

**SOUDAL**

[www.soudal.com](http://www.soudal.com)



# Application manual **SOUDABOND EASY**



bonding of insulation panels



bonding of drywall panels



bonding of cellular concrete blocks

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Our technical service will be pleased to be of assistance with additional information. Please consult our website: <a href="http://www.soudal.com">www.soudal.com</a>			
Tel: +32 14 424231			
Fax: +32 14 426514			
<a href="mailto:info@soudal.com">info@soudal.com</a>			

### TIPS FOR ACHIEVING A PERFECT ADHESIVE BOND:

- Read the application instructions on the packaging carefully
- Clean the substrate and the materials which need to be bonded and ensure that they are free of dust and grease
- Wear gloves and work with long sleeves
- SBE contains flammable propellants
- Do not apply close to open fire and sources of ignition
- Ensure sufficient ventilation during and after work
- Application temperature is between +5°C and +35°C
- Moisten applications slightly before assembling parts



**Soudal** has combined the bond strength of its PU Construction Adhesive with the ease of use of its PU Foams in a new, unique and revolutionary Adhesive Foam – **Soudabond Easy**.

**Soudabond Easy** is a fast setting PU Construction Adhesive for a wide range of finishing jobs. The ideal product for many applications in new construction and building renovation.

## Products



## Accessories

### Soudal Design Gun

also available with 60cm and 100cm barrel



### Soudal Design Gun Click & Fix



### Soudal Compact Gun



### Soudal Compact Gun Click & Fix



### Foamcleaner Gun / Click & Fix

500ml



### Soudal Swipex Cleaning Wipes

100 wipes  
50 wipes



## General information on applications



### Bonding of Insulation Panels

For the bonding of most types of insulation panels (PUR, PIR, EPS, XPS\*, PS, rockwool, mineral wool etc. to each other or to interior and exterior walls, ceilings, also below the soil level, on attic floors, flat roofs, etc. Also suitable for acoustic insulation, insulation of cavity walls, floor- and wall acclimatization....

### Bonding of drywall panels and finishing panels

For the bonding of drywall panels, finishing panels, plaster profiles, fibre-cement panels, composite panels, MDF and OSB panels, etc. onto interior walls.

\* For XPS panels (Extruded Polystyrene) preliminary tests are always recommended. This is due to the fact that many types of these panels are covered with a very smooth extrusion skin on which the adhesive may not bond. It is therefore recommended to roughen this surface to ensure optimal results. XPS panels with a ribbed exterior structure have especially been designed for adhesive bonding.



**Bonding of cellular concrete building blocks**

Division of large spaces into smaller rooms by building non-carrying interior walls. Creation of small constructions for the insertion of bath tubs, shower cells, etc....\*\*



**Installation of electrical boxes**



**Bonding of decorative elements**

such as plinths, moldings, etc. inside, outside and on façades.

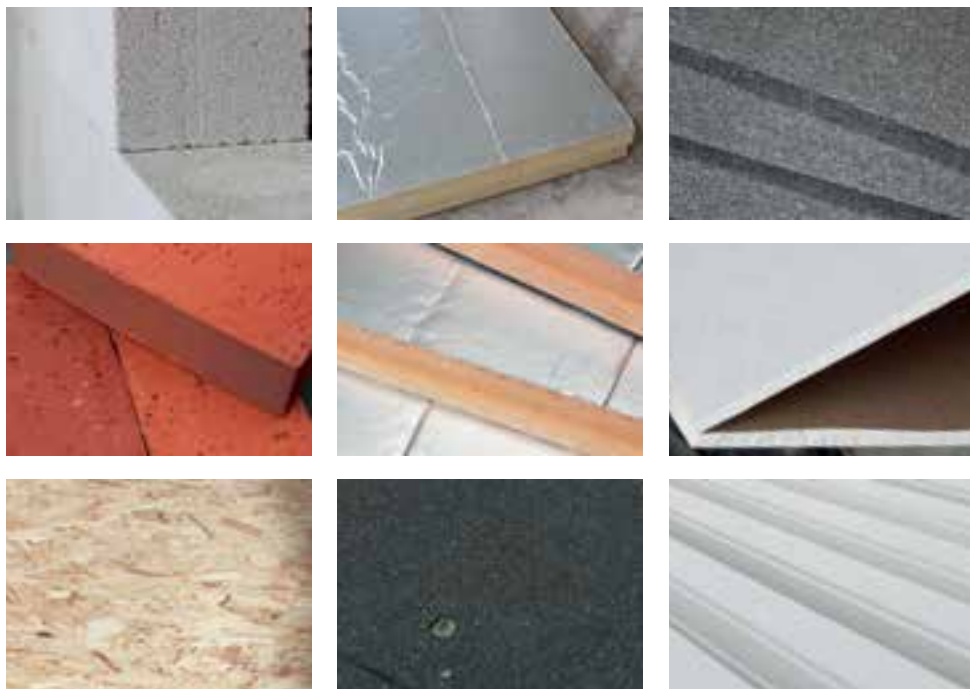


**As a filler and insulating product**

at the edges of insulation materials and along connections.

