

ADFOAM BOND 1850 Gun grade polyurethane Foam Adhesive

DESCRIPTION

ADFOAM BOND 1850 is a ready-to-use, single component, self-expanding polyurethane adhesive for clean, efficient and economical permanent bonding of insulation panels and plasterboard in building and construction.

PHYSICAL PROPERTIES PHYSIQUES

Base	Single component polyurethane
Color	Orange
Consistency	Stable adhesive foam (does not sag)
Curing system	Moisture cure at room temperature
Curing Speed (*)	About 30 minutes – 30 mm adhesive bead
Skin formation (*)	About 8 minutes – 30 mm adhesive bead
Can be trimmed (')	About 50 minutes – 30 mm adhesive bead
Full strenght (*)	About 12 minutes – 30 mm adhesive bead
Post expansion	Minimal
Thermal conductivity (DIN 52612)	About 0.035 W/(m·K)
Tensile strength (DIN EN 1607)	0.19 N/mm ²
Shear strength (DIN EN 12090)	0.142 N/mm ²
Shear modulus (DIN EN 12090)	0.489 N/mm ²
Temperature resistance	-40°F to 194°F (-40°C to +90°C) +248°F (120°C) (up to max. 1 hour)
Building material class (DIN 4102, part 1)	B2
V.O.C.	149 g/L

(*) Measured at 80°F / 20°C/65% R.H. These values may vary depending on ambient factors such as temperature, humidity and type of substrate.

PRODUCT CHARACTERISTICS

- Cuts working time by up to 30%
- Excellent initial bond - even at low temperatures
- Economical to use due to precise application
- One can covers up to 129 ft² (12 m²) of insulation
- Suitable for vertical applications
- Can be applied at temperatures between 23°F and 95°F (-5°C and 35°C)
- Thermal conductivity 0.035 W/ (m·K) enhances performance of insulation panels when filling gaps
- Remains flexible, does not become brittle
- Levels uneven surfaces
- Limited post expansion for fast and precise installation of insulation panels and plasterboard
- Substantial space and weight savings compared to conventional PU roof adhesives, bonding mortars, etc.

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- Fast curing, work can continue about 1 hour after application
- Solvent-free
- Resistant to a variety of solvents, paints and chemicals
- Does not age or rot, mould and mildew resistant, but not UV resistant
- Water resistant (not watertight)

APPLICATIONS

- Clean, efficient and economical permanent bonding of insulation panels.
- Suitable for bonding polystyrene (EPS + XPS), polyurethane (PUR/PIR) and phenol resin foam based insulation panels for flat roofs, perimeters, facades, insulation/drain elements, cellar ceilings, internal insulation, etc.
- Suitable for bonding gypsum plasterboard/gypsum fibreboard in dry lining applications.
- Suitable for bonding non-load bearing walls, e.g. partition walls, screen walls, cellar bars, stone shelves, etc., of concrete precision blocks (aerated concrete, sand-lime brick, gypsum, etc.).
- Fills cavities between individual thermal insulation panels.

FORM OF DELIVERY

Packaging: 750 ml aerosol can (12 per box)

SHELF LIFE

12 months from date of production in unopened packaging with cool 41°F to 77°F (+5°C to +25°C) and dry storage. Cans must be stored upright to prevent blockage of spray valve. Once opened, keep container tightly closed and use within a short period.

SUBSTRATES

All usual substrates such as concrete, masonry, stone, plaster, wood, cold bituminous thick coatings, sand or slate surfaced bituminous sheeting, polystyrene, polyurethane and phenol resin foam, corrosion protected steel sheeting, fibre cement, gas concrete, particle board, plasterboard, gypsum fibreboard, fibre cement, hard PVC and emulsion paints. Adhesive surfaces must be stable, clean, without bubbles and free of separating agents such as talcum, grease, oils, etc. Suitable are building moist, but not wet (water film, standing water) substrates. Any cement slurries and sinter layers on mineral substrates must be removed mechanically. Bubbles in bituminous sheeting must be removed. To ensure perfect adhesion, the bituminous sheeting should have a fully covered surface. Does not adhere to PE, PP, PTFE and silicone. All substrates should be tested for suitability with regard to adhesion and compatibility.

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DIRECTIONS FOR USE

General

Prior to using the product, cover all adjacent areas for protection against soiling. In windy conditions, precautions must be taken to ensure that ADFOAM BOND 1850 cannot contaminate components, objects or persons in the vicinity. Good ventilation must be ensured for indoor use. Wear protective goggles and gloves. Tightly screw the can to the thread in the gun and shake the gun about 20 times downwards so that the contents are mixed well to ensure an optimum adhesive quality and high yield. After extended periods of non-use, the gun must be shaken again to obtain the required adhesive quality! With the adjusting screw on the gun, adjust the adhesive bead to the required diameter. (The emptier the can, the more the adjusting screw needs to be opened). The gun must be held vertical during application.

