TYTAN PROFESSIONAL Insulation Adhesive 820 ml grey

Professional one-component polyurethane adhesive designed for adhesion of thermal insulation materials such as EPS (white and graphite) polystyrene boards, mineral wool, PUR and PIR boards when insulating external and internal walls of buildings, as well as bonding to existing insulation. Foam adhesive is also dedicated to bonding XPS boards to underground parts of buildings and to flat roofs.

BENEFITS

- fast initial grab
- correction to 30 mm
- excellent, dedicated formula for easy positioning
- anchoring arter 2 hours
- very good adhesion to mineral substrates and thermal insulation materials
- use in a wide temperature range (-5°C to +35°C degrees)
- no electricity, water or specialized equipment

RECOMMENDED USES

- bonding of thermal insulation boards (white and graphite EPS, XPS, mineral wool, PIR, PUR)
- fixing thermal insulation materials to existing insulation
- filling expansion joints in thermal insulation
- bonding of other insulation and construction materials inside and outside

TECHNICAL DATA

Parameter (+23°C/50% RH)	Value
Correction time [min]	≤ 10
Full cure time (RB024) [h]	24
Class of reaction to fire (EN 13501-1:2008)	F
Flammability class (DIN 4102)	B3

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Mechanical anchoring [h]	2
Heat conductivity coefficient (RB024) [W/mK]	0,036
Capacity (surface coverage) [m^2]	5 - 9
Capacity (Final yield depends on temperatures, humidity, distance between foamed polystyrene and wall and chosen method of covering the panels) [mb]	50 - 55
Open time (products tested according to EOTA TR 46. Test methods for polyurethane foam adhesives for external thermal insulation composite systems (ETICS). The product is in compliance with ETAG 004 Guidelines for European Technical Approvals) [min]	≤5
Conditions of application	**Value**
Can / applicator temperature (optimal +20°C) [°C]	+10 - +30
Ambient/surface temperature [°C]	+0 - +35
Adhesion	**Value**
Concrete (studies conducted to 3mm wide gap in the external institute Research Report No LK02-2289/11/Z00NK) [MPa]	>0,230
Cellular concrete (studies conducted to 3mm wide gap in the external institute Research Report No LK02-2289/11/Z00NK) [MPa]	>0,500
Brick porotherm (studies conducted to 3mm wide gap in the external institute Research Report No LK02-2289/11/Z00NK) [MPa]	>0,200
Wood (pine) (studies conducted to 3mm wide gap in the external institute Research Report No LK02-2289/11/Z00NK) [MPa]	>0,350
Galvanized steel (studies conducted to 3mm wide gap in the external institute Research Report No LK02-2289/11/Z00NK) [MPa]	>0,180
Cardboard (studies conducted to 3mm wide gap in the external institute Research Report No LK02-2289/11/Z00NK) [MPa]	>0,330
Extruded styroboards (XPS) (studies conducted to 3mm wide gap in the external institute Research Report No LK02-2289/11/Z00NK) [MPa]	>0,260
Expanded styroboards (EPS) (studies conducted to 3mm wide gap in the external institute Research Report No LK02-2289/11/Z00NK) [MPa]	>0,080
Mineral wool (studies conducted to 3mm wide gap in the external institute Research Report No LK02-2289/11/Z00NK) [MPa]	>0,090
Glass (studies conducted to 3mm wide gap in the external institute Research Report No LK02-2289/11/Z00NK) [MPa]	>0,160
Cork boards (studies conducted to 3mm wide gap in the external institute Research Report No LK02-2289/11/Z00NK) [MPa]	>0,400