\*\* The use of Soudabond Easy for the bonding of hollow bricks is prohibited in Europe due to a patent for this application.

## General Information on substrates and surfaces



### **Soudabond Easy can be applied onto a wide range of common building materials:**

- Stone, concrete, cellular concrete, aerated concrete, brickwork.
- Plasterboard.
- Timber, OSB, MDF.
- Metals, steel, steel deck.
- Painted surfaces.
- Bituminous surfaces, roofing rolls,
- Many types of plastic such as hard PVC, Polyester, Fiberglass (not on PE, PP, PTFE).
- Insulation materials such as EPS, PUR, PIR, PS, hard mineral wool, ...

Due to the variety of substrate qualities we recommend preliminary compatibility testing on all types of substrates.



## General advantages

**30%  
faster**

### 30% savings compared with traditional systems

- No preparation, start and finish immediately.
- Replaces most types of powder adhesives and paste adhesives– one can of 750ml replaces one bag of 25kg powder adhesive.
- No mixing required.
- No Primer required.
- No waste and loss of product.
- Can be extruded directly from the can, fast and easy to apply.
- Clean to work, almost no cleaning required after extrusion.

**no  
mixing**



### Fast setting: 1 hour

- Finishing possible 1 hour after application (plastering, sanding, painting).
- Insulation panels can be finished quickly, covered with tape, etc.
- Joints and gaps between drywall panels can be filled.
- Walls can be plastered.

**25kg**



### Economic in use

- 1 can of 750ml = up to 14m<sup>2</sup> of panels, insulation as well as drywall.
- 1 can of 750ml = up to 12m<sup>2</sup> of wall surface (H25cmxL60cmxD10cm).
- 1 can of 750ml = up to 120 electric wall boxes installed.
- 1 can of 750ml replaces up to 25kg of powder adhesives and up to 50kg of adhesive plaster.

**14m<sup>2</sup>**



**cellular  
concrete**

**12m<sup>2</sup>**



- The cost of bonding per m<sup>2</sup> remains unchanged, irrelevant of the thickness of the insulation panels
- Saves space and reduces weight: no more carrying of heavy powder bags, easy to use on a scaffold, easy to carry to the attic, inside the elevator, on the stairs...

## General advantages



### Easy to use

- Can always be used immediately.
- No extra tools such as a mixer, trowel, spatula needed.
- No need for electricity or pressurized air.
- No smell, no noise.
- No hazardous solvents.
- No backbreaking carrying of heavy bags.
- Can be reused - no product waste.

### Fills empty spaces

- Bonds and fills in one go.
- Keeps its adhesive strength on uneven surfaces (up to 10mm).
- Easy to create level surfaces.
- Perfect for uneven surfaces.
- Suitable for ceiling connection filling in interior walls.
- Can also be used as filler and insulation foam.

## General advantages



- Very limited post expansion



- Also perfectly suitable for the installation of door- and window frames

### **Soudabond Easy = Cost savings compared to traditional systems**

- Time saving = money saving.
- Costprice per m<sup>2</sup> is many times lower than mechanical fixing.
- Costprice per m<sup>2</sup> does not depend on the thickness of insulation panels.

### **Soudabond Easy is a high performance construction adhesive and at the same time:**

- An excellent insulator, both thermal and acoustic.
- Perfectly suited as a filler and insulation foam, therefore can be used to fill gaps and cavities at the edges where a perfectly insulating barrier is created.
- Fire rating B2 to DIN EN 4102.
- Can be used in humid surroundings, such as kitchens, bathrooms, even behind shower panels.
- Cured adhesive does not absorb moisture.
- Can be used on slightly humid substrates.
- Very easy to trim and smoothen once fully cured.

### **No post-expansion after application**

- This permits the use of Soudabond Easy as adhesive for insulation panels and drywall panels where a level surface is an absolute requirement.
- Once applied according to the application instructions the adhesive foam will not expand and push off the panels.

## Test Results



### Excellent adhesion on all usual building materials

- Can be used without primer on most non-porous substrates.
- Can be used without primer on most strongly absorbent surfaces.
- Can be applied directly onto (slightly) humid surfaces.
- On sealed and airtight surfaces slightly moistening the substrates will improve the bond strength.

### Durable solutions

- Soudal has more than 30 years of experience with durable bonding applications based on PUR adhesive technology.
- If correctly applied Soudabond Easy will ensure a perfectly stable long term adhesive bond.
- As the adhesive layer is always applied between two building materials there is no exposure to UV radiation and therefore no risk of UV degradation.
- If Soudabond Easy remains visible (when used as a filler or in frame installations) the cured material needs to be trimmed and covered with paint or a layer of plaster to prevent UV degradation of the surface.

## Test Results

- Soudabond Easy has been tested by the renowned German institute for façade and fastening technology, IFBT GmbH Leipzig. The test reports can be consulted on the website of Soudal – [www.soudal.com](http://www.soudal.com).



