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Technical Approval, ATG, with Certification

ATG 11/H894

STACMID INSULATING STRIPS FOR ALUMINIUM PROFILES WITH THERMAL BREAK

Valid from 20.01.2011
until 19.01.2014

Approval and Certification operator

BCCA

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1 Objective and scope of the technical approval

A technical approval is a favourable assessment by an independent approval operator appointed by the non-profit organisation UBAtc of a product for a specified intended use. The result of this assessment is given in an approval text. The material(s) used is (are) identified in this text.

The technical approval is accompanied by regular monitoring and an adjustment to the state–of-the-art when such modifications are pertinent. A three yearly review is imposed.

The maintenance of the technical approval of a product demands that the compounding of the product fulfils the characteristics described in this text and that the approval holder can demonstrate at all times that he/she will take the necessary steps to guide the installers of the product, so that the performances described in the approval may be achieved. This monitoring is entrusted to a certification operator designated by UBAtc.

2 Object

This technical approval describes the characteristics of the STACMID insulating strips in polyamide PA6.6 reinforced by glass fibre for their use as thermal break in aluminium profiles with improved thermal performances for window and door systems. These strips comply with NBN EN 14024 as regards the suitability of the thermal break equipment (NBN EN 14024, §5.2) and the mechanical durability of thermal break (NBN EN 14024, §5.3, §5.4 and §5.5).

The approval with certification comprises a continuous production control by the manufacturer, supplemented by regular designated external supervision established by a certification operator appointed by UBAtc.

The technical product approval with certification relates to the actual strips but not to the mechanical design systems and processes for the manufacture of window profiles, the manufacture and installation of windows nor the quality of the workmanship.

3 Materials

3.1 POLITEC 6.6 GF25

The strips are manufactured from polyamide reinforced by 25 % glass fibre.

Table 1 – Characteristics of the strips

Characteristics	Unit	Standard	Criteria extruded in dry state
Volume mass	g/cm³	NBN EN ISO 1183-1	1.30 ± 0.05
Maximum tensile resistance	N/mm²	NBN EN ISO 527 2-4	≥ 80
Breakage splitting	%	NBN EN ISO 527 2-4	≥ 3
Elasticity module	N/mm²	NBN EN ISO 527 2-4 (1 mm/min)	≥ 3500
Shore hardness	ShD	NBN EN ISO 868	82 ± 5
Charpy impact strength	KJ/m²	NBN EN ISO 179-2 1eU	≥ 30
Ash content	%	NBN EN ISO 3451-1	25 ± 2.5
Melting point	°C	NBN EN ISO 11357-3	≥ 250
Heat conduction coefficient	W/mK	NBN EN ISO 10456	0.30
Expansion coefficient (longitudinal)	K^{-1}	ISO 11359-2	$(2.5\text{-}3.5).10^{-5}$
Water absorption	%	NBN EN ISO 62	1.3 ± 0.3

4 Geometric characteristics of the strips

4.1 Standard strips

The standard strips are available in various shapes and dimensions, with the exception of zones to be clasped which always have a dovetail shape or a comparable form (see the example in fig. 1).

The strips exist in various heights and thicknesses.

4.2 Special strips

- Strips with an adhesive joint
- Strips with T
- Strips with an additional function

Special forms of strips are possible, e.g. strips with a cavity, with hooks, with a nib, asymmetrical strips, etc. (see example in figure 1).

Tolerances for thickness: ± 0,05 mm, tolerances for height: maximum ± 0,15 mm.

4.3 Overview

An overview of the strips is given in table 2 below.

