the framework of this ATG, to an initial investigation and limited certification by the certification body designated by the UBAtc asbl.

The following requirements must be met for this purpose:

- The product has been identified by means of initial tests.
- The product is traceable.
- The product has been checked by the manufacturer and the in-house results from the production control have been verified by the certification body.
- The product is subject to external verification tests, which are conducted on an annual basis.

2.2.1.1 FRP EUROPE BONDING ADHESIVE

Contact adhesive based on silaprene and organic solvents, which is applied cold, used to fit TECHNO RUBBER EPDM membranes as fully bonded to different surfaces. This adhesive is also available under the trade names FRP EUROPE CONTACTLIJM and COLLE DE CONTACT FRP EUROPE .

Table 5 – FRP EUROPE BONDING ADHESIVE

Identification characteristics	FRP EUROPE BONDING ADHESIVE
Volumetric mass [kg/l]± 5 %	0.839
Dry extract [%]	Approx. 23
Flash point [°C]	≥ -18
Colour	Yellow
Application temperature (°C)	≥ +5
Performance	
Consumption [g/m²]	Approx. 500 – 650(1)(2)
Shelf life [months]	12 (between +15 °C and +27 °C)
Packaging	18.9 litre tub
Surface	

See § 4.2.2.

(1): Depending on the roughness and nature of the surface

(2): Total consumption (quantity applied to surface membrane)

2.2.1.2 FRP EUROPE SPRAYABLE BONDING ADHESIVE

Synthetic contact adhesive spray, which is chlorine-free, with organic solvents, applied cold and used to fit TECHNO RUBBER EPDM and TECHNO RUBBER EPDM FLEECEBACK membranes as fully bonded to different surfaces. This adhesive is also available under the trade names FRP EUROPE SPUITLIJM and COLLE DE CONTACT FRP EUROPE EN SPRAY .

Table 6 – FRP EUROPE SPRAYABLE BONDING ADHESIVE

Identification characteristics	FRP EUROPE SPRAYABLE BONDING ADHESIVE
Volumetric mass [kg/l]± 5 %	0.84
Dry matter content [%]±2 %abs	Approx. 35
Colour	Green
Application temperature (°C)	between 15 and 25
Performance	
Consumption [g/m²]	Approx. 230 (1) (2)
Shelf life [months]	12 (between +15 °C and +35 °C)
Packaging	22 litre can
Surface	
See § 4.2.2.	

(1): Depending on the roughness and nature of the surface

(2): Total consumption (quantity applied to surface membrane)

2.2.1.3 FRP EUROPE PG1 FLEECEBACK ADHESIVE

FRP EUROPE PG1 FLEECEBACK ADHESIVE is a bi-component, solvent-free PU adhesive, which is applied cold and used to fit TECHNO RUBBER EPDM FLEECEBACK membranes as partially bonded to different surfaces.

Table 7 – FRP EUROPE PG1 FLEECEBACK ADHESIVE

Identification characteristics	FRP EUROPE PG1 FLEECEBACK ADHESIVE
Volumetric mass – Part A [kg/l]±5 %	1.22
Volumetric mass – Part B [kg/l]±5 %	1.00
Dry matter content [%]±2 %abs	Approx. 35
Flash point [°C]	≥ 220
Colour	White-amber
Application temperature (°C)	≥ +5
Performance	
Consumption [g/m²]	160 - 200 (1)
Shelf life [months]	12 (between +7 °C and +35 °C)
Packaging	1.5 litre can
Surface	
See § 4.2.2.	

(1): Depending on the roughness and nature of the surface with a maximal distance of 30 cm between the adhesive strips

2.2.2 Preformed corners and roof accessories

Preformed corners and roof accessories form part of the system but are not included in this approval and certification.

2.2.3 FRP EUROPE NADENTAPE joint tapes

Joint tapes are made from extruded and cured pressure-sensitive adhesive tapes.

These FRP EUROPE NADENTAPE joint tapes are used to create joints between strips. The tapes are applied to the joint, after being treated with FRP EUROPE SEMI-ADHESIVE PRIMER. They are then secured by placing pressure on the actual joints (see § 4.2.4.1.).

This tape can be applied to the TECHNO RUBBER EDPM FLEECEBACK membrane in advance at the production site. These membranes can be identified by the suffix PT.

Table 8 – FRP EUROPE NADENTAPE

Identification characteristics	FRP EUROPE NADENTAPE
Thickness [mm]	Approx. 0.76
Width [mm]	76.3
Length [m]	30.5
Colour	Black
Performance	
Shelf life [months]	24 (between +5 °C and +45 °C)

FRP EUROPE NADENTAPE joint tapes form part of the system but are not included in this approval and certification.

2.2.4 FRP EUROPE COVER STRIP cover tapes

These cover strips consist of a semi-cured EPDM tape, onto which an extruded and cured black pressure sensitive adhesive is laminated across the entire width.

FRP EUROPE COVER STRIPS are used to create transverse joints using TECHNO RUBBER EPDM FLEECEBACK. The strips are applied across the area between two adjacent membranes, after being treated with FRP EUROPE SEMI-ADHESIVE PRIMER. They are then secured by placing pressure on the actual joints (see § 4.2.4.2.).

Table 9 – FRP EUROPE COVER STRIP

Identification characteristics	FRP EUROPE COVER STRIP
Thickness [mm]	Approx. 0.76
Width [mm]	127 / 152 / 229 / 305
Length [m]	30,5 (15,24 for a width of 305 mm)
Colour	Black
Performance	
Shelf life [months]	24 (between +5 °C and +40 °C)

FRP EUROPE COVER STRIPS form part of the system but are not included in the certification.

2.2.5 FRP EUROPE EPDM FLASHING TAPE

This self-curing EPDM tape is laminated onto an EPDM membrane. The tape is used to ensure that metallic pipe fittings are waterproof, as well as for T-joint coverings, corners, pipes and other applications.

Table 10 – FRP EUROPE EPDM FLASHING TAPE

Identification characteristics	FRP EUROPE EPDM FLASHING TAPE
Thickness [mm]	EPDM membrane: 0.64 Self-curing tape: 1.14
Width [mm]	127 / 152 / 229 / 305 / 458
Length [m]	30.4 (15.24 for the following widths: 229 mm, 305 mm and 458 mm)
Colour	Black
Performance	
Shelf life [months]	24 (between +5 °C and +40 °C)

The FRP EUROPE EPDM FLASHING TAPE product forms part of the system, but is not covered by this approval and is not included in this certification.

2.2.6 FRP EUROPE SEMI-ADHESIVE PRIMER

FRP EUROPE SEMI-ADHESIVE PRIMER has a high quality hydrocarbon and toluene base and is used for finishing all joints, as well as for creating detail finishes.

Table 11 – FRP EUROPE SEMI-ADHESIVE PRIMER

Identification characteristics	FRP EUROPE SEMI-ADHESIVE PRIMER
Volumetric mass [kg/l]	0.79
Dry matter content [%]	Approx. 17
Flash point [°C]	≥ -4
Colour	Blue
Performance	
Shelf life [months]	12 (between +5 °C and +25 °C)
Packaging	1 and 3.78 litre cans

The FRP EUROPE SEMI-ADHESIVE PRIMER product forms part of the system, but is not covered by this approval and is not included in this certification.