Cellular Concrete



Drywall panels

## General information on surface preparation



### Precautions

- Protect surrounding areas with cardboard or plastic foil to avoid soiling.
- Wear protective clothing with long sleeves, protective gloves, safety goggles.
- Ensure that the workplace is sufficiently ventilated.
- Never work close to a source of ignition.
- Do not smoke during application.
- Shake can thoroughly before application, at least 20-30 times.
  - a. Open cap and release application straw (Genius Gun - see next page).
  - b. Attach foam applicator tool on Soudabond Easy Gun / Click&Fix (see next page).
  - c. Thread extrusion applicator onto the valve (see next page)

### Work Conditions

- Application temperature should be above +5°C and below +35°C.
- Best performance is achieved if the can temperature is between +5°C and +25°C – if necessary place can in a bucket of luke-warm water to ensure this.
- If used outside, ensure that there is no strong wind during extrusion or place wind-screens.

### Substrates

- Substrates should be clean and free of dust, rust, grease and oils.
- The substrates may be humid. In dry conditions (<40% rH) it is recommended to moisten substrates by means of a fine spray of clean water. When bonding drywall panels it is not recommended to spray additional moisture onto the surfaces.
- Powdery substrates such as aerated concrete blocks (Hebel blocks) need to be brushed clean thoroughly – if necessary they can be pretreated with a Surface Primer.
- Unstable substrates such as screed with a high sand content or burnt surfaces need to be brushed off thoroughly and be pretreated with a Deep Primer.
- Surfaces may be slightly uneven; Soudabond Easy can easily absorb unevenness of up to 20mm. The full adhesive strength remains intact at an unevenness of up to 10mm per m.
- On surfaces which have not been mentioned, always perform a preliminary compatibility test to ensure that the product performs correctly.
- There is no adhesion on PE, PP and PTFE based surfaces.

### Soudabond Easy Hand Held: Thread the Applicator onto the Valve



1. Can of SBE hand held



2. Remove gloves from the cap



3. Wear gloves



4. Shake can thoroughly at least 20-30 times



5. Thread applicator onto the valve



6. Apply with the valve pointed downwards

### Soudabond Easy Click & Fix: Click the Can into the Click & Fix Gun



1. Shake can thoroughly at least 20-30 times or during 30 seconds



2. Remove gloves from below the can



3. Wear gloves



4. Remove safety cap from the adaptor



5. Thread or click the can into the Click & Fix or Foam Gun



6. Set end screw of the gun to the required extrusion rate (ca 30mm bead) and extrude adhesive

### Soudabond Easy Genius Gun: Ready to Use



1. Remove gloves from the cap



2. Wear gloves



3. Free straw



4. Shake can thoroughly at least 20-30 times



5. Apply the foam to the substrate



6. Lock the straw with the slot and press the straw in the clip



## Drywall panels and other finishing panels

**Finishing panels** are panels which need to be installed as a completely level surface. Very often they remain visible to the eye. Due to its ease of use, its filling characteristics and its fast setting performance Soudabond Easy offers the most efficient solution for the adhesive bonding of these panels. Carrying heavy and cumbersome bags of powder adhesive, mixing them with special mixing machines, applying the adhesive with trowels, worrying that the powder based adhesive will set before the job is finished, spending time on cleaning tools – all this is now the Past...

**No more dust, no cleaning needed after the job is done.**

## ■ Panels

### TYPES OF PANELS



Cardboard covered drywall panels based on gypsum



Fiber reinforced gypsum based drywall panels



Panels based on timber derivate (OSB panels)



Cement reinforced XPS panels



Composite panels with insulation layer



Woodchip panels with a decorative melamine coating

**Soudabond Easy can also be used with composite panels which combine a layer of gypsum etc. and an insulation layer (drywall & hard extruded PU; OSB with EPS, etc...).**

- No need to install a frame.
- No additional loss of space in a room which needs to be insulated.
- Ideal when external insulation or cavity insulation is not possible (renovation of flats, buildings which are considered monuments where special building legislation prevents external insulation, ...).

**Soudabond Easy can also be used on a wide range of other decorative interior wall panels:**

- MDF panels with or without melamine coating.
- Stone strip panels.
- Other finishing panels with a weight of less than 15kg/m<sup>2</sup> can be installed by means of adhesive bonding without supplementary mechanical fixing.



## SUBSTRATES

### • IDEALLY DIRECTLY ONTO WALLS



Interior wall



Interior wall



Installation of metal plastering profiles

- Ideal for direct bonding onto walls.
- Bonds to most common construction substrates: gypsum, concrete, bricks, timber (both painted and raw), metal (both coated and uncoated), PVC, painted walls, painted substrates, onto old drywall panels, etc...
- Directly onto the surface or onto a metal or timber frame.
- Helps to maintain the disengagement between the original substrate and the finishing panel.
  - Acoustic disengagement.
  - The adhesive prevents moisture intrusion.
  - The adhesive prevents penetration of discoloring agents (salts, rust, etc.).

