



INSTYTUT TECHNIKI BUDOWLANEJ
PL 00-611 WARSZAWA
ul. Filtrowa 1
tel.: (+48 22) 825-04-71
(+48 22) 579-62-94
eta@itb.pl
www.itb.pl



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European Technical Assessment

**ETA-22/0675
of 30/12/2022**

General Part

Technical Assessment Body issuing the European Technical Assessment

Instytut Techniki Budowlanej

Trade name of the construction product

Bostik H970 Paneltack

Product family to which the construction product belongs

Adhesive for wall cladding

Manufacturer

Bostik Benelux B.V.
Denariusstraat 11
4903 RC Oosterhout
The Netherlands

Manufacturing plant

Manufacturing plant No. P02

This European Technical Assessment contains

8 pages including 3 Annexes which form an integral part of this Assessment

This European Technical Assessment is issued in accordance with regulation (EU) No 305/2011, on the basis of

European Assessment Document (EAD)
250005-00-0606 "Adhesive for wall cladding"

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Specific Part

1 Technical description of the product

Bostik H970 Paneltack is light grey, one component, hybrid adhesive for bonding HPL wall cladding panels onto aluminium alloy (mill finish or anodised) supporting frames in ventilated façades.

Bostik H970 Paneltack adhesive is used with:

- Bostik Solvent 300 – colourless, one-component, quick-drying cleaner for pre-treatment of raw aluminium frames (mill finish), before applying primers,
- Bostik Prep G Plus – black, one-component, quick-drying primer for pre-treatment of raw aluminium frames (mill finish),
- Bostik Primer Paneltack – one-component, fast-drying cleaner and primer for pre-treatment of cladding panels backside and anodised aluminium frames,
- Bostik Foam Tape – double-sided adhesive mounting tape.

Design characteristics of Bostik H970 Paneltack adhesive are given in Table 1.

Table 1

| Design characteristics | Values |
|---------------------------------------|----------------------------------|
| Thickness of adhesive bead | $e = 3,0 \text{ mm}$ |
| Width of adhesive bead | $b \geq 13,5 \text{ mm}$ |
| Maximum design tensile stress | $\sigma_{des} = 0,3 \text{ MPa}$ |
| Maximum design shear stress | $\tau_{c,d} = 0,003 \text{ MPa}$ |
| Maximum displacement in dynamic shear | $\Delta_{s,d} = 2,15 \text{ mm}$ |

Bostik H970 Paneltack adhesive characteristics are given in Annex A. Variants of trade names used for adhesive, cleaner, primers and adhesive mounting tape are given in Annex C.

2 Specification of the intended use in accordance with the applicable European Assessment Document (EAD)

Bostik H970 Paneltack adhesive is intended to be used to bond HPL wall cladding panels according to EN 438-7 onto aluminium alloy (mill finish or anodised) supporting frames according to EN 573-3 in ventilated façades.

The characteristics and performance given in clauses 1 and 3 are only valid if the adhesive is used in compliance with the conditions given in Annex B.

The provisions given in this European Technical Assessment are based on an assumed working life of 25 years. The indications given on the working life cannot be interpreted as a guarantee given by the producer or the Technical Assessment Body, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

3 Performance of the product and references to the methods used for its assessment

3.1 Performance of the product

3.1.1 Safety in case of fire (BWR 2)

No performance assessed.

3.1.2 Hygiene, health and the environment (BWR 3)

No performance assessed.

