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ATG Technical Approval with Certification

ATG H894

Semi-finished products for window and door systems with profiles made from aluminum

Insulating strips for aluminium profiles with thermal break

STACMID

Valid from 10/04/2020
to 09/04/2025

Approval and Certification Body

BCCA

Belgian Construction Certification Association
Rue d'Arlon, 53 1040 Brussels
www.bcca.be - info@bcca.be

Approval holder :

SISTEMAS TÉCNICOS DEL ACCESORIO Y COMPONENTES SL
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1 Objective and scope of the Technical Approval

This Technical Approval is a favourable evaluation of the product (as described above) by an independent approval operator designated by UBAtc, BCCA, for the intended use specified in this technical approval.

The Technical Approval specifies the results of the approval examination. This examination comprises: identification of relevant product properties taking into account its intended use and installation and execution, its design and reliability of production.

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.

In order to retain the technical approval, 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. Monitoring the conformity of the product with the Technical Approval is essential. This monitoring is entrusted by the UBAtc to the independent certification operator, BCCA.

The approval holder [and distributor] is/are required to adhere to the examination results specified in the Technical Approval when making information available to third parties. The UBAtc or certification operator may take any appropriate steps if the approval holder [or the distributor] fails to do so (to a sufficient extent).

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.

Note: in this Technical Approval, the term "contractor" will always be used when referring to the entity that completes the work. This word has the same meaning as other frequently used words, such as "installer" and "fitter".

2 Object

This technical approval describes the properties of STACMID insulating strips, made from polyamide PA66 GF25 and STACMID PA66 GF25 HITEP reinforced with 25% of glass fibre, which are used as a thermal break in aluminium profiles, resulting in improved thermal performance for door and window systems. These strips are in compliance with NBN EN 14024, in terms of the suitability of the thermal break material (NBN EN 14024, § 5.2) and mechanical durability of the thermal break (NBN EN 14024, § 5.3, § 5.4 and § 5.5).

Approval with certification requires continuous monitoring of production by the manufacturer, in addition to regular monitoring of production by a certification body designated by the UBAtc.

The technical product approval with certification covers the actual strips, but not the systems and assembly process used to manufacture the window profiles, the manufacture or installation of windows or quality of execution.

3 Materials

3.1 Polyamide 66 GF25

The strips are made from polyamide reinforced with 25% glass fibre.

Table 1 – Strip characteristics

Characteristics	Unit	Norm	Criteria for dry extrusion
Volume mass	g/cm³	NBN EN ISO 1183-1	1,30 ± 0,05
Maximum tensile strength	N/mm²	NBN EN ISO 527-2/4	≥ 80
Rupture elongation	%	NBN EN ISO 527-2/4	≥ 2
Elasticity modulus	N/mm²	NBN EN ISO 527-2/4 (1 mm/min)	≥ 3500
Shore Hardness	ShD	NBN EN ISO 868	82 ± 5
Shock resistance CHARPY	KJ/m²	NBN EN ISO 179-1/2	≥ 30
Ash content	%	NBN EN ISO 3451-1	25 ± 2,5
Melting point	°C	NBN EN ISO 11357-3	≥ 250
Heat conductivity coefficient	W/mK	NBN EN ISO 10456	0,30
Expansion coefficient (longitudinally)	K^{-1}	ISO 11359-2	$(2,5\text{-}3,5).10^{-5}$
Water absorption	%	NBN EN ISO 62	1,3 ± 0,3

3.2 Polyamide 66 GF25 HITEP

The strips are made from polyamide reinforced with 25% glass fibre.

Table 2 – Strip characteristics

Characteristics	Unit	Norm	Criteria for dry extrusion
Volume mass	g/cm³	NBN EN ISO 1183-1	1,03 ± 0,05
Maximum tensile strength	N/mm²	NBN EN ISO 527-2/4	≥ 50
Rupture elongation	%	NBN EN ISO 527-2/4	≥ 3
Elasticity modulus	N/mm²	NBN EN ISO 527-2/4 (1 mm/min)	≥ 2800
Shore Hardness	ShD	NBN EN ISO 868	75 ± 5
Shock resistance CHARPY	KJ/m²	NBN EN ISO 179-1/2	≥ 20
Ash content	%	NBN EN ISO 3451-1	25 ± 2,5
Melting point	°C	NBN EN ISO 11357-3	≥ 250
Heat conductivity coefficient	W/mK	NBN EN ISO 10456	0,19
Expansion coefficient (longitudinally)	K^{-1}	ISO 11359-2	$(2,5\text{-}3,5).10^{-5}$
Water absorption	%	NBN EN ISO 62	

4 Geometric characteristics of strips

4.1 Standard strips

The standard strips are available in different shapes and sizes, except for the crimping areas, which are always shaped like a dovetail (see example in Fig. 1).