### Limitations:

- > Not suitable for ceiling applications without mechanical support.
- > Interior applications on the inside of exterior walls should include insulation or a vapour barrier to ensure that no condensation occurs at the exterior side of the finishing panel.
- > Maximum weight of the panel = 15kg/m<sup>2</sup>. Heavier panels need to be supported mechanically for a period of at least 24 hours.
- > Not suitable for applications which require a fire rating.
- > Not suitable for applications onto which heavy objects will be attached (hanging toilets, etc...).

## Surface preparation

### SURFACE PREPARATION

1. Check if the surface is stable enough to carry finishing panels.
2. Avoid condensation problems by correctly insulating exterior walls.
  - Use a water repellent coating on the outside of the exterior walls if necessary.
  - Avoid condensation when installing extra insulation by adding a vapour barrier on the warm side of the insulation.
  - Avoid condensation.
  - Fit exterior walls without cavities with a vapor proof layer on which Soudabond Easy adheres.
3. Remove all loose parts completely.
4. If required, stabilize powdery and strongly absorbent surfaces with Deep Primer.
5. If required stabilize cellular concrete based walls by removing dust (brushing) and applying Surface Primer.
6. Remove all dust from smooth substrates, if necessary fix surface with Surface Primer.
7. Verify that the surface is level and install chalk lines to indicate the positioning of the panels.
  - Draw a straight chalk line at the ceiling at a distance of between 5 to 15cm from the wall (= thickness of panel + thickness of screed board + 1mm adhesive thickness and indicate the joint between each panel.
  - Use the screed board to detect uneven areas on the substrate:
    - The highest point of a hump will be the zero line.
    - In areas where the surface is more than 20mm below the zero line additional pieces of the panel should be glued to ensure that the maximum adhesive thickness will not exceed 20mm.
8. Cut or saw the panels to the required dimensions according to the instructions of the panel manufacturer.
  - Do not forget to sand the edges of cardboard covered drywall panels to ensure a smooth connection between the different panels.

**Soudabond Easy can be directly used on humid surfaces. The product will ensure moisture disengagement between the surface and the finishing panels as Soudabond Easy does not allow moisture penetration (depending on the thickness of the adhesive layer).**

**Moisture sensitive panels such as cardboard covered drywall panels, MDF, etc. may still absorb moisture from the humid air layer between the surface and the panel; in such a situation the installation of a vapor barrier is recommended.**



# ■ Panels: application method

## THE THICKNESS OF THE ADHESIVE BEAD DEPENDS ON THE (UN)EVENNESS OF THE SURFACE



Ø 1-2cm bead – bonding on (almost) level surface



Ø 3-4cm bead – bonding on a surface with unevenness of max 1cm

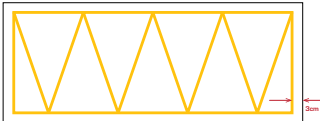


Ø min 5cm bead – bonding on surface with maximum 2cm unevenness

## APPLY ADHESIVE AT THE PERIMETER OF THE PANEL AT A DISTANCE OF 3CM FROM THE EDGE AND IN A ZIGZAG PATTERN (5 BEADS) = 40% OF ADHESIVE CONTACT SURFACE AFTER PRESSING

- Extrude Soudabond Easy onto the panel.
- Creation of closed compartments.

Apply adhesive with sufficient beads



To allow 40% adhesive contact surface after pressing the panel to the substrate



## WAIT CA. 5 MINUTES BEFORE INSTALLING THE PANEL

- In this period adhesive can be applied on up to 3 panels.
- After ca 5 minutes the adhesive is ready for installation of the panel.



Adhesive layer bursts when touched → too soon



Filaments appear on the finger when adhesive layer is touched after ca 5 min. → optimal adhesive bond



Adhesive has skinned and feels dry → too late; remove adhesive and apply new layer

## PRESS PREPARED PANEL STRONGLY



- Press prepared panel strongly onto the substrate and keep pressure for 1 minute or place wedges at the top of the panel.

## FINISH AFTER 1 HOUR

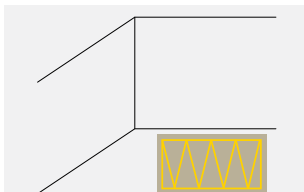


- 1 hour after the installation the panels can be finished (painted, plastered, gaps and joints filled, etc. ....).

## Cardboard covered drywall panels: application method

### APPLICATION METHOD CARDBOARD COVERED DRYWALL PANELS

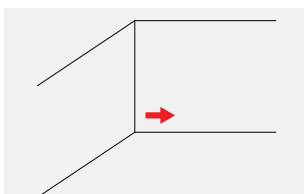
1. Apply Soudabond Easy to the first panel.



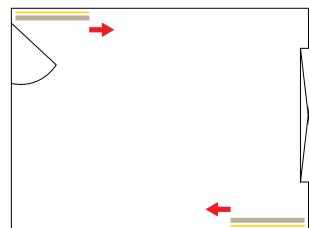
1. Only apply adhesive to the first panel



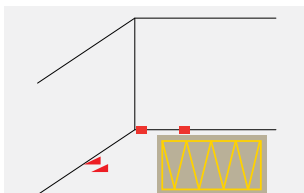
2. The first panel needs to be installed in the corner of a room.