3.1.3 Safety and accessibility in use (BWR 4)

Table 2

| No | Essential characteristics | Performances | | Assessment methods |
|--|--|--|--|---|
| 1 | Initial mechanical resistance | +23°C | $\sigma_{c,+23^{\circ}\text{C}} = 1,49 \text{ MPa}^{1)}$ $C_{r,+23^{\circ}\text{C}} = 100\%^{3)}$ | Clause 2.2.5 of EAD 250005-00-0606 |
| | | -20°C | $\sigma_{c,-20^{\circ}\text{C}} = 1,67 \text{ MPa}^{1)}$ $\Delta X_{m,-20^{\circ}\text{C}} = 1,10^{2)}$ $C_{r,-20^{\circ}\text{C}} = 100\%^{3)}$ | |
| | | +80°C | $\sigma_{c,+80^{\circ}\text{C}} = 1,43 \text{ MPa}^{1)}$ $\Delta X_{m,+80^{\circ}\text{C}} = 0,99^{2)}$ $C_{r,+80^{\circ}\text{C}} = 100\%^{3)}$ | |
| 2 | Residual mechanical resistance: | | | |
| 2.1 | Ageing under temperature and high humidity | $\sigma_{c,th} = 1,50 \text{ MPa}^{1)}$ $\Delta X_{m,th} = 0,99^{2)}$ $C_{r,th} = 100\%^{3)}$ | | Clause 2.2.6.1 of EAD 250005-00-0606 |
| 2.2 | Immersion in water | $\sigma_{c,iw} = 1,53 \text{ MPa}^{1)}$ $\Delta X_{m,iw} = 1,01^{2)}$ $C_{r,iw} = 100\%^{3)}$ | | Clause 2.2.6.2 of EAD 250005-00-0606 |
| 2.3 | High humidity and NaCl atmosphere | $\sigma_{c,Na} = 1,16 \text{ MPa}^{1)}$ $\Delta X_{m,Na} = 0,84^{2)}$ $C_{r,Na} = 100\%^{3)}$ | | Clause 2.2.6.3 of EAD 250005-00-0606 |
| 2.4 | High humidity and SO ₂ atmosphere | $\sigma_{c,SO} = 1,64 \text{ MPa}^{1)}$ $\Delta X_{m,SO} = 1,02^{2)}$ $C_{r,SO} = 100\%^{3)}$ | | Clause 2.2.6.4 of EAD 250005-00-0606 |
| 2.5 | Mechanical fatigue in tension | $\sigma_{c,f} = 1,54 \text{ MPa}^{1)}$ $\Delta X_{m,f} = 1,06^{2)}$ $C_{r,f} = 100\%^{3)}$ | | Clause 2.2.6.5 of EAD 250005-00-0606 |
| 3 | Shear under cyclic loading | $\sigma_{c,cl} = 1,62 \text{ MPa}^{1)}$ $\Delta X_{m,cl} = 1,11^{2)}$ $C_{r,cl} = 100\%^{3)}$ $S_{t,c} = 0,13\%^{2)}$ | | Clause 2.2.7 of EAD 250005-00-0606 |
| 4 | Shear creep and climatic ageing | $S_{t,v} = 7,39 \text{ mm}^{1)}$ | | Clause 2.2.8 of EAD 250005-00-0606 |
| 5 | Tear resistance | $\sigma_{c,e} = 1,82 \text{ MPa}^{1)}$ $l_e = 1,18 \text{ MPa}$ $C_{r,e} = 100\%^{3)}$ | | Clause 2.2.9 of EAD 250005-00-0606 |
| ¹⁾ c = characteristic value giving 75% confidence that 95% of the test results will be higher than this value ²⁾ m = mean (average) value ³⁾ cohesive rupture in the adhesive | | | | |

3.2 Methods used for the assessment

The assessment has been made in accordance with EAD 250005-00-0606 “Adhesive for wall cladding”.

4 Assessment and verification of constancy of performance (AVCP) system applied, with reference to its legal base

According to Decision 99/470/EC of the European Commission, amended by the Decision 2001/596/EC of the European Commission the system 2+ of assessment and verification of constancy of performance applies (see Annex V to regulation (EU) No 305/2011).

5 Technical details necessary for the implementation of the AVCP system, as provided in the applicable European Assessment Document (EAD)

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited in Instytut Techniki Budowlanej.

For type testing the results of the tests performed as part of the assessment for the European Technical Assessment shall be used unless there are changes in the production line or plant. In such cases the necessary type testing has to be agreed between Instytut Techniki Budowlanej and the notified body.