2.2.7 MASTIC FRP EUROPE LS-100

FRP EUROPE LS-100 is synthetic, solvent-based mastic, which is used to create details, T-junctions and for finishing strip joints.

Table 12 – FRP EUROPE LS-100

Identification characteristics	FRP EUROPE LS-100
Volumetric mass [kg/l]	5.3
VOC-content [g/l]	≤ 250
Dry matter content [%]	Env. 80
Colour	Black
Performance	
Shelf life [months]	24 (between +5 °C and +40 °C)
Packaging	300 ml tubes

The FRP EUROPE LS-100 product forms part of the system, but is not covered by this approval and is not included in this certification.

2.2.8 MASTIC FRP EUROPE LPS-100

FRP EUROPE LPS-100 is a single component, isocyanate-free polyurethane mastic, which is used to create details and for minor repairs.

Table 13 – FRP EUROPE LPS-100

Performance	FRP EUROPE LS-100
Shelf life [months]	12 (between +5 °C and +27 °C)
Packaging	300 ml tubes

The FRP EUROPE LPS-100 product forms part of the system, but is not covered by this approval or included in this certification.

2.2.9 FRP EUROPE EDPM CLEANER

FRP EUROPE EPDM CLEANER is an organic, solvent-based product, which is used to clean EPDM areas prior to the use of adhesives.

Table 14 – FPR EUROPE EPDM CLEANER

Identification characteristics	FPR EUROPE EPDM CLEANER
Volumetric mass [kg/l]	0.75
VOC-content [g/l]	825
Colour	Black
Performance	
Shelf life [months]	6 (between +15 °C and +27 °C)
Packaging	500 ml tubes

The FRP EUROPE EPDM CLEANER product forms part of the system, but is not covered by this approval or included in this certification.

2.2.10 FPR EUROPE KIMFIXATIE PERIPHERAL ATTACHMENT

FRP EUROPE KIMFIXATIE is an EPDM-reinforced membrane tape, laminated with a 0.9 mm EPDM-based pressure sensitive adhesive tape (adhesive layer of vulcanised rubber). FRP EUROPE KIMFIXATIE is used for the non-invasive attachment of EPDM membranes on roof systems that are ballasted or secured with adhesive.

Table 15 – FPR EUROPE KIMFIXATIE

Identification characteristics	FPR EUROPE KIMFIXATIE
Adhesive tape thickness [mm]	0.9
Width [mm]	152
Length [m]	30.48
Colour	Black
Performance	
Shelf life [months]	24 (between +5 °C and +40 °C)

The FRP EUROPE LS-100 product forms part of the system, but is not covered by this approval and is not included in this certification.

2.2.11 Heat insulation

The thermal insulation must be covered by a technical approval (ATG) with certification for use on roofs.

2.2.12 Separation and protective layers

Separation and protective layers are used as follows:

- Immediately under the EPDM membrane (for TECHNO RUBBER EPDM only):
  In order to avoid direct contact between the membrane and surfaces at risk of mechanical damage due to piercing or cracking (e.g. rough surfaces);
- Immediately under the EPDM membrane:
  - In order to avoid direct contact between the membrane and materials at risk of causing mechanical damage due to piercing, cracking, etc.;
  - In order to avoid direct contact between the membrane and incompatible chemical materials (e.g. inverted roofs) (see Table 16).

Table 16 – Separation and protective layers

Type	Trade name	Mass per unit area [g/m²]
Mechanical separation layers		
Polyester non-woven fabric	-	≥ 150
Protection layers		
Synthetic fleece	-	≥ 300

Separation and protective layers are part of the described system, but not part of this approval and are not subject to certification.

2.2.13 Vapour barrier

For information concerning vapour barriers and their installation, please refer to Chapter 6 of NIT 280.

Vapour barriers are part of the described system, but not part of this approval and are not subject to certification.

3 Manufacture and marketing

3.1 Membranes

TECHNO RUBBER EPDM membranes and TECHNO RUBBER FLEECEBACK are manufactured at the TechnoRubber Company Ltd factory in Dammam (Saudi Arabia).

Labelling: rolls of roofing material can be identified by the trade name of the product, the approval holder, the ATG brand logo and the ATG number. The article number, dimensions (thickness, length, width) are also indicated on the packaging.

It is necessary to display the production code on the rolls of roofing material or heat-shrinkable film.

The FRP EUROPE company (Oudenaarde, BE) markets the product.

3.2 Auxiliary products

Auxiliary products (adhesives, primers, cleaners, etc.) are manufactured for the TechnoRubber Company Ltd factory.

The company FRP EUROPE (Oudenaarde) markets the auxiliary products.

4 Design and installation

If used, monolayer roof waterproofing materials require greater care than multi-layer materials. The contractor is required to use only highly qualified workers and ensure, by means of regular and strict supervision, that work is conducted in compliance with the specifications of the Technical Approval holder at all times and in all places.

The materials can only be fitted by contractors trained by TechnoRubber Company Ltd and/or FRP EUROPE (Oudenaarde).

4.1 Hygrothermal conditions – vapour barrier

See NIT 280.

4.2 Laying the roof waterproofing material

Roof waterproofing materials must be fitted according to NIT 280.

Work should be halted in the event of damp weather (rain, snow or fog) and if the ambient temperature is below 5 °C. Work can only resume if the surface is dry.

The installation sheet indicates the authorised roof composition according to the installation type, nature of the surface and states whether the Royal Decree of 7/07/1994 and its amendments of 19/12/1997, 04/04/2003, 01/03/2009, 12/07/2012, 07/12/2016 and 22/05/2022 apply.

The roofing materials are fitted to a flat, dry surface without tension.

4.2.1 Loose laid membranes

Loose laid membranes are only authorised for 5% (3°) slopes (or less) if gravel ballast is used and 10% (6°) if tiles are to be fitted.

Loose laid membranes are authorised for all types of surfaces.

If laid on concrete or a rough surface, a separation layer is applied between the membrane and the surface (see § 2.2.12).

Ballast must be present in order to obtain the required wind resistance. A protective layer is applied between the membrane and the ballast (see § 2.2.12).

It is necessary to apply a linear fixing mechanism (fixing mechanism on the roof edge corner) around the entire roof perimeter, as well as each piercing (domes, etc.) (see NIT 244, § 5.4.2).

Overlapping joints are created according to § 4.2.4.

4.2.2 Fully bonded membranes

TECHNO RUBBER EPDM membranes and TECHNO RUBBER EPDM FLEECEBACK can be fully bonded using FRP EUROPE CONTACT ADHESIVE and FRP EUROPE SPRAYABLE BONDING ADHESIVE.

The characteristics of the adhesives are listed in § 2.2.1.

Table 17 – Compatibility of adhesives and membranes

Membrane	A [1]	B [1]
TECHNO RUBBER EPDM	X	X
TECHNO RUBBER EPDM FLEECEBACK	-	X

A = FRP EUROPE BONDING ADHESIVE
B = FRP EUROPE SPRAYABLE BONDING ADHESIVE
[1]: X = compatible
- = not evaluated

Table 18 – Compatibility of adhesives and surfaces

Surface	A [1]	B [1]
Coated PU		
With bituminised glass fleece	-	-
With mineral glass fleece	-	-
With aluminium	-	-
With aluminium multi-layer complex	X	X
MW		
Uncoated	-	-
With bituminised glass fleece	-	-
With mineral glass fleece	-	-
Bitumen impregnated	-	-
EPS		
Uncoated	-	-
With bituminised glass fleece	-	-
EPB		
Uncoated	-	-
Bitumen impregnated	-	-
Bituminous sheet [2]	-	-
Concrete	-	-
Cellular concrete	-	-
Wood, multiplex, ...	-	-

A = FRP EUROPE BONDING ADHESIVE

B = FRP EUROPE SPRAYABLE BONDING ADHESIVE

[1]: X = compatible

- = not included within the framework of this approval

[2]: if fitting a bituminous sheet with adhesive so that it is fully bonded.