2. Start in a corner



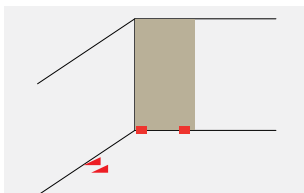
3. Use a spacer (ca 10mm) and a wedge to ensure that the panel is installed at a correct distance from the floor, the panel will rest on the spacer during the installation and curing of the adhesive.



3. Place spacers and keep wedges close at hand



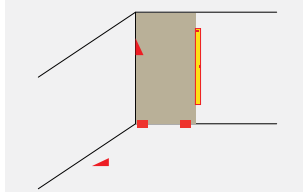
4. After ca 5 min. (the adhesive is threading) the first panel can be placed onto the spacers and the corner wedge. Press panel slightly onto the substrate but not yet entirely.



4. Ca 5min. after application of the adhesive place panel and press on slightly



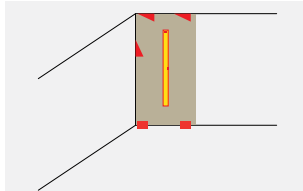
5. Control the vertical evenness of the panel at the joint side and push or release the wedge on the lower side to ensure evenness. If necessary, use additional wedge.



5. Control that the panel is 100% vertically even, if necessary place wedge



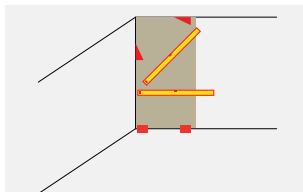
6. Press the panel completely into the substrate by means of a screed board or a long plumb rule. Insert a wedge at the space between the ceiling and the top of the panel both on the left and on the right side to ensure horizontal and vertical evenness.



6. Press on completely, ensure that the panel is 100% vertical on the other side, if necessary place wedge



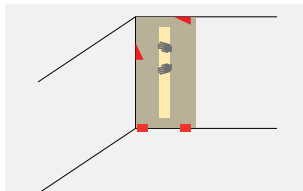
7. Now control the diagonal and horizontal evenness at various places on the panel.



7. Check horizontal and vertical evenness

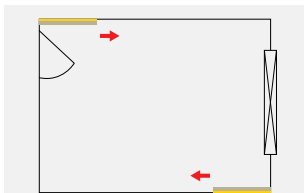


8. Once the first panel has been installed correctly and completely even it will be easy to install the other panels. Preferably wait until the first panel is sufficiently fixed (after 30-45 minutes).



8. Press strongly into the substrate by means of a screed board

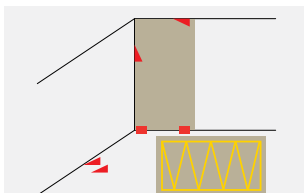
9. It is possible to install a panel using the same method in the opposite corner of the room during the waiting period of 30-45 minutes.



**9. Repeat the action at the opposite corner of the room**



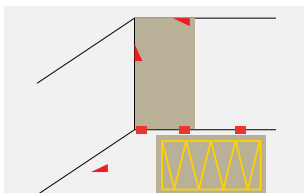
10. Now it is possible to install additional panels as described above with a reaction period of 5 minutes. In this way it is possible to install 2-3 panels at the same time.



**10. Apply adhesive onto the next panel with Soudabond Easy**



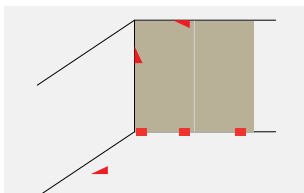
11. Insert a spacer at each panel at a sufficient distance from the seam (ca 50cm at panels of 60cm width, ca 100cm at panels of 120cm width).



**11. Only insert one spacer per panel**



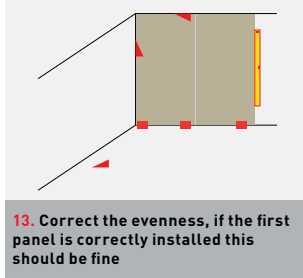
12. Place the panel on the spacer and press against the side of the previously installed panel; this ensures its correct vertical positioning. If required use a wedge to install correctly.



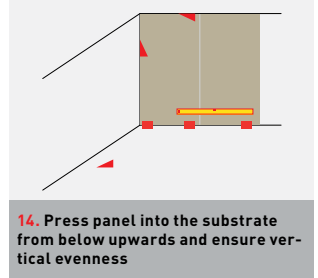
**12. Insert the panel into its space ca 5 minutes after applying the adhesive and check on the horizontal, vertical and diagonal evenness**



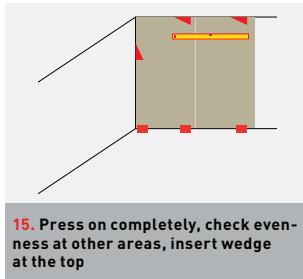
13. Ensure that the panel is evenly placed.
14. Reapply pressure from below upwards and install panel evenly.
15. Use a wedge both on the left and on the right top side to ensure correct positioning of the panel. Do a final check on horizontal, vertical and diagonal evenness also in relation to the previous panel.