The strips are available in different heights and thicknesses.

4.2 Special strips

- Strips with adhesive thread
- Strips with T
- Strips with additional functions

Specially shaped strips can be prepared, such as strips with cavities, hooks, bridge, asymmetric strips, ... (see example in Fig. 1).

Thickness tolerances: ± 0.05 mm, maximum height tolerances: ± 0.15 mm.

5 Manufacture and marketing

The strips are extruded from PA 66 polyamide reinforced with glass fibre.

They are manufactured using extrusion at a plant of Sistemas Técnicos del Accesorio y Componentes SL, Poligono Picusa, La Mantanza, s/n, E-15900 Padrón, La Coruña.

The strips are packaged and information is added to the packaging (label including the ATG No., customer No., date & certification body). The standard packaging consists of wood or metal boxes.

Regular checks on self-monitoring are conducted at the plant laboratory and an external independent laboratory. These tests are conducted on test pieces taken by a representative of the UBAtc, during its approval inspection visits.

6 Performance

6.1 Suitability of the thermal break material

Evaluation of the suitability of the strip material is based on the results taken from the measurement of characteristics after immersion in water, exposure to humidity and the fragility test described in NBN EN 14024 § 5.2. The results of these tests proved satisfactory.

6.2. *Mechanical durability of thermal break*

The evaluation of the mechanical durability of strips is based on the results taken from the measurement of characteristics before (§ 5.3 and 5.4) and after accelerated artificial aging, as described in § 5.5 of NBN EN 14024. The results of these tests proved satisfactory.

7 Fitting

The strips are crimped into lacquered or anodised aluminium profiles before or after surface treatment (see Fig. 2).

After crimping, the aluminium penetrates the strip by 0.1 – 0.3 mm.

The actual crimping is not covered by the approval.

8 Conditions

A. This technical approval exclusively covers the mentioned on the cover page of the Technical Approval.

B. Only the approval holder and, if applicable, the distributor may assert rights based on the Technical Approval.

C. The approval holder and, if applicable, the distributor are not permitted, in any way, to use the name of the UBAtc, its logo, the ATG mark, the Technical Approval or the approval reference for product evaluations that fail to comply with the Technical Approval or products, kits or systems, including their properties or characteristics, which do not form the object of the Technical Approval.

D. Information provided in any way by the approval holder, distributor or a recognized contractor or by their representatives to (potential) users (e.g. for clients, contractors, architects, consultants, designers, etc.), which is specified in the Technical Approval may not be incomplete or contradict the content of the Technical Approval or information referred to in the Technical Approval.

E. The approval holder is at all times obliged to provide UBAtc, the approval operator and the certification operator with prompt and prior notification of any adjustments made to raw materials and products, installation instructions and/or the manufacturing and installation processes and equipment. Depending on the information communicated, the UBAtc, the approval operator and the certification operator will judge whether it is necessary to adjust the Technical Approval.

F. The Technical Approval is based on the available technical and scientific knowledge and information, complemented by information provided by the applicant and completed by an approval examination, which takes account of the specific nature of the . Nevertheless, users remain responsible for selecting the as specified in the Technical Approval, for specific uses intended by the user.

G. The intellectual property rights associated with the Technical Approval, including the copyright, belong exclusively to the UBAtc.

H. Any references to the Technical Approval shall be accompanied by an ATG reference (ATG H894) and the validity period.

I. The UBAtc, the approval body and the certification body cannot be held responsible for any damage or adverse consequences suffered by third parties (e.g. the user) that result from the failure of the approval holder or distributor to respect the provisions of Article 8.