If the TECHNO RUBBER EPDM and TECHNO RUBBER EPDM FLEECEBACK are fully bonded, it will be necessary to fit a fixing mechanism on the corner of the roof curb. (See NIT 244, § 5.4.2).

4.2.2.1 Using the contact adhesive FRP EUROPE BONDING ADHESIVE

Membranes and surfaces that are compatible with FRP EUROPE BONDING ADHESIVE are listed in Table 17 and Table 18.

The contact adhesive FRP EUROPE BONDING ADHESIVE must first be mixed thoroughly before the undiluted product is applied using an adhesive roller onto the surface and the lower side of the membrane, using the total quantity of 500 – 650 g/m² (surface + membrane). After the adhesive has reached “tacky point”, the membrane is unrolled onto the adhesive, before being laid immediately onto the surface.

Overlapping joints are created according to § 4.2.4.

4.2.2.2 Using FRP EUROPE SPRAYABLE BONDING ADHESIVE

Membranes and surfaces that are compatible with FRP EUROPE SPRAYABLE BONDING ADHESIVE are listed in Table 17 and Table 18.

The FRP EUROPE SPRAYABLE BONDING adhesive is applied both to the surface and the lower side of the membrane, at a rate of 25 g/m² of dry weight (per side) or 115 g/m² of wet weight per side (equivalent to a total consumption of 230 g/m² on the surface and membrane), with a pressurised adhesive cylinder and spray system fitted with an appropriate adhesive spray nozzle.

Overlapping joints are created according to § 4.2.4.

4.2.3 Partially bonded membranes

TECHNO RUBBER EPDM FLEECEBACK membranes can be partially bonded using the FRP EUROPE PG1 FLEECEBACK ADHESIVE.

The characteristics of the adhesives are listed in § 2.2.1.

Table 19 –– Compatibility of adhesives and surfaces

Surface	FRP EUROPE PG1 FLEECEBACK ADHESIVE [1]
Coated PU	
With bituminised glass fleece	-
With mineral glass fleece	-
With aluminium	-
With aluminium multi-layer complex	X
MW	
Uncoated	-
With bituminised glass fleece	-
With mineral glass fleece	-

Bitumen impregnated	-
EPS	
Uncoated	-
With bituminised glass fleece	-
EPB	
Uncoated	-
Bitumen impregnated	-
Bituminous sheet [2]	-
Concrete	-
Cellular concrete	-
Wood, multiplex, ...	-

[1]: X = compatible
- = not included within the framework of this approval

[2]: if fitting a bituminous sheet with adhesive so that it is fully bonded.

If applying loose laid TECHNO RUBBER EPDM FLEECEBACK, it is fully bonded onto the roof corner using a tape measuring at least 500 mm in length along the edges. (See NIT 244, § 5.4.2).

4.2.3.1 Using FRP EUROPE PG1 FLEECEBACK ADHESIVE

Membranes and surfaces compatible with FRP EUROPE PG1 FLEECEBACK ADHESIVE are listed in Table 19.

The adhesive is applied using an automatic adhesive applicator, which makes it possible to apply the adhesive onto the surface in strips. This enables you to create adhesive beads measuring 1.5 cm – 2.0 cm, which cause the tapes to expand in width to 5.0 cm – 7.5 cm when they expand. After the adhesive has foamed for about 1 - 2 minutes, the sheet is rolled onto the wet adhesive, as the membrane must then be laid onto the surface. The amount used will be between 160 g/m² - 200 g/m² depending on the surface, with a maximum distance of 30 cm between the strips of adhesive.

The adhesive cannot be used at temperatures below 5 °C.

Overlapping joints are created according to § 4.2.4.

4.2.4 Overlap joints

4.2.4.1 Longitudinal joints

The sheets are laid without tension with a minimum covering of 100 mm in longitudinal direction, both for loose laid and fully bonded membranes. Any dust and grease is removed from both edges using the primer, as described in § 2.2.6. The FRP EUROPE NADENTAPE self-adhesive tape is then applied to the lower strip, while the PE film protecting the self-adhesive tape is removed and both strips are laid on top of each other before the joint is pressed into place using a roller. The FRP EUROPE NADENTAPE tape must extend 3 mm - 5 mm below the joint (see Fig. 1).

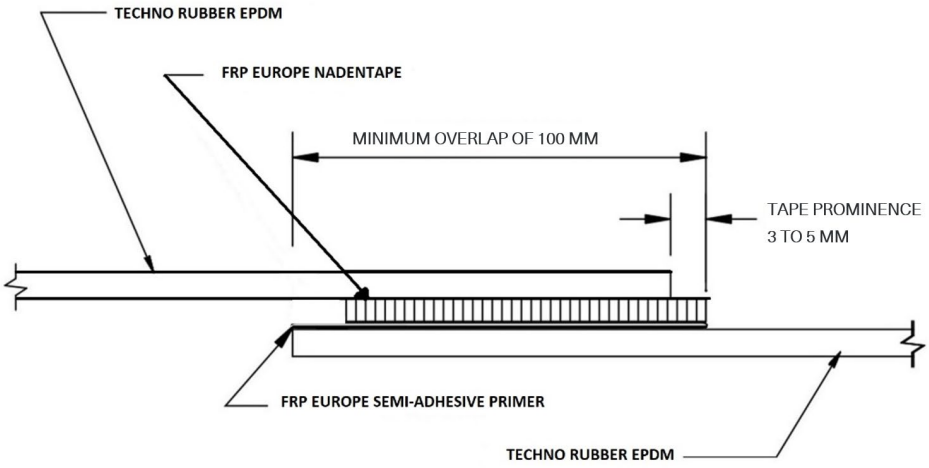

Fig. 1 – Overlapping joints in longitudinal direction

The principle, according to which the self-adhesive tape is first applied (PT version of TECHNO RUBBER EPDM FLEECEBACK) is identical to that described for FRP EUROPE NADENTAPE.

Work will be interrupted if the temperature falls below 5 °C.

4.2.4.2 Transversal joints

For TECHNO RUBBER EPDM, the sheets are laid without tension with a 100 mm overlap in transversal direction, whether they are loose laid or applied with adhesive. Any dust and grease is removed from both edges using the primer, as described in § 2.2.6. The FRP EUROPE NADENTAPE self-adhesive tape is then applied to the lower strip, while the PE film protecting the self-adhesive tape is removed and both strips are laid on top of each other before the joint is pressed into place using a roller. The FRP EUROPE NADENTAPE tape must extend 3 mm - 5 mm below the joint.

For TECHNO RUBBER EPDM FLEECEBACK, the transverse joints are created by laying the membranes edge to edge. On both sides of the joint, the surface is cleaned across a sufficient width using FRP EPDM CLEANER. After FRP EUROPE SEMI-ADHESIVE PRIMER has been applied, the FRP EUROPE COVER STRIP self-adhesive joint tape is applied using adhesive and pressed onto this surface.