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Bitumen layer with mineral sprinkle (studies conducted to 3mm wide gap in the external institute Research Report No LK02-2289/11/Z00NK) [MPa]	>0,350
Extruded styroboards (XPS) (+23°C/50% RH) (Studies conducted to 8mm wide gap in the external institute, based on EOTA TR 46. Research Report No N020-032442) [MPa]	0,141
Styroboards (EPS) (+23°C/50% RH) (Studies conducted to 8mm wide gap in the external institute, based on EOTA TR 46. Research Report No N020-032439) [MPa]	0,113
Adhesion to XPS polystyrene board [T=+23°C, RH=50%] (Tests conducted for an 8mm wide gap at an outdoor institute according to EOTA TR 46) [MPa]	0,135
Adhesion to EPS polystyrene board [T=+23°C, RH=50%] (tests carried out for an 8mm wide gap at an outdoor institute according to EOTA TR 46) [MPa]	0,107
Extruded styroboards (XPS) (+5°C/-% RH) (Studies conducted to 8mm wide gap in the external institute, based on EOTA TR 46. Research Report No N020-032442) [MPa]	0,144
Styroboards (EPS) (+5°C/-% RH) (Studies conducted to 8mm wide gap in the external institute, based on EOTA TR 46. Research Report No N020-032439) [MPa]	0,121
Extruded styroboards (XPS) (+35°C/30% RH) (Studies conducted to 8mm wide gap in the external institute, based on EOTA TR 46. Research Report No N020-032442) [MPa]	0,136
Styroboards (EPS) (+35°C/30% RH) (Studies conducted to 8mm wide gap in the external institute, based on EOTA TR 46. Research Report No N020-032439) [MPa]	0,111
Extruded styroboards (XPS) (+23°C/50% RH) (Studies conducted to 15mm wide gap in the external institute, based on EOTA TR 46. Research Report No N020-032442) [MPa]	0,134
Styroboards (EPS) (+23°C/50% RH) (Studies conducted to 15mm wide gap in the external institute, based on EOTA TR 46. Research Report No N020-032439) [MPa]	0,130

METHOD OF USE

Prior to application, read safety instruction presented at the end of TDS and in MSDS.

Surface preparation

- The adhesive should be applied according to the range of ambient temperatures and surface temperatures given in the table above.

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- The surface can’t be icy, frosted or covered with snow.
- Secure surfaces exposed to accidental adhesive contamination.
- If the surface of the insulation boards is hydrophobic or coated, grind glued surface with abrasive paper in order to improve adhesion.

Product preparation

- Too cold can should be brought to room temperature, e.g. by immersion in warm water with temperature up to 30°C or leaving it in room temperature for at least 24 h.
- Applicator temperature cannot be lower than can temperature.

Application

- Put on protective gloves.
- Vigorously shake the can (10-20 seconds, the valve facing down) to thoroughly mix the components.
- Screw the can onto the applicator.
- Working position of the can is “valve facing down”.
- Below application mode:
- FOR BONDING POLYSTYRENE BOARDS TO FACADE WALLS
- Apply a braid of adhesive with a thickness of approx. 2 cm directly to the styrofoam board to create a letter “M” enclosed from the top with a horizontal line constituting about 1/3 of the length of the board, parallel to the long edge of the board. It is important that in each case the distance from the adhesive braid to the edge of the board (also when vertical lines of the letter M are parallel to the shorter edge of the boards) is at least 2 cm.
- Stream volume and pace of application is controlled by pressure force on the applicator trigger.
- If the surface is significantly uneven, apply adhesive twice.
- Immediately after applying the adhesive press board to the wall, crushing the bead of adhesive to half of its thickness and pre-set position of the board. It is essential to avoid complete crushing of the bead of adhesive.
- After a few minutes, using a level or long darby, adjust the final setting of the board by re-pressing and gently pulling it from the ground. Pay attention not to break the bond.
- The board position can be adjusted within about 10 minutes from its first application to the wall.
- The maximum gap thickness: 30 mm.
- The first layer of bonded boards must be supported on the starter strip.
- At lintels, support the boards until the bond cures.
- In case of heavy wind or rainfall use scaffolding mesh.
- Foamed polystyrene boards anchoring depends on specification of used ETIC System and should be established based on technical documentation of the ETICS or European Technical Approvals guidelines ETAG for ETICS.
- FOR BONDING POLYSTYRENE BOARDS TO ROOFS AND FUNDATIONS
- 2 cm adhesive braids – it is recommended to provide the board with three braids parallel to each other and to the shorter edge of the styrofoam board, if possible of the same length and distance from each other (approx. 30 cm). In addition, the distance from the two extreme adhesive braids to the edge of the board should be approx. 17 cm.
- Stream volume and pace of application is controlled by pressure force on the applicator trigger