Table 2 – Overview

Reference	Height mm	Thickness mm
STM 0046	12 ± 0.05	1.8 ± 0.05
STM 0047C	12 ± 0.05	1.8 ± 0.05
STM 0048C	13.4 ± 0.05	1.8 ± 0.05
STM 0034T	14 ± 0.05	1.3 ± 0.05
STM 0011T	14.6 ± 0.05	1.8 ± 0.05
STM 0013	14.6 ± 0.05	1.8 ± 0.05
STM 0025TO	14.6 ± 0.05	1.8 ± 0.05
STM 0022	14.8 ± 0.05	1.8 ± 0.05
STM 0033C	14.8 ± 0.05	1.9 ± 0.05
STM 0056CP	14.8 ± 0.05	1.9 ± 0.05
STM 0059T	14.8 ± 0.05	1.8 ± 0.05
STM 0065T	14.8 ± 0.05	1.8 ± 0.05
STM 0015C	15 ± 0.05	1.6 ± 0.05
STM 0027P	15 ± 0.05	1.6 ± 0.05
STM 0044CT	15 ± 0.05	1.6 ± 0.05
STM 0051	15 ± 0.05	1.8 ± 0.05
STM 0017	15.5 ± 0.15	2.3 ± 0.05
STM 0042	15.5 ± 0.15	2.3 ± 0.05
STM 0045	15.5 ± 0.15	2.3 ± 0.05
STM 0062	15.5 ± 0,15	2,3 ± 0,05
STM 0014C	16 ± 0,05	1.8 ± 0.05
STM 0035CP	16 ± 0.05	1.8 ± 0.05
STM 0036CT	16 ± 0.05	1.8 ± 0.05
STM 0049	16 ± 0.05	1.8 ± 0.05
STM 0006C	18 ± 0.05	1.8 ± 0.05
STM 0050	18 ± 0.05	1.8 ± 0.05
STM 0005	18.6 ± 0.05	1.6 ± 0.05
STM 0024C	18.6 ± 0.05	1.8 ± 0.05
STM 0032	18.6 ± 0.05	1.8 ± 0.05
STM 0061T	18.6 ± 0.1	1.8 ± 0.05
STM 0003	19.5 ± 0.05	2.5 ± 0.05
STM 0007CPP	20 ± 0.1	1.6 ± 0.05
STM 0016C	20 ± 0.1	2 ± 0.05
STM 0018CT	20 ± 0.1	1.6 ± 0.05
STM 0019CPT	20 ± 0.1	1.6 ± 0.05
STM 0026CTT	20 ± 0.1	1.6 ± 0.05
STM 0029CP	20 ± 0.1	1.6 ± 0.05
STM 0020C	22 ± 0.1	1.9 ± 0.05
STM 0041CT	23 ± 0.1	1.6 ± 0.05
STM 0001C	24 ± 0.1	2 ± 0.05
STM 0002T	24 ± 0.1	2 ± 0.05
STM 0012C	24 ± 0.1	2 ± 0.05
STM 0021P	24 + 0.15/ - 0.1	1.6 ± 0.05
STM 0030	24 ± 0.1	2 ± 0.05
STM 0040CP	24 ± 0.1	1.6 ± 0.05
STM 0066CP	24 ± 0.1	2 ± 0.05
STM 0031P	24 + 0.15/ - 0.1	2 ± 0.05
STM 0052CPT	25 ± 0.1	1.6 ± 0.05
STM 0053CT	25 ± 0.1	1.6 ± 0.05
STM 0054CTT	25 ± 0.1	1.4 ± 0.05
STM 0055CP	25 ± 0.1	1.6 ± 0.05
STM 0058	25 ± 0.1	2 ± 0.05
STM 0037C	26 ± 0.1	1.8 ± 0.05
STM 0038CT	26 ± 0.1	1.8 ± 0.05
STM 0039CP	26 ± 0.1	2 ± 0.05
STM 0043CB	26 ± 0,1	1,6 ± 0,05
STM 0064C	27 ± 0,1	1,9 ± 0,05

Reference	Height mm	Thickness mm
STM 0063	28 ± 0,1	2 ± 0,05
STM 0004C	30 ± 0,1	1,6 ± 0,05
STM 0060V	30	-
STM 0057	32 ± 0,1	2 ± 0,05
STM 0008CP	35 ± 0,1	1,6 ± 0,05
STM 0009CTD	35 ± 0,1	1,6 ± 0,05
STM 0010C	35 ± 0,1	1,6 ± 0,05
STM 0023C	35 ± 0,1	1,8 ± 0,05
STM 0028CP	35 ± 0,1	1,6 ± 0,05

5 Manufacturing and marketing

The strips are extruded from polyamide PA6.6 reinforced by glass fibre.

They are manufactured by Sistemas Técnicos del Accesorio y Componentes SL, Poligono Picusa, La Mantanza, s/n, E-15900 Padrón, La Coruña factory.

The strips are packaged and marked on the packaging (label with ATG number H894, customer number, date, batch number, etc). The standard packaging consists of wood or metal boxes.

Surveillance tests of the self inspection are performed regularly in the factory laboratory on the one hand and in an external independent laboratory on the other. The latter tests are performed on samples taken by a representative of UBAtc during surveillance visits in the context of this approval.

6 Performance

6.1 Suitability of the thermal break material

The evaluation of the fitness for use of the strips is based on the results of the measurements of the characteristics after submersion in water and after exposure to humidity and the fragility test as specified in NBN EN 14024 §5.2. The results of these tests were satisfactory.

6.2. Mechanical sustainability of the thermal break.

The evaluation of the mechanical durability of the strips is based on the results of the measurements of the characteristics before (§5.3 and 5.4) and after accelerated artificial "ageing" as determined in §5.5 of NBN EN 14024. The results of these tests were satisfactory.

7 Fitting

The strips are clasped into lacquered or anodised aluminium profiles before or after the surface processing (see figure 2).

After clasping, the aluminium penetrates 0,1 to 0,3 mm into the strip.

The clamping is not part of this approval *per se*.

8 Conditions

A. Only the company (companies) specified on the front page as the ATG holder (and companies) that form the subject of the approval is permitted to claim the use of this technical approval.

B. This technical approval exclusively relates to the product or system of which the trade name is specified on the front page. Holders of a technical permit are not permitted to use the name of UBAtc, its logo, the ATG mark, the approval text or the approval number to make a claim on product judgements which are not in compliance with the technical approval nor with products and/or systems and/or characteristics or features which do not feature in the technical approval.