4.3 Roof details

For the installation of expansion joints, flashings, ridges and gutters, please refer to NIT 244 from the BUILDWISE and the approval holder's instructions.

In order to ensure that the roof is airtight and protect against fire, roof details must be added in order to prevent air leaks and protect against fire while work is conducted.

4.4 Storage and preparing the site

See NIT 280.

The membranes must be stored flat on a clean, smooth and dry surface, without any pointed lumps and away from adverse weather conditions.

4.5 Wind resistance

The wind resistance of the roof waterproofing is determined according to the anticipated wind action, which is calculated according to Information sheet UBAtc n° 2012/2: "Wind action on flat roofs according to the wind action standard NBN EN 1991-1-4".

The dimensions and type of ballast take account of the calculated wind action, as well as the criteria required in order to meet the Royal Decree (A.R.) of 07/ 07/ 1994 and its amendments of 19/12/1997, 04/04/2003, 01/03/2009, 12/07/2012, 07/12/2026 and 20/05/2022 if the latter apply.

The relevant calculated wind resistance values for the waterproofing are listed in Table 1.

Table 20 – Calculated values for wind action (waterproofing system)

Application	System	Calculation value [N/fastener]
Loose laid (LL)	Ballast according to Information sheet UBAtc n° 2012/2: "Wind action on flat roofs according to the wind action standard NBN EN 1991-1-4" (UBAtc).	
Application	**Surface**	**Calculation value [Pa]**
Fully adhered (TC)	TECHNO RUBBER EPDM	
	using FRP EUROPE CONTACTLIJM	
	Coated PU	
	Multi-layer aluminium complex	2,650 (1)
	using FRP EUROPE SPUITLIJM	
	Coated PU	
	Multi-layer aluminium complex	2,325 (1)
	TECHNO RUBBER EPDM FLEECEBACK	
	using FRP EUROPE SPUITLIJM	
	Coated PU	
	Multi-layer aluminium complex	2,650 (1)
Partially adhered (PC)	using FRP EUROPE PG1 FLEECEBACK ADHESIVE	
	Coated PU	
	Multi-layer aluminium complex	5,650 (1)

(1): These values are based on a wind test, using a safety coefficient of 1.5.

The above-mentioned calculated values are comparable to the effect of wind action with a return period of 25 years, as indicated in the Information Sheet 2012/02 from the UBAtc "Wind action on flat roofs according to the wind action standard NBN EN 1991-1-4 » (UBAtc).

If the above calculated values are used, the installation sheet must be followed.

These calculated values must be checked against the calculated values for the roof insulation material (see ATG for insulation material), with reference to the lowest calculated value.

5 Performance

The performance characteristics of TECHNO RUBBER EPDM membranes are listed in § 5.1 of Table 21, while those for TECHNO RUBBER EPDM FLEECEBACK are listed in § 5.3 of TABLE 22.

The "UEAtc/UBAtc" column shows the minimum acceptance criteria set by the UEAtc/UBAtc. The "Evaluated criteria" column mentions the acceptance criteria required by the manufacturer.

Compliance with these criteria is verified during the different checks conducted and forms part of the product certification.

The performance characteristics of the system are listed in § 5.2 of Table 21 (for TECHNO RUBBER EPDM) membranes) and in §5.4 of Table 22 (for TECHNO RUBBER EPDM FLEECEBACK)

The "UEAtc/UBAtc" column shows the minimum acceptance criteria set by the UEAtc/UBAtc. The "Evaluated criteria" column mentions the acceptance criteria required by the manufacturer.

Table 21 – TECHNO RUBBER EPDM

Properties	Test methods	Criteria UEAtc/BUtgb [1]	Evaluated criteria TECHNO RUBBER EPDM	Evaluation tests [2]
5.1 Performance of the membrane				
Effective thickness [mm]	NBN EN 1849-2	MDV (≥ 1,10) -5 %, +10 %		
1.20			1.20	X
1.50			1.50	X
Visible defects	NBN EN 1850-2			
After exposure to bitumen	(UEAtc § 4.4.1.2)	No damage	No damage	X
After exposure to ozone	(NBN EN 1844)	No damage	No damage	X
Dimensional stability [%]	NBN EN 1107-2			
Longitudinal		≤ 0.5	≤ 0.5	X
Transversal		≤ 0.5	≤ 0.5	X
Water-tightness	NBN EN 1928	Waterproof at 10 kPa	Waterproof at 10 kPa	X
Tensile strength (N/mm^2) Initial	NBN EN 12311-2: 2013 (Method B)			
Longitudinal		≥ 6,0	≥ 8,0	X
Transversal		≥ 6,0	≥ 8,0	X
After 24 weeks at 70 °C	(NBN EN 1297)			

Longitudinal		Δ ≤ 20 %	Δ ≤ 20 %	X
Transversal		Δ ≤ 20 %	Δ ≤ 20 %	X

Table 21 (vervolg 1) – TECHNO RUBBER EPDM

Properties	Test methods	Criteria UEAtc/BUtgb [1]	Evaluated criteria TECHNO RUBBER EPDM	Evaluation tests [2]
Elongation at break [%]	NBN EN 12311-2: 2013 (Method B)			
Initial				
longitudinal		≥ 300	≥ 300	X
transversal		≥ 300	≥ 300	X
After 24 weeks at 70 °C	(NBN EN 1296)			
longitudinal		Δ ≤ 40 % and ≥ 200	Δ ≤ 40 % and ≥ 200	X
transversal		Δ ≤ 40 % and ≥ 200	Δ ≤ 40 % and ≥ 200	X
Tear resistance [N]	NBN EN 12310-2			
Longitudinal		≥ MLV	≥ 30	X
Transversal		≥ MLV	≥ 30	X
Foldability at low temperature [°C]	NBN EN 495-5			
Initial		≤ -30	≤ -40	X
After 2,500 h of UV exposure (A)	(UEAtc §4.4.1.3)	Δ ≤ 10 °C	Δ ≤ 10 °C	X
After exposure to bitumen	(UEAtc § 4.4.1.2)	Δ ≤ 5 °C	Δ ≤ 5 °C	X
Water absorption [%]	UEAtc § 4.3.13	≤ 2.0	≤ 2.0	X
Weight loss				
After exposure to bitumen	(UEAtc § 4.4.1.2)	Δ ≤ 3 %	Δ ≤ 3 %	X

5.2 System performance

5.2.1 Full roof composition

Resistance to static loading [class L]	NBN EN 12730			
On EPS 100	Method A	≥ MLV	≥ L20	X
On concrete	Method B	≥ MLV	≥ L20	X
Resistance to impact [mm]	NBN EN 12691			
On aluminium	Method A	≥ MLV	≥ 150	X
On EPS 150	Method B	≥ MLV	≥ 2,000	X

Table 21 (vervolg 2) – TECHNO RUBBER EPDM

Properties	Test methods	Criteria UEAtc/UBAtc [1]	Evaluated criteria TECHNO RUBBER EPDM	Evaluation tests [2]