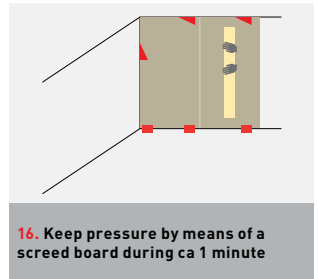
**13. Correct the evenness, if the first panel is correctly installed this should be fine**



**14. Press panel into the substrate from below upwards and ensure vertical evenness**

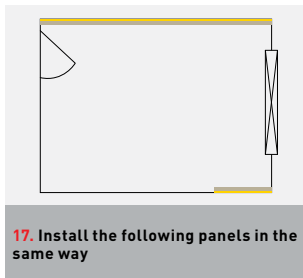


**15. Press on completely, check evenness at other areas, insert wedge at the top**

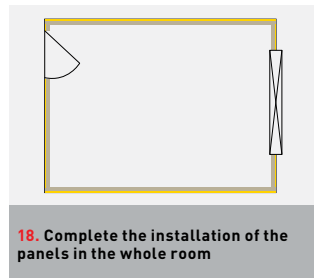


**16. Keep pressure by means of a screed board during ca 1 minute**

18. 1 hour after the installation of the last panels all the spacers and wedges can be removed and the installed drywall can be finished (painted, plastered, etc....).



**17. Install the following panels in the same way**



**18. Complete the installation of the panels in the whole room**

## ■ Panels with insulation: application method

### APPLICATION METHOD PANELS WITH INSULATION

Due to recent legislation the realization of high quality insulation in building renovation is one of the most important points of attention. For walls, there are various solutions, but in many cases the insulation of interior walls is the easiest and least costly method and often the only viable solution. This is especially the case if the installation of exterior insulation panels or of wall cavity insulation is not possible (high-rise apartment buildings, national heritage buildings, high cost factors, ...).

In this case drywall panels with an insulation layer can be used and easily installed by means of **Soudabond Easy** adhesive bonding.



### ADVANTAGES

- No frame required, installation directly to the wall.
- Minimal loss of space and volume in the room which needs to be insulated.
- Soudabond Easy has excellent adhesion on most common building substrates; plaster, concrete, stone, brickwork, timber (painted, varnished and raw), metal (coated and uncoated), many plastics, painted walls, onto other panels...
- No perforation of the panels required, therefore less risk of insulation loss.
  - Insulation panels are increasingly thick:
    - No expensive plugs required.
    - The cost price of adhesive bonding with Soudabond Easy remains the same irrespective of the thickness of the insulation panel.
- Soudabond Easy contributes to the creation of an uninterrupted insulation layer with all types of insulation panels: PIR, PUR, EPS, PF and XPS. Due to the fact that all penetrations, connections and joints are filled an air- and humidity tight barrier is created.
- With Soudabond Easy the adhesive layer creates an airtight and water resistant adhesive bond on all regular building substrates and at the same times fills cracks, openings and cavities of up to 100mm wide.

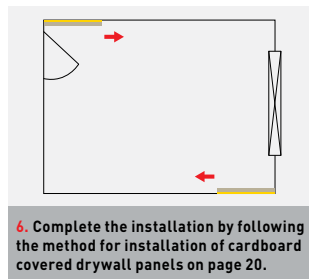


## INSTALLATION METHOD WITH SOUDABOND EASY

- See Installation method drywall panels.
- To create a completely airtight wall the seams between the different panels need to be sealed. For this the following products may be used:
  - Soudabond Easy.
  - Acryrub Exterior.
  - Fix All Flexi / Fix All High Tack.
- Always apply the product along the whole length of the panel.

## POINTS OF ATTENTION

- Remove all traces of wall paper from the substrate.
- Composite drywall panels fitted with an insulation layer of rockwool or high density timber wool can be installed with Soudabond Easy. We recommend to include a number of mechanical fixing points as well as the insulation layer is prone to tearing.



## Window reveals

### WINDOW REVEALS

In the building industry the trend is towards systems which save time and improve the insulation performance of the building. A critical element when considering building insulation is the area of window reveals. In traditional building methods the installation of window reveals is time consuming and the insulation of the reveal is often insufficient, resulting in loss of heat in cold - or loss of cooling in warm climates.

Soudabond Easy allows efficient installation of these reveals, especially when opting for a precut drywall panel with preinstalled metal corner profiles.



### ADVANTAGES

- Saves up to 30% time thanks to:
  - Speed of installation of the reveals.
  - The fact that no powder adhesive needs to be prepared.
  - The fact that no cleaning is required.
- Fills and bridges unevenness up to 20mm.
- Adhesive and insulation material at the same time – no more insulation gap.
- Fast curing – very short time between installation of the reveals and continuation of the work.