A distance of 0.4 to 0.78 inch / 1 to 2 cm must be maintained between the gun nozzle and insulation panel/substrate while spraying. Apply pressure to the insulation panel within about 8 minutes (80°F / 20°C - 65% R.H. – this time is shorter at higher temperature/humidity and longer at lower temperature / humidity). Do not tap or remove and reapply panels as this will damage the adhesive structure and reduce the adhesive strength substantially. At high temperatures and low humidity in particular, curing can be accelerated by lightly spraying the adhesive bead with water. All surfaces should be free of dust, oil, grease, freeze or any other contaminant. Clean all surfaces with our ADFOAM CLEANER 500. Let it evaporate for 20 minutes prior to the ADFOAM BOND 1850 application.

1. Bonding flat roof insulation materials

Apply ADFOAM BOND 1850 directly to the substrate. Pressure should be applied to the insulation panels for optimal contact and maintained using suitable weights for at least 15 minutes to prevent lifting and slipping through wind suction. The panels must not be subjected to traffic for about 2 hours.

Consumption: At least three uniform adhesive beads with a minimum diameter of 1.2 inches (30 mm) are required per square meter adhesive surface. The number of adhesive strips, according to DIN 1055, part 4, depend on the region roof area, structure height, corner and edge areas as well as the materials to be bonded.

The amount of adhesive to be applied depends on the wind load and must be increased in corner and edge areas.

2. Perimeter insulation

ADFOAM BOND 1850 facilitates the installation of insulation panels in perimeter areas according to DIN4108-2 (Not suitable for pressing water).

Spray ADFOAM BOND 1850 from bottom to top with a bead spacing of about 1 inch (25 cm) (minimum three beads per continuous panel or minimum two beads for short panels!) on to the insulation panel or cellar wall. Press the insulation panel lightly against the cellar wall. Work from bottom to top without gap. The insulation panels must be bonded staggered in corners of buildings. The installed insulation panels can be readjusted with a long spirit level to correct any post expansion of the adhesive within 8 minutes.

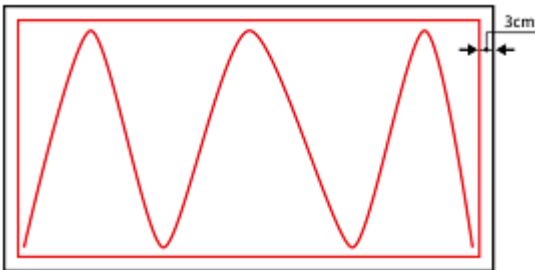
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The insulation achieves its final strength through the pressure of the filled soil, gravel or similar. Filling must take place within 14 days after bonding.

3. Facade/wall insulation

ADFOAM BOND 1850 is ideal for bonding insulation panels to interior walls and exterior facades. The gun must be held vertical during application. Apply a circular bead of ADFOAM BOND 1850 to the insulation panel with enclosed M/W to cover an adhesive area of minimum 40% with pressure applied.



Wait at least 2 to maximum 8 minutes (80°F / 20°C -65% R.H.- this time is shorter at higher temperature/humidity and longer at lower temperature/humidity) and subsequently press the insulation panel against the wall. Work from bottom to top without gap. Insulation panels must be bonded staggered in outer corners of buildings. Installed insulation panels can be adjusted with a long spirit level after 10 to 15 minutes to correct any post expansion of the adhesive. It is recommended to fix the last installed insulation panel during breaks.

4. Cellar ceiling insulation

For working overhead, suitable protective goggles must be worn!

ADFOAM BOND 1850 has a very high initial bonding strength and is therefore ideal for permanent bonding of insulation panels to cellar ceiling, garage ceiling or overhead areas, also without additional mechanical fastening. Suitable are all standard insulation panels of polystyrene (EPS and XPS) and PUR / PIR measuring 20 x 20 inches (500 x 500 mm) and with a maximum thickness of 4 inches (100 mm) and a maximum weight of 400 grams. Larger and heavier insulation panels and/or additional surfaces should be fixed mechanically within 15 minutes. This is easily done using ceiling supports for example. Prior to application, the substrate stability must be verified. This can also take place with a sealing pate test.

In this test, sealing tape is applied to the substrate and quickly pulled off again. If old paint or plaster adheres to the adhesive tape, this means that the substrate does not have the necessary stability and must be reinforced or removed. With chalking and highly absorbent substrates, the substrate adhesion can be improved with a deep solvent primer. Protruding concrete burr must be removed mechanically. At least one circular and one angular adhesive foam bead with a minimum diameter of 1.2 inches (30 mm) (about 1.4 oz /40 grams per panel) must be applied to each 500 x 500 mm panel. Do not apply the adhesive too close to the outer edges to avoid the excess going over the edges when pressure is applied to the insulation panel. **Before bonding the insulation panel to the ceiling, ADFOAM BOND 1850 must be allowed to stand for 3 to maximum 6 minutes to achieve the required initial strength.** The insulation panel can subsequently be bonded to the ceiling. The panel must be placed carefully in the required position and pressure applied without tapping (damages the adhesive structure). **The next insulation panel must be bonded 5 minutes after the previously**

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bonded panel so that it remains in place when the next panel is bonded. Insulation panel must be additionally fixed in the center with a suitable insulation anchor under unfavourable bonding conditions.