5.2.2 Overlap joints

Peel resistance of joints using FRP EUROPE NADENTAPE [N/50 mm]	NBN EN 12316-2			
Initial		≥ 25 (average)	≥ 25 (average)	X
After 4 weeks at 80 °C		Δ ≤ 20 %	Δ ≤ 20 %	X
After 1 week in water at 60 °C		Δ ≤ 20 %	Δ ≤ 20 %	X
Shear resistance of joints using FRP EUROPE NADENTAPE [N/50 mm]	NBN EN 12317-2			
Initial (+23 °C)		≥ 200	≥ 200	X
Initial (-20 °C)		≥ 50	≥ 50	X
Initial (+80 °C)		Δ ≤ 20 %	Δ ≤ 20 %	X
After 4 weeks at 80 °C		Δ ≤ 20 %	Δ ≤ 20 %	X
After 24 weeks at 80 °C (+ 23 °C)		Δ ≤ 20 %	Δ ≤ 20 %	X
After 24 weeks at 80 °C (+ -20 °C)		Δ ≤ 20 %	Δ ≤ 20 %	X
After 24 weeks at 80 °C (+ +80 °C)		Δ ≤ 20 %	Δ ≤ 20 %	X
After 1 week in water at +60 °C		Δ ≤ 20 %	Δ ≤ 20 %	X

5.2.3 Surface adhesion – peeling test

TECHNO RUBBER EPDM using FRP EUROPE BONDING ADHESIVE on: PU with aluminium multi-layer complex [N/50 mm]	UEAtc § 4.3.3			
Initial		≥ 25	≥ 25	X
After 28 days at 80 °C		≥ 25 and Δ ≤ 50 %	≥ 25 and Δ ≤ 50 %	X
TECHNO RUBBER EPDM using FRP EUROPE SPRAYABLE BONDING ADHESIVE on: PU with aluminium multi-layer complex [N/50 mm]				
Initial		≥ 25	≥ 25	15
After 28 days at 80 °C		≥ 25 and Δ ≤ 50 %	≥ 25 and Δ ≤ 50 %	X

(1): MDV = Manufacturer's Declared Value / MLV = Manufacturer's Limiting Value

(2): X: evaluated and in compliance with the ATG holder's criteria

Table 21 (vervolg 3) – TECHNO RUBBER EPDM

Properties	Test methods	Assessment tests

5.2.4 Wind tests (for calculation values, see Table 1, § 4.5)

Wood, PU (multilayer aluminium complex), 100 mm with + **TECHNO RUBBER EPDM** 1.2 mm (adhered with **FRP EUROPE BONDING ADHESIVE** contact adhesive - 472 g/m² (total consumption – on both sides))	UEAtc § 4.3.2	Test result = 4,000 Pa, rupture at 4,500 Pa, (delamination of membrane – isolation and delamination of the insulation material finishing)

Wood, PU (multilayer aluminium complex), 100 mm with + TECHNO RUBBER EPDM 1.2 mm (adhered with FRP EUROPE SPRAYABLE BONDING ADHESIVE - 168 g/m² (total consumption - on both sides))	Test result = 3,500 Pa, rupture at 4,000 Pa, (delamination of membrane – isolation and delamination of the insulation material finishing)

5.2.5 Chemical resistance

The membrane is resistant to the effects of most products, but not certain substances, such as: gasoline, petroleum, benzene, organic solvents, greases, oils, tar, detergents and concentrated oxidation products at high temperatures. If in doubt, seek advice from the manufacturer or his representative.

Table 22 – TECHNO RUBBER EPDM FLEECEBACK

Properties	Test methods	Criteria UEAtc/BUtgb [1]	Evaluated criteria TECHNO RUBBER EPDM FLEECEBACK	Evaluation tests [2]
5.3 Performance of the membrane				
Effective thickness [mm]	NBN EN 1849-2	MDV (≥ 1,10) -5 %, +10 %		
1.20			1.20	X
Visible defects	NBN EN 1850-2			
After exposure to ozone	(NBN EN 1844)	No damage	No damage	X
Dimensional stability [%]	NBN EN 1107-2			
Longitudinal		≤ 0.5	≤ 0.5	X
Transversal		≤ 0.5	≤ 0.5	X
Water-tightness	NBN EN 1928	Waterproof at 10 kPa	Waterproof at 10 kPa	X
Tensile strength [N/50 mm]	NBN EN 12311-2 (method A)			
Longitudinal		≥ 400	≥ 400	X
Transversal		≥ 400	≥ 400	X
Elongation at max. tensile strength [%]	NBN EN 12311-2 (method A)			
Longitudinal		≥ 40	≥ 40	X
Transversal		≥ 40	≥ 40	X

Table 22 (vervolg 1) – TECHNO RUBBER EPDM FLEECEBACK

Properties	Test methods	Criteria UEAtc/BUtgb [1]	Evaluated criteria TECHNO RUBBER EPDM FLEECEBACK	Evaluation tests [2]
Nail tear resistance [N]	NBN EN 12310-1			
Longitudinal		≥ 150	≥ 150	X
Transversal		≥ 150	≥ 150	X
Foldability at low temperature [°C]	NBN EN 495-5			
Initial		≤ -30	≤ -40	X
After 24 weeks at 70 °C	(NBN EN 1296)	Δ= 0 °C	Δ= 0 °C	X
After 2,500 h of UV exposure (A)	(§ UEAtc 4.4.1.3)	Δ ≤ 10 °C	Δ ≤ 10 °C	X

Water absorption [%]	UEAtc § 4.3.13	≤ 2.0	≤ 2.0	X
Interlaminar adhesion [N/50 mm]	UEAtc § 4.3.16			
Between the membrane and the backing		≥ 50	≥ 50	X

5.4 System performance

5.4.1 Full roof composition

Resistance to static loading [class L]	NBN EN 12730			
On EPS 100	Method A	≥ MLV	≥ L20	X
On concrete	Method B	≥ MLV	≥ L20	X
Resistance to impact [mm]	NBN EN 12691			
On aluminium	Method A	≥ MLV	≥ 150	X
On EPS 150	Method B	≥ MLV	≥ 2,000	X

5.4.2 Overlap joints

Peel resistance of joints using FRP EUROPE NADENTAPE [N/50 mm]	NBN EN 12316-2			
Initial		≥ 25 (average)	≥ 25 (average)	X
After 4 weeks at 80 °C		Δ ≤ 20 %	Δ ≤ 20 %	X
After 1 week in water at 60 °C		Δ ≤ 20 %	Δ ≤ 20 %	X

Table 22 (vervolg 2) – TECHNO RUBBER EPDM FLEECEBACK

Properties	Test methods	Criteria UEAtc/BUtgb [1]	Evaluated criteria TECHNO RUBBER EPDM FLEECEBACK	Evaluation tests [2]
Shear resistance of joints using FRP EUROPE NADENTAPE [N/50 mm]	NBN EN 12317-2			
Initial (+23 °C)		≥ 200	≥ 200	X
Initial (-20 °C)		≥ 50	≥ 50	X
Initial (+80 °C)		Δ ≤ 20 %	Δ ≤ 20 %	X
After 4 weeks at 80 °C		Δ ≤ 20 %	Δ ≤ 20 %	X
After 24 weeks at 80 °C (+ 23 °C)		Δ ≤ 20 %	Δ ≤ 20 %	X
After 24 weeks at 80 °C (+ -20 °C)		Δ ≤ 20 %	Δ ≤ 20 %	X
After 24 weeks at 80 °C (+ +80 °C)		Δ ≤ 20 %	Δ ≤ 20 %	X
After 1 week in water at +60 °C		Δ ≤ 20 %	Δ ≤ 20 %	X