### INSTALLATION METHOD WITH SOUDABOND EASY

- Preparation of the substrate – see above.
- Cut the panels into the required dimension – the side panels support the top panel.
- Extrude Soudabond Easy to the panels and leave to set (5 minutes).
- First install the top panel, immediately support by one side panel, then install the other side panel below the top panel on the other side.
- When a long top panel is installed support in the center by means of a couple of support lathes to prevent sagging.
- One hour after installation support lathes may be removed.
- Finish by installing the low reveal panel.



1. Measure



2. Cut drywall material to the required size



3. Check if the panels fit



4. Prepare the installation area



5. Apply adhesive to the panels and leave to set for 5 minutes



6. Install top reveal



7. Install side reveal n°1



8. Install side reveal n°2 and support lathes



9. Install lower reveal and ensure evenness where required



10. Check all over the area



11. Soudabond Easy for a perfect installation on top...



12. ...and below!

## Installation of profiles

### INSTALLATION OF PROFILES

Soudabond Easy offers a clean, fast and efficient solution to the installation of corner profiles:

- Ready to use – no need to prepare powder based adhesive.
- Very fast setting – work can be continued one hour after installation.
- Saves time and money.



### COVERING OF CONCRETE AND METAL LOAD BEARING CONSTRUCTIONS

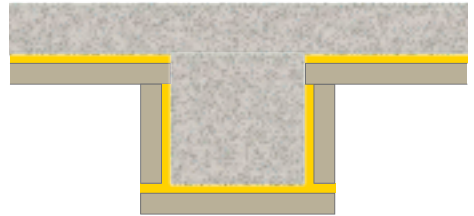
In this type of application the use of Soudabond Easy to install covering panels will save a lot of time and effort. A frame is no longer required as the panels can be bonded directly to the load bearing construction. In some situations one may consider a combination of mechanical fixing and adhesive bonding, especially when a metal H-profile needs to be covered.



# Covering of concrete and metal load bearing constructions

## CONCRETE

- First install the panels on the adjacent walls next to the concrete structure.
- Then bond the precut panels on the left and on the right side of the concrete structure.
- Finish by installing the front panel with Soudabond Easy.

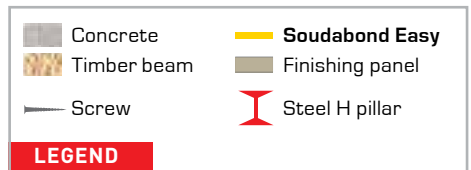
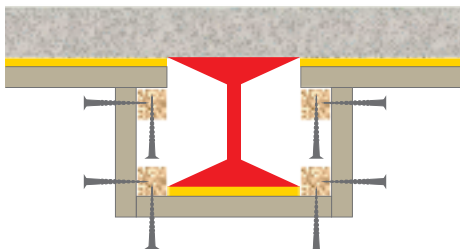


## METAL

Here it is possible to combine the use of Soudabond Easy with mechanical fixing by screws or rivets.

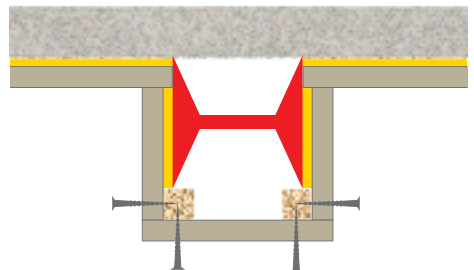
### OPTION 1:

- First install the panels on the adjacent walls next to the concrete structure with Soudabond Easy.
- Install a wooden beam onto the installed panels at both sides adjacent to the metal H-profile with screws or rivets.
- Cut a panel so that it matches the dimensions of the end face of the metal profile & the width of two wooden beams which you screw onto the designated area at both sides of the profile.
- Install the precut end panel to the end face of the metal profile with Soudabond Easy and by screwing to the beams.



### OPTION 2:

- First install the panels on the adjacent walls next to the concrete structure with Soudabond Easy.
- Cut two panels to the dimension of the side face of the metal profile + the width of the wooden beam and one panel to the dimension of the width of the metal profile and screw the wooden beams to the required area.
- Install the side panels to the metal H-profile with Soudabond Easy.
- Screw the precut end panel to the beams on both sides.



**METAL****OPTION 3:**

- A combination of the two previous options.



# Repair of loose panels

## REPAIR OF LOOSE PANELS

In case some panels may have become loose. Soudabond Easy can be used to fix them again without the need to resort to drastic measures.

### APPLICATION METHOD

- Drill a hole of Ø 16mm through the panel.
- Dust off the drill hole by means of a bellows and with a brush.
- Inject Soudabond Easy through the drill hole.
- Press the loose panel into the substrate and maintain pressure for ca 20 minutes.
- Trim off surplus adhesive.
- Plug hole with e.g. Soudafill Light.





## Bonding of construction blocks (creation of interior walls)

**Soudabond Easy** is the ideal adhesive for the bonding of rectified full building blocks made from a wide range of materials (AAC, cellular concrete, bricks, concrete, limestone, gypsum,...) in non-load bearing walls.