C. Information which is made available by the approval holder or its representative and/or known installers, in whatsoever form, to (potential) users of the product or system dealt with in the technical approval (e.g. contracting authorities, contractors, specification writers, etc), is not permitted to be in conflict with the content of the approval text, nor with the information featured in the approval text.

D. Holders of a technical approval are always obliged to notify, in due time, of changes to the raw materials and products, the processing directives, the production process and/or equipment, to the non-profit organisation UBAtc, and the certification operator appointed by UBAtc, so that they can assess whether the technical approval needs to be adapted.

E.

9 Figures

Figure 1 – Examples of strips

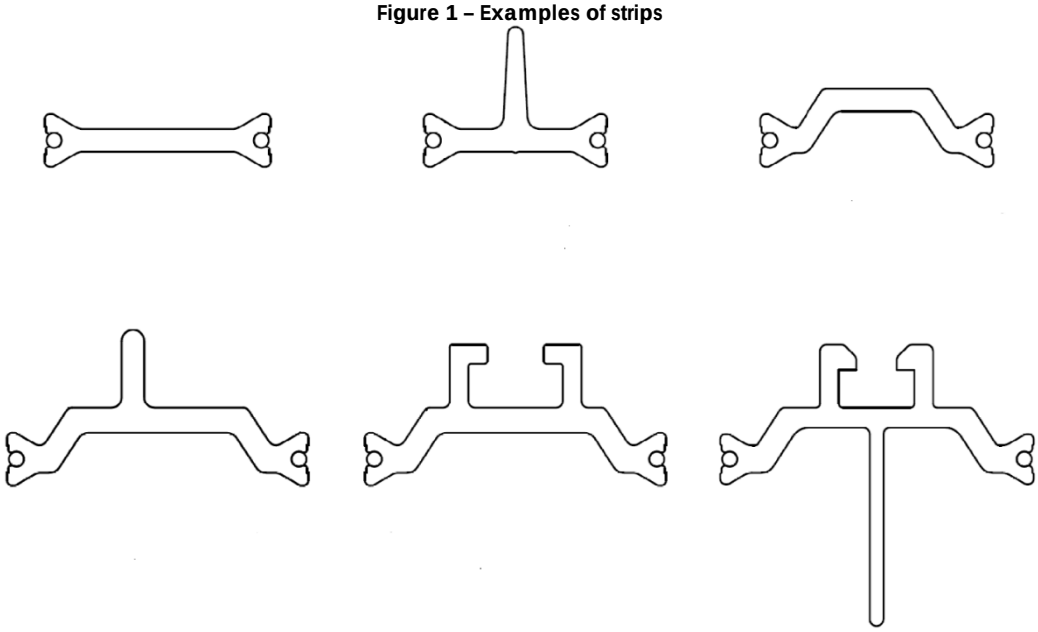
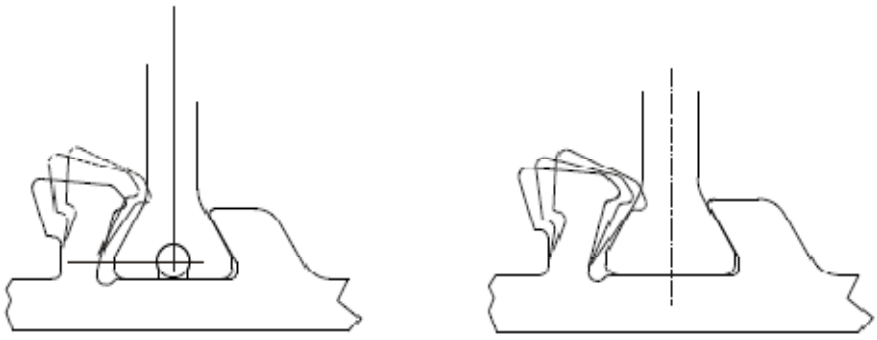


Figure 2 – Example of clasping of strips



The non-profit organisation UBAtc is an approval institute that is a member of the European Union of technical approvals in Construction (UEAtc, see www.ueatc.com) and which was notified by FPS Economy in the context of Directive 89/106/EEC and is a member of the European Organisation for Technical Approvals (EOTA, see www.eota.eu). The certification operators designated by UBAtc work in accordance with a system that may be accredited by BELAC (www.belac.be).

This technical approval was published by UBAtc, under the responsibility of the approval operator, BCCA, and on the basis of the favourable advice from the Specialist Group 'Facades' issued on 22 October 2010.

In addition, the certification operator, BCCA, confirms that production satisfies the certification conditions and that a certification agreement was signed with the ATG holder.

Date of this issue: 20 January 2011

For UBAtc, as the declaration of the validity process of the approval process

Peter Wouters, director

For the approval and certification operator

Benny De Blaere, director

This technical approval remains valid, given that the product, its manufacture and all associated relevant processes:

- are maintained, so that at least the performance levels are reached as specified in this approval text

- are continually subject to verification by the certification operator and it confirms that certification remains valid

If these conditions are no longer fulfilled, the technical approval will be suspended or withdrawn and the approval text will be removed from the UBAtc website.

The validity and latest version of this approval text may be verified by consulting the UBAtc website (www.ubatc.be) or by making contact with the UBAtc secretariat.