5.4.3 Surface adhesion – peeling test

TECHNO RUBBER EPDM using FRP EUROPE BONDING ADHESIVE on:				
PU with aluminium multi-layer complex [N/50 mm]	UEAtc § 4.3.3			
Initial		≥ 25	≥ 25	21
After 28 days at 80 °C		≥ 25 and Δ ≤ 50 %	≥ 25 and Δ ≤ 50 %	X

TECHNO RUBBER EPDM using FRP EUROPE PG1 FLEECEBACK ADHESIVE on:			
PU with aluminium multi-layer complex [N/50 mm]			
Initial	≥ 25	≥ 25	X
After 28 days at 80 °C	≥ 25 and Δ ≤ 50 %	≥ 25 and Δ ≤ 50 %	X

(1): MDV = Manufacturer's Declared Value / MLV = Manufacturer's Limiting Value

(2): X: evaluated and in compliance with the ATG holder's criteria

Table 22 (vervolg 3) – TECHNO RUBBER EPDM FLEECEBACK

Properties	Test methods	Assessment tests
5.4.4 Wind tests (for calculation values, see Table 1, § 4.5)		
Wood, PU (multilayer aluminium complex), 100 mm with + **TECHNO RUBBER EPDM FLEECEBACK** 1.2 mm (adhered with **FRP EUROPE SPRAYABLE BONDING ADHESIVE** - 178 g/m² per side (total consumption - on both sides))	UEAtc § 4.3.2	Test result = 4,000 Pa, rupture at 4,500 Pa, (delamination of membrane – isolation and delamination of the insulation material finish)
Wood, PU (multilayer aluminium complex), 100 mm with + **TECHNO RUBBER EPDM FLEECEBACK** 1.2 mm (partially adhered with **FRP EUROPE PG1 FLEECEBACK ADHESIVE** - 168 g/m², 30 cm between adhesive strips)	UEAtc § 4.3.2	Test result = 8,500 Pa, rupture at 9,000 Pa (delamination in the insulation material under the adhesive tapes)
5.4.5 Chemical resistance		
The membrane is resistant to the effects of most products, but not certain substances, such as: gasoline, petroleum, benzene, organic solvents, greases, oils, tar, detergents and concentrated oxidation products at high temperatures. If in doubt, seek advice from the manufacturer or his representative.		

6 Instructions

6.1 Accessibility

Only waterproof sheets fitted with tiles or an equivalent coating are accessible. Access to other roofing sheets is permitted only for maintenance purposes.

6.2 Maintenance

Maintenance must be conducted on the roof waterproofing material and its protection every year before and after the winter. It should focus on specific areas, such as those listed in NBN B46-001 or NIT 280.

6.3 Repairs

Repairs to roof waterproofing material or its protection must be conducted using the same materials as those previously used. Repairs must be conducted with care and according to the Approval holder's instructions.

Application sheet TECHNO RUBBER EPDM

The following application sheet accompanies the notes in Table 2 and mentions the types of membranes and the associated laying techniques, depending on the surface, according to the fire protection requirements, as defined in the Royal Decree of 07/07/1994, including the amendments described in the Royal Decree of 19/12/1997, the Royal Decree of 04/04/2003, the Royal Decree of 01/03/2009, the Royal Decree of 07/12/2016 and the Royal Decree of 20/05/2022. The codes are indicated in NIT 280.

For systems shown in colour, ANNEXE A provides details of roof systems that meet fire requirements, as listed in the above-mentioned Royal Decrees.

Product symbols and names:

◆ = TECHNO RUBBER EPDM

Symbol used:

O = this application is not covered by this ATG

Application options: see Table 23 + instructions from NIT 280

Table 23 – Installation instruction sheet

Laying method	A.R.	Heavy protection (ballast, tiles, etc.)	Surface												
			PU	PF	uncoated EPS	coated EPS	uncoated CG	Coated CG	MW, EPB	Existing waterproofing	Concrete or light concrete screed	Cellular concrete, concrete tiles	Fibre cement sheets or particle boards, multiplex	Cement bonded wood fibre boards	Wooden floor
Loose laid membranes [1]			(a)	(a)		(a)	(b)	(c)			(d)	(d)			
Single layer (LL)	applicable	Without	Not authorised												
		With (e)	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
	not applicable	Without	Not authorised												
		With (e)	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆

[1]: The heavy protection layer must also ensure that the waterproofing system is wind resistant (see § 4.5).

(a): coated PU/PF/EPS: the insulation material is always protected by a suitable coating.

(b): uncoated GC: a first bituminous underlayer (V3 or higher) is laid with full adhesion using hot bitumen onto the GC, or welded, cold bonded or applied so that it adheres to the cooled hot bitumen mop coat applied onto the GC.

(c): Coated GC: the insulation material is either covered with weldable finishing, onto which a first bituminous underlayer (V3 or higher) is welded so that it adheres fully (a separation layer is provided) or covered with a suitable finishing.

(d): (cellular) concrete: the concrete must be dry.

(e): A protective layer is added between the membrane and the ballast.

Table 23 (cont'd 1) - Installation instruction sheet

Laying method	A.R.	Heavy protection (ballast, tiles, etc.)	Surface												
			PU	PF	uncoated EPS	coated EPS	uncoated CG	Coated CG	MW, EPB	Existing waterproofing	Concrete or light concrete screed	Cellular concrete, concrete tiles	Fibre cement sheets or particle boards, multiplex	Cement bonded wood fibre boards	Wooden floor
			(a)												
Fully adhered – FRP EUROPE CONTACT ADHESIVE															
Single layer (TC)	applicable	Without	◆	O	O	O	O	O	O	O	O	O	O	O	O
		With (b)	◆	O	O	O	O	O	O	O	O	O	O	O	O
	not applicable	Without	◆	O	O	O	O	O	O	O	O	O	O	O	O
		With (b)	◆	O	O	O	O	O	O	O	O	O	O	O	O
Fully adhered – FRP EUROPE SPRAYABLE BONDING adhesive															
Single layer (TC)	applicable	Without	◆	O	O	O	O	O	O	O	O	O	O	O	O
		With (b)	◆	O	O	O	O	O	O	O	O	O	O	O	O
	not applicable	Without	◆	O	O	O	O	O	O	O	O	O	O	O	O
		With (b)	◆	O	O	O	O	O	O	O	O	O	O	O	O

(a): coated PU/PF/EPS: the insulation material is always covered with a multilayer aluminiun complex finishing.

(b): A protective layer is added between the membrane and the ballast.

Application sheet TECHNO RUBBER EPDM FLEECEBACK

The following application sheet accompanies the notes in Table 2 and mentions the types of membranes and the associated laying techniques, depending on the surface, according to the fire protection requirements, as defined in the Royal Decree of 07/07/1994, including the amendments described in the Royal Decree of 19/12/1997, the Royal Decree of 04/04/2003, the Royal Decree of 01/03/2009 and the Royal Decree of 18/01/2017. The codes are indicated in NIT 280.

For systems shown in colour, ANNEXE A provides details of roof systems that meet fire requirements, as listed in the above-mentioned Royal Decrees.