Issued in Warsaw on 30/12/2022 by Instytut Techniki Budowlanej



Krzysztof Kuczyński, PhD
Deputy Director of ITB

Table A1. Characteristics of Bostik H970 Paneltack adhesive

| Characteristics | Performance | Assessment method |
|---|--|--|
| Shrinkage | change in mass: $\Delta m = -2,1\%$ ¹⁾ change in volume: $\Delta V = -4,3\%$ ¹⁾ | EN ISO 10563 |
| Specific mass (density) | 1,50 g/cm ³ ± 10% | EN ISO 1183-1 |
| Effects of materials in contact | $R_{u,c5} = 1,44$ MPa ²⁾ $R_{R,c} = 0,97$ $C_{r,Rc} = 100\%$ ³⁾ no discolouration has been observed | Clause 2.2.2.4 of EAD 250005-00-0606 |
| Tensile elastic modulus | 4,08 ± 0,6 MPa | EN ISO 527-1 EN ISO 527-3, specimen type 5, thickness 2,2 ± 0,2 mm, loading speed 5 mm/min |
| Flow resistance | no flow | EN ISO 7390 |
| Shore hardness (scale A) | ≥ 47 | EN ISO 868, method A |
| Thermogravimetric analysis | according to the curve obtained in the tests | EN ISO 11358-1 |
| Colour measurement (colorimetry) | light grey (L = 78,93; a = -1,14; b = -3,12) | ISO 7724-2 |
| ¹⁾ “-“ indicate a decrease of mass or volume ²⁾ characteristic value giving 75% confidence that 95% of the test results will be higher than this value ³⁾ cohesive rupture in the adhesive | | |

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| Bostik H970 Paneltack | Annex A of European Technical Assessment ETA-22/0675 |
| Product characteristics | |

Design, installation, maintenance and repair

The design of the external wall cladding in ventilated façades using Bostik H970 Paneltack adhesive shall consider:

- The verification of the minimum dimensions of the adhesive bead bite, bead length and minimum number of beads by each cladding panel by means of calculation, considering the design values (design characteristics) given in Table 1 of this ETA. National safety factors, other national provisions and specific provisions given by adhesive manufacturer shall be taken into account.
- The verification of the adherence on the specific materials (cladding panels and subframe profiles) to be used on-site by means of peel test according to Annex 3 of EAD 250005-00-0606.
- Construction details regarding drainage and ventilation provisions. Water stagnation is not allowed in the vicinity of the adhesive bead. Therefore, the bonded cladding shall be designed with an efficient drainage and ventilation.
- The first layer behind ventilated air space (e.g. insulation layer) should be composed by materials with low water absorption.

Installation:

- Installation shall be carried out by appropriately trained, qualified personnel and under the supervision of the person responsible for technical matters of the site.
- Installation shall be executed in temperature from +5°C to +35°C.
- Installation shall be carried out according to manufacturer's specification and using the components specified in ETA.
- Product shelf life and storage conditions shall be respected.

Maintenance and repair:

- Maintenance of the external wall claddings for ventilated façades using Bostik H970 Paneltack adhesive includes inspections on-site, appearance of any damage as cracking, detachment, delamination, mould presence, corrosion presence or water accumulation due to permanent moisture or permanent irreversible deformation.
- Repair to localized damaged areas shall be carried out with the same components and following the repair instruction given by the adhesive manufacturer.

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| Bostik H970 Paneltack | Annex B of European Technical Assessment ETA-22/0675 |
| Design, installation, maintenance and repair | |

Variants of trade names used for adhesive, cleaner, primers and adhesive mounting tape

| Trade name | Variants of trade name |
|-------------------------|------------------------------------|
| Bostik H970 Paneltack | Bostik Paneltack |
| Bostik Solvent 300 | Bostik T750 Paneltack Cleaner A |
| Bostik Prep G Plus | Bostik T924 Paneltack Prep A Black |
| Bostik Primer Paneltack | Bostik T920 Paneltack Prep CS |
| Bostik Foam Tape | Bostik M925 Paneltack Foamtape |

| | |
|--------------------------------|--|
| Bostik H970 Paneltack | Annex C of European Technical Assessment ETA-22/0675 |
| Variants of trade names | |