5. Interior insulation / dry lining

Prior to application, the substrate stability must be verified. This can also take place with a sealing tape test. In this test, sealing tape is applied to the substrate and quickly pulled off again. If old paint or plaster adheres to the adhesive tape, this means that the substrate does not have the necessary stability and must be reinforced or removed. With chalking and highly absorbent substrates, the substrates adhesion can be improved with a deep solvent primer. Remove protruding concrete burr or excess plaster. ADFOAM BOND 1850 levels uneven surfaces up to 1.2 inches (30 mm).

Interior insulation panels:

Apply ADFOAM BOND 1850 about 0.78 inch (2 cm) away from the edge of the panel as a 1.2 inches (30 mm) circular bead and to the panel surface in lines or W-shape. It must be ensured that the adhesive contact is about 40% after applying pressure. The adhesive must always be applied circular also for the panel cut-outs, penetrations, etc., to prevent rear circulation of the interior insulation. After applying ADFOAM BOND 1850, depending on the climatic conditions, allow to flash off for about 3 to 6 minutes. This ensures that an optimal adhesive strength is achieved with reduced post expansion. Subsequently place the insulation panel on wedges, align and apply pressure from bottom to the top. Do not tap or remove the panels as this can reduce the adhesive strength substantially. Apply new adhesive if necessary. After 6 to 10 minutes, check for correct seating, readjust with a spirit level/level. Edges of walls, ceiling and floor, openings and penetrations must be filled out completely with ADFOAM BOND 1850 air-tight and sound insulated. Work can be continued after 1 hour. ADFOAM BOND 1850 can also be used for mounting electrical installation boxes.

Plasterboard:

In contrast to interior installation, three vertical adhesive beads are sufficient for the installation of plasterboard wider than 1.75 inches (50 cm). For panel widths below 50 cm, a minimum of two adhesive beads must be applied.

6. Concrete precision block bonding

ADFOAM BOND 1850 must not be used for components requiring approval, e.g. supporting walls and walls relevant for safety. Good ventilation must be ensured for indoor use.

Clean the adhesive surfaces with ADSEAL Cleaner 6003 and allow evaporation for about 20 minutes. Remove loose particles and moisten. Apply two ADFOAM BOND 1850 beads with a diameter of about 30 mm to the substrate and subsequently to all further concrete precision blocks. The adhesive beads must be applied about 50 mm away from the stone edge parallel on horizontal and vertical joints. Position joint and align bricks within minimum 2 to maximum 8 minutes (80°F / 20°C/65% R.H— this time is shorter at higher temperature/humidity and longer at lower temperature/humidity). If once jointed bricks are removed new adhesive beads must be applied. Allow excess adhesive to cure and subsequently remove, e.g. with a spatula. Depending on the ambient temperature, work can be continued after 60 minute. The adhesive achieves full strength after a minimum 12 hours.

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7. Other applications

Due to its excellent adhesive properties, reduced foaming and fast initial strength, ADFOAM BOND 1850 is suitable for numerous bonding applications. ADFOAM BOND 1850 is ideal for the insulation of insulation panels in building and construction installation of loft insulation reveals and claddings as well as bonding of wall edging strips are just a few examples.

GENERAL NOTE

Do not load or subject the bond to traffic within the curing time of about two hours! All open joints within the insulation can be filled out with ADFOAM BOND 1850. Trim protruding, fully cured adhesive with a sharp knife. ADFOAM BOND 1850 can be painted or plastered after curing.

Application temperature:

- 23°F and 95°F (-5°C to +35°C) (adhesive surface temperature)
- 41°F to 77°F (+5°C to +25°C) (can temperature) – optimal 59°F to 77°F (+15°C to +25°C)

If required slowly bring the can to the optimum temperature by placing in warm or cool water.

Cleaning: with ADFOAM CLEANER 500 prior to curing, subsequently mechanically.

Repair option: ADFOAM BOND 1850

SAFETY RECOMMENDATIONS:

Observe the standard industrial hygiene procedures. Wear protective goggles and gloves. Remove cured adhesive mechanically, never remove with flame. For further information on product safety and handling, refer to the information on the container. If you need additional information, do not hesitate to contact your technical representative. Always test product on your particular application prior to use. Please refer to Material Safety Data Sheet before use. For Industrial Use Only.

IMPORTANT

READ CAREFULLY

The information and recommendations contained herein are derived from our research and information from other reliable sources. This data applies only to our products and not when used with other products. We believe in the reliability of our information. However, no guarantee is offered to that effect. It is the responsibility of the buyer to verify this data according to their own operating conditions to ensure that they conform to the purpose for which the product is intended, even before using it.

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