Product symbols and names:

■ = TECHNO RUBBER EPDM FLEECEBACK

Application options: see Table 24 + instructions from NIT 280

Symbol used:

O = this application is not covered by this ATG

Table 24 - Installation instruction sheet

Laying method	A.R.	Heavy protection (ballast, tiles, etc.)	Surface												
			PU	PF	uncoated EPS	coated EPS	uncoated CG	Coated CG	MW, EPB	Existing waterproofing	Concrete or light concrete screed	Cellular concrete, concrete tiles	Fibre cement sheets or particle boards, multiplex	Cement bonded wood fibre boards	Wooden floor
Loose laid membranes (1)			(a)	(a)		(a)	(b)	(c)			(d)	(d)			
Single layer (LL)	applicable	Without	Not authorised												
		With (e)	■	■	■	■	■	■	■	■	■	■	■	■	■
	not applicable	Without	Not authorised												
		With (e)	■	■	■	■	■	■	■	■	■	■	■	■	■

(1): The heavy protection layer must also ensure that the waterproofing system is wind resistant (see § 4.5).

(a): coated PU/PF/EPS: the insulation material is always protected by a suitable finishing.

(b): uncoated GC: a first bituminous underlayer (V3 or higher) is laid with full adhesion using hot bitumen onto the GC, or welded, cold bonded or applied so that it adheres to the cooled hot bitumen mop coat applied onto the GC.

(c): coated GC: the insulation material either includes weldable finishing, onto which the first bituminous underlayer can be (V3 or higher) welded with full adhesion or is covered with a suitable finishing.

(d): (cellular) concrete: the concrete must be dry.

(e): A protective layer is added between the membrane and the ballast.

Table 24 (cont'd 1) – Installation instruction sheet

Laying method	A.R.	Heavy protection (ballast, tiles, etc.)	Surface												
			PU	PF	uncoated EPS	coated EPS	uncoated CG	Coated CG	MW, EPB	Existing waterproofing	Concrete or light concrete screed	Cellular concrete, concrete tiles	Fibre cement sheets or particle boards, multiplex	Cement bonded wood fibre boards	Wooden floor
			(a)												
Fully adhered – FRP EUROPE SPRAYABLE BONDING adhesive															
Single layer (TC)	applicable	Without	■	O	O	O	O	O	O	O	O	O	O	O	O
		With (b)	■	O	O	O	O	O	O	O	O	O	O	O	O
	not applicable	Without	■	O	O	O	O	O	O	O	O	O	O	O	O
		With (b)	■	O	O	O	O	O	O	O	O	O	O	O	O
Partially adhered - FRP EUROPE PG1 FLEECEBACK ADHESIVE															
Single layer (PC)	applicable	Without	■	O	O	O	O	O	O	O	O	O	O	O	O
		With (b)	■	O	O	O	O	O	O	O	O	O	O	O	O
	not applicable	Without	■	O	O	O	O	O	O	O	O	O	O	O	O
		With (b)	■	O	O	O	O	O	O	O	O	O	O	O	O

(a): coated PU/PF/EPS: the insulation material is always covered with a multilayer aluminium complex finishing.

(b): A protective layer is added between the membrane and the ballast.

CONDITIONS FOR THE USE AND MAINTENANCE OF THE ATG

A. This technical approval applies exclusively to the construction products referred to on the cover page of this document.

B. The approval holder and, if applicable, the distributor are not permitted to make any use of the name of the UBAtc, its logo, the ATG mark, the technical approval or the approval reference to claim assessments of products which do not comply with the technical approval or for a product (and its properties or characteristics) which is not the subject of the technical approval.

C. The technical approval is based on the available technical and scientific knowledge and information, together with the information provided by the applicant and completed by an approval examination taking into account the specific nature of the product. Nevertheless, users remain responsible for selecting the product as described in the technical approval, for specific uses intended by the user.

D. Only the approval holder and, if applicable, the distributor may assert rights based on the technical approval.

E. Any references to the technical approval shall be accompanied by the ATG reference 3236 and the validity period.

F. The approval holder and, if applicable, the distributor obliged to comply with the examination results specified in the technical approval when making information available to third parties. The UBAtc or the certification operator may take any appropriate action if the approval holder [or the distributor] fails to do so (sufficiently) on its own initiative.

G. Information made available in any way by the approval holder, distributor or a recognized contractor or by their representatives to (potential) users of the product covered by the technical approval (e.g. for clients, contractors, architects, consultants, designers, etc.), may not be incomplete or contradict the content of the technical approval or information referred to in the technical approval.

H. The UBAtc, the approval operator and the certification operator cannot be held responsible for any damage or adverse consequences caused to third parties as a result of the failure of the approval holder or distributor to comply with the provisions of this document.

I. This technical approval shall remain valid, provided that the product, its manufacture and all related processes:

- are maintained, in order to achieve, as a minimum, the examination results specified in this technical approval;
- are continuously monitored by the certification operator, which confirms that the certification continues to be valid.

If these conditions are no longer met, the technical approval shall be suspended or withdrawn and the technical approval shall be removed from the UBAtc website. Technical approvals are regularly updated. It is recommended to always use the version published on the UBAtc website.

J. The approval holder is at all times obliged to inform in advance the UBAtc, the approval operator and the certification operator of any possible adjustments made to raw materials and products, installation instructions and/or the manufacturing and installation processes and equipment. Depending on the information provided, the UBAtc, the approval operator and the certification operator will assess whether or not it is necessary to adapt the technical approval.

This technical approval has been published by UBAtc, under the responsibility of the approval operator, SECO/Buildwise, and based on a favourable opinion by specialised group "", expressed on 26 November 2018. In addition, the certification operator, BCCA, confirmed that the production process meets the conditions for certification and that a certification agreement has been signed by the ATG holder.

Date of issue: 30 May 2024.

For the **UBAtc**, as validating the approval process

Eric Winnepenninckx
General Secretary

Benny De Blaere
Director

For the operators

Buildwise

Olivier Vandooren
Director

SECO Belgium

Bernard Heiderscheidt
Director

BCCA

Olivier Delbrouck
Director

BUtgb vzw - UBAtc asbl

Belgische Unie voor de technische goedkeuring in de bouw vzw

Union belge pour l'Agrément technique de la construction asbl

Registered address and offices:

Kleine Kloosterstraat 23
1932 Sint-Stevens-Woluwe

Phone: +32 (0)2 716 44 12
info@butgb-ubatc.be
www.butgb-ubatc.be

VAT: BE 0820.344.539
RLP Brussels

UBAtc asbl is notified by the FPS Economy within the framework of Regulation (EU) 305/2011.

UBAtc asbl is an approval body member of:

ANNEXES

ANNEX A [1]

External fire resistance of the systems covered by the technical approval ATG

Index 0: on dd/mm/jjjj [2]

According to the Royal Decree (A.R.) of 07/07/1994, the Royal Decree (A.R.) of 19/12/1997, the Royal Decree of 01/03/2009, the Royal Decree of 12/07/2012, the Royal Decree of 07/12/2016 and the Royal Decree of 20/05/2022, buildings are divided into 2 categories:

1. Buildings, to which the Royal Decrees do not apply:
   - Buildings with a maximum of two building levels and a total surface area of less than or equal to 100 m^2;
   - Single-family houses.
2. Buildings, to which the Royal Decrees apply:

   The roof systems described in this Technical Approval ATG need to:

   - Classified as $B_{ROOF}(t1)$ (Resistance to External Fire) in compliance with the valid classification [3].