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- Immediately after applying the adhesive on the borad, join the board with the wall and press slightly using level or long darby (slot up to 15 mm).
- The board position should be corrected within 10 min from joining.
- Foamed polystyrene boards anchoring depends on specification of used ETIC System and should be established based on technical documentation of the ETICS or European Technical Approvals guidelines ETAG for ETICS.

Works after completion of application

- Should application be interrupted for more than 5 minutes, the applicator nozzle with fresh adhesive should be cleaned with polyurethane foam cleaner. To do so, place the plastic tube supplied with the dispensing gun packaging on the dispensing gun outlet to avoid the formation of mist containing the cleaner and applicator residue during cleaning. Then screw the can with the cleaner onto the dispensing gun and press the trigger until clear liquid flows out of the gun. The can should be shaken prior to application.

Remarks / restriction

- The adhesive working yield depends on several circumstances: air, surface and can temperatures, air humidity and the distance between the foamed polystyrene and the face of the wall, wall leveling. When application temperature is higher, time is reduced. When application temperature is lower and closer to the minimum, correction time may be extended.
- Product does not adhere to polyethylene, polypropylene, polyamide, silicones, Teflon.
- The adhesive is safe for polystyrene board, not destroy them.
- Use acetone Cleaner to remove uncured adhesive. Caution! Cleaners can cause for foamed polystyrene boards by dissolving matter. Hardened adhesive may only be removed mechanically (e.g. with a knife).
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- Quality and technical condition of used applicator affect the parameters of final product.
- The foam should not be used in spaces without access of fresh air and poorly ventilated, and do not expose to temperatures exceeding 50°C.

ADDITIONAL INFORMATION

All given parameters are based on laboratory tests compliant with internal manufacturer’s standards and strongly depend on foam hardening conditions (ca, ambient, surface temperature, quality of used equipment and skills of person applying the foam).

TRANSPORT / STORAGE

The adhesive maintains its usability within 12 months from manufacturing date, provided that it is stored in original packaging in vertical position (valve facing up) in a dry place in temperature +5°C do +30°C . Storage in temperature exceeding +30°C shortens the shelf life of the product, adversely affecting its parameters. The

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product may be stored in temperature -5°C, no longer however than for 7 days (excluding transport). Storage of adhesive cans in temperature exceeding + 50°C or in vicinity of open flame is not allowed. Storage of the product in a position other than recommended may result in jamming the valve. The can cannot be squeezed or pierced even when it is empty.

Do not store the foam in the passenger compartment. Transported only in the trunk.

Detailed transport information is included in the Material Safety Data Sheet (MSDS).

Transport temperature	Transport period [days]
< -20°C	4
-19°C ÷ -10°C	7
-9°C ÷ -0°C	10

SAFETY AND HEALTH PRECAUTIONS

The information contained herein is offered in good faith based on Producer’s research and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information shall not be used in substitution for customer’s tests to ensure that Producer’s products are fully satisfactory for your specific applications. Producer’s sole warranty is that the product will meet its current sales specifications. Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted. Producer specifically disclaims any other expressed or implied warranty of fitness for a particular purpose or merchantability. Producer disclaims liability for any incidental or consequential damages. Suggestions of use shall not be taken as inducements to infringe any patent.

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