9 Diagrams

Figure 1 – Examples of strips

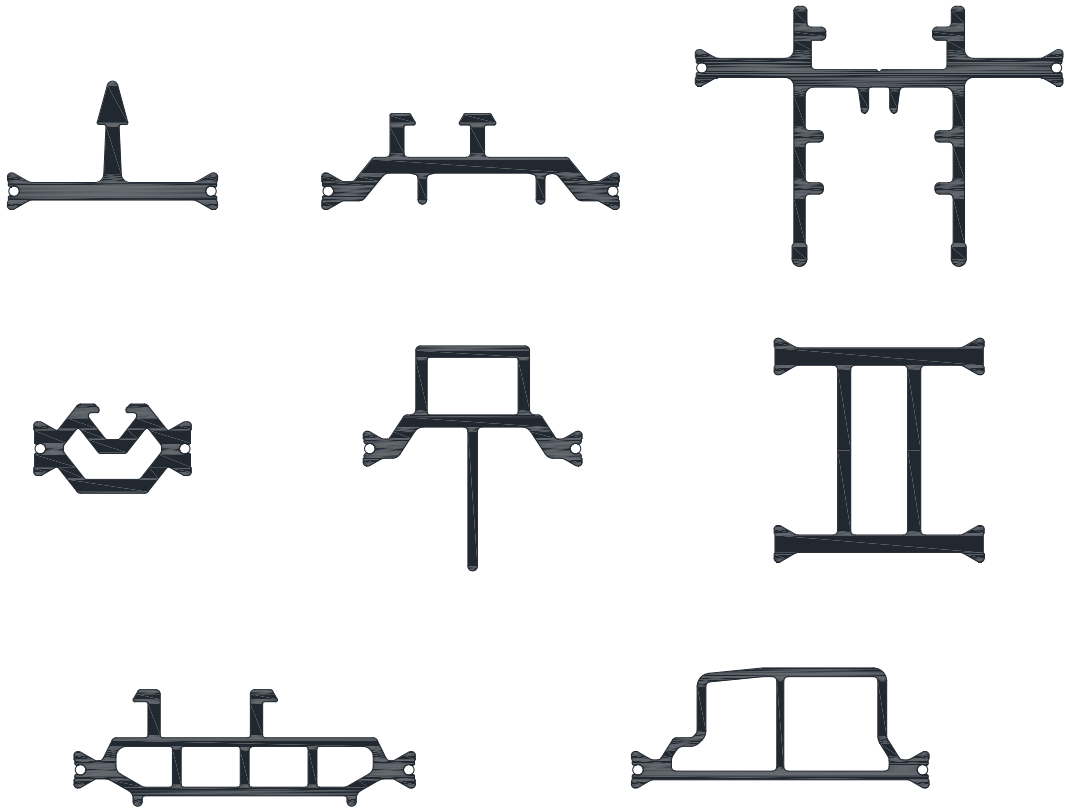
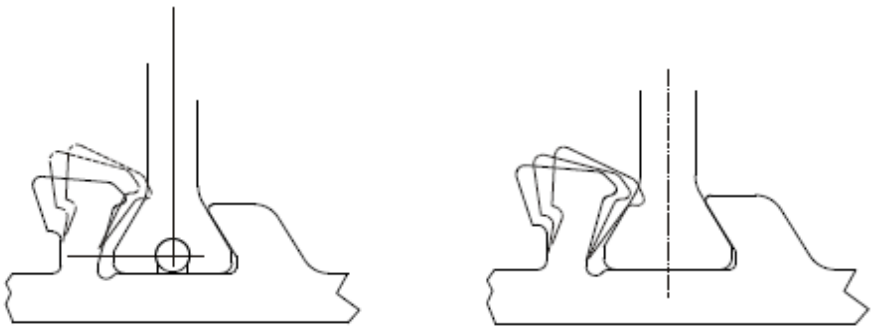


Figure 2 – Example of strip installation



UBAtc npo is an approval body which is member of the European Union for Technical Approval in Construction (UEAtc, zie www.ueatc.eu) en dat aangemeld werd door de FOD Economie in het kader van Verordening (EU) n°305/2011 en lid is of the European Organisation for Technical Assessments (EOTA, see www.eota.eu). Certification bodies designated by UBAtc npo operate in compliance with a system that may be accredited by BELAC (www.belac.be).

This Technical Approval has been published by UBAtc, under the responsibility of the approval operator BCCA, and based on a favourable opinion by specialist group "FACADES", expressed on 14 March 2014.

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: 10 April 2020.

This ATG replaces ATG H894 (version from 31/01/2017), valid from 31/01/2017 to 30/08/2022. The changes with respect to the previous versions are listed below:

Modifications compared to the previous versions	
compared to validity period	**Changes**
From 31/01/2017 to 30/08/2022	addition of thermal break profiles in PA66 GF25 HITEP

For UBAtc, declaration of the validity of the approval process

Peter Wouters, director

For the approval and certification operator

Benny De Blaere, general manager

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 (www.ubatc.be).

The most recent version of the Technical Approval may be consulted using the adjacent QR code.

Belgische Unie voor de technische goedkeuring in de bouw — Union belge pour l'Agrément technique de la construction

ATG H894

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