     In this case Table 1 gives an overview of the field of application related to the roof systems as described in this Technical Approval ATG.

   - Or be covered with a heavy protection layer (e.g. ballast, tiles, etc.) according to the decision of the European Commission of 06/09/2000 (on the implementation of Directive 89/106/CEE concerning the classification of the external fire performance of roofs and roof coverings), which makes it possible to consider that this heavy protection layer meets the requirements of the Royal Decree concerning fire behaviour.

     In this case, it is not necessary to conduct tests in order to determine the external fire resistance of the relevant roof systems listed in this ATG Technical Approval.

     Note 1: "ballast" is "gravel spread loosely with a thickness of at least 50 mm or a mass of at least 80 kg/m^2 (maximum granulometry of the aggregate: 32 mm; minimum: 4 mm)"

     Note 2: "tiles" are "mineral tiles with a minimum thickness of 40 mm".

[1]: This annex is an integral part of the technical approval.

[2]: The index of the up-to-date version of Annex A can be consulted on the UBAtc non-profit organisation website, www.butgb-ubatc.be.

[3]: Cf. Provision 2001/671/CE of the Commission.

Table 1 – Field of application of the roof systems with a resistance to external fire, classified $B_{ROOF}(t1)$ in accordance with EN 13501-5

TECHNO RUBBER EPDM				
Application			Fully adhered with an adhesive	
			Single layer TC	
Effective thickness			1,20 mm	
Slope			< 20° (36 %)	
Layers	Properties			
Waterproofing layer	Colour		Black	
	Finishing	Upper side	Naked	
		Under side	Naked	
	Backing		-	
	Fastening method		Adhered with a cold bonding adhesive	
Adhesive water-proofing layer	Type		FRP EUROPE CONTACTLIJM	
	Applied quantity		500 - 600 g/m²	
Separation layer	Type		Not relevant for the concerned field of application	
	Reaction to Fire			
	Mass per unit Area			
	Fastening method			
Insulation	Type		PU	
	Reaction to Fire		Euroclass A1 tot E	
	Thickness		≥ 50 mm	
	Compressive Strength		-	
	Finishing	Upper side	Multilayer aluminium complex	
		Under side	Multilayer aluminium complex	
	Fastening method		Mechanically fastened	
Adhesive insulation	Type		Not relevant	
	Applied quantity			
Vapour Barrier	Type		Without	All types (according to NBN EN 13970, NBN EN 13984)
	Reaction to Fire			Euroclass A1 tot E
	Thickness			All thicknesses
	Fastening method			All possible fastening methods
Underlaying structure			Any wooden continuous deck and any non-combustable continuous deck each with gaps not exceeding 5 mm	

Table 1 (cont'd 1) – Field of application of the roof systems with a resistance to external fire, classified $B_{ROOF}(t1)$ in accordance with EN 13501-5

TECHNO RUBBER EPDM				
Application			Fully adhered with an adhesive	
			Single layer TC	
Effective thickness			1,20 mm	
Slope			< 20° (36 %)	
Layers	Properties			
Waterproofing layer	Colour		Black	
	Finishing	Upper side	Naked	
		Under side	Naked	
	Backing		-	
	Fastening method		Adhered with a cold bonding adhesive	
Adhesive water-proofing layer	Type		FRP EUROPE SPUITLIJM	
	Applied quantity		about 350 g/m²	
Separation Layer	Type		Not relevant for the concerned field of application	
	Reaction to Fire			
	Mass per unit Area			
	Fastening method			
Insulation	Type		PU	
	Reaction to Fire		Euroclass A1 tot E	
	Thickness		≥ 50 mm	
	Compressive Strength		-	
	Finishing	Upper side	Multilayer aluminium complex	
		Under side	Multilayer aluminium complex	
	Fastening method		Mechanically fastened	
Adhesive insulation	Type		Not relevant	
	Applied quantity			
Vapour Barrier	Type	Without	All types (according to NBN EN 13970, NBN EN 13984)	
	Reaction to Fire		Euroclass A1 tot E	
	Thickness		All thicknesses	
	Fastening method		All possible fastening methods	
Underlaying structure			Any wooden continuous deck and any non-combustable continuous deck each with gaps not exceeding 5 mm	

Table 1 (cont'd 2) – Field of application of the roof systems with a resistance to external fire, classified $B_{ROOF}(t1)$ in accordance with EN 13501-5

TECHNO RUBBER FLEECEBACK EPDM				
Application			Fully adhered with an adhesive	
			Single layer TC	
Effective thickness			1,20 mm	
Slope			< 20° (36 %)	
Layers	Properties			
Waterproofing layer	Colour		Black	
	Finishing	Upper side	Naked	
		Under side	-	
	Backing		Polyester (PY)-fleece (300 g/m²)	
	Fastening method		Adhered with a cold bonding adhesive	
Adhesive water-proofing layer	Type		FRP EUROPE SPUITLIJM	
	Applied quantity		about 350 g/m²	
Separation Layer	Type		Not relevant for the concerned field of application	
	Reaction to Fire			
	Mass per unit Area			
	Fastening method			
Insulation	Type		PU	
	Reaction to Fire		Euroclass A1 tot E	
	Thickness		≥ 50 mm	
	Compressive Strength		-	
	Finishing	Upper side	Multilayer aluminium complex	
		Under side	Multilayer aluminium complex	
	Fastening method		Mechanically fastened	
Adhesive insulation	Type		Not relevant	
	Applied quantity			
Vapour Barrier	Type		Without	All types (according to NBN EN 13970, NBN EN 13984)
	Reaction to Fire			Euroclass A1 tot E
	Thickness			All thicknesses
	Fastening method			All possible fastening methods
Underlaying structure			Any wooden continuous deck and any non-combustable continuous deck each with gaps not exceeding 5 mm	

Table 1 (cont'd 3) – Field of application of the roof systems with a resistance to external fire, classified $B_{ROOF}(t1)$ in accordance with EN 13501-5

TECHNO RUBBER FLEECEBACK EPDM				
Application			Partially adhered with an adhesive	
			Single layer **PC**	
Effective thickness			1,20 mm	
Slope			< 20° (36 %)	
Layers	Properties			
Waterproofing layer	Colour		Black	
	Finishing	Upper side	Naked	
		Under side	-	
	Backing		Polyester (PY)-fleece (300 g/m²)	
	Fastening method		Adhered with a cold bonding adhesive	
Adhesive water-proofing layer	Type		FRP EUROPE PG1 FLEECEBACK ADHESIVE	
	Applied quantity		160 – 200 g/m²	
Separation Layer	Type		Not relevant for the concerned field of application	
	Reaction to Fire			
	Mass per unit Area			
	Fastening method			
Insulation	Type		PU	
	Reaction to Fire		Euroclass A1 tot E	
	Thickness		≥ 50 mm	
	Compressive Strength		-	
	Finishing	Upper side	Multilayer aluminium complex	
		Under side	Multilayer aluminium complex	
	Fastening method		Mechanically fastened	
Adhesive insulation	Type		Not relevant	
	Applied quantity			
Vapour Barrier	Type		Without	All types (according to NBN EN 13970, NBN EN 13984)
	Reaction to Fire			Euroclass A1 tot E
	Thickness			All thicknesses
	Fastening method			All possible fastening methods
Underlaying structure			Any wooden continuous deck and any non-combustable continuous deck each with gaps not exceeding 5 mm	