# Advantages of bonding building blocks with Soudabond Easy

## • SOUDABOND EASY ADVANTAGES

### SOUDABOND EASY OFFERS MANY ADVANTAGES COMPARED WITH TRADITIONAL BONDING SYSTEMS

- Saves up to 50% time compared with traditional methods (powder adhesives which have to be mixed, cement mortar...).
- Simple, clean and ergonomic application with special trigger foam applicators or with the patented Genius Gun system.
- No need for mixing prior to application, no need of electricity, water or compressed air.
- Very economic in use due to its precise application system.
- Much less weight to carry compared with cement mortar or powder adhesives).
- High initial bond, even at low temperatures.
- Better adhesion than traditional cement.
- Fast curing, allowing the finishing of the walls 60 minutes after their installation (painting, plastering, etc.).
- It is not necessary to wait until the adhesive has set before bonding the next layer. There is no limit of number of layers to be installed per hour or per day. It is possible to continue to work until the wall is finished (unlike work with traditional mortar or powder based adhesive).
- One can replaces up to 25kg of traditional mixed powder adhesive or cement mortar.
- Wind- and weatherproof.
- Perfect for room compartmentation.
- Does not become brittle.
- Does not absorb humidity, therefore also suitable for vertical joints at the top of the wall.

#### Suitable for use on most types of building substrates and – materials:

- Concrete\*, bricks\*, limestone and other natural stones, cellular concrete , cementitious substrates.
- Metal surfaces.
- Painted surfaces.
- Timber surfaces, OSB, plywood, etc...

## SOUDABOND EASY – HOW MUCH TO USE WHEN BONDING BUILDING BLOCKS

- The amount of **Soudabond Easy** required for bonding of building blocks depends on the dimension of the blocks and wether or not the vertical joints need to be sealed.
- Always consider the requirement of 2 beads of 20mm diameter of Soudabond Easy.
- **For blocks of 100mm thickness, 500mm length and 660mm height** the product requirement is as follows:
  - Without vertical joints: 1 can will be sufficient to install ca 96 blocks, enough to build a wall of  $12,6m \times 2,5m = 31.5m^2$ .
  - With vertical joints: 1 can will be sufficient to install ca 42 blocks, enough to build a wall of  $ca 5,6m \times 2.5m = 13.6m^2$ .
- **For blocks of 150mm thickness, 600mm length and 250mm height** the product requirement is as follows:
  - Without vertical joints: 1 can will be sufficient to install ca 80 blocks, enough to build a wall of  $ca 4.8m \times 2,5m = 12m^2$ .
  - With vertical joints: 1 can will be sufficient to install ca 57 blocks, enough to build a wall of  $ca 3.4m \times 2.5m = 8.5m^2$ .
- **For blocks of 140mm thickness, 290mm length and 190mm height** the product requirement is as follows:
  - Without vertical joints: 1 can will be sufficient to install ca 166 blocks, enough to build a wall of  $ca 3,6m \times 2,5m = 9m^2$ .
  - With vertical joints: 1 can will be sufficient to install ca 100 blocks, enough to build a wall of  $ca 2.2m \times 2.5m = 5.5m^2$ .

\* Soudabond Easy may not be used for the bonding of hollow bricks and blocks due to a European patent granted.

## Application method for installing building blocks



Shake can thoroughly during ca 30 times



Fit can into the Foam applicator gun



Additional tools required



Install first block levelly into a layer of mortar spread on the floor



Use a bricklayer cord to install first layer of blocks completely level.



Apply two beads of Soudabond Easy to the side of the first block



Remove dust, if necessary moisten block with a fine water spray



Apply two parallel beads of Soudabond Easy



Inert the block into the adhesive layer within 8 minutes from extrusion of the adhesive foam



Apply adhesive also on the vertical side of the block



Slide the following stone into the adhesive layer below and on the side



Check levelness after each layer of blocks

When working with Soudabond Easy handheld or Genius Gun check the instructions on Page 14/15.



Check levelness in all directions



Where required scrape off material



One hour after the installation of the wall it is possible to plaster, paint, etc.

- Pay special attention to the installation of the first layer and make sure that this is completely level. On uneven surfaces the first layer should be installed on a bed of mortar to ensure its levelness.
- Remove dust from the blocks before bonding with Soudabond Easy.
- Slightly moisten the blocks with a fine spray of water to improve the adhesion.
- Use a bricklayers cord to ensure levelness and evenness in all directions.
- Apply at least 2 beads of 2cm diameter (on wider blocks more beads can be applied) on top of the previous layer.
- Insert a stone immediately into the adhesive layer and then apply adhesive to the vertical side of this stone. Continue in this way, pressing the next stone onto the vertical side of the previous stone until the layer is finished.
- Check levelness and evenness after each layer, if necessary scrape off to ensure that the top of the layer is completely level.
- It is not necessary to wait until the adhesive has set before bonding the next layer. There is no limit of number of layers to be installed per hour or per day. It is possible to continue to work until the wall is finished (unlike working with traditional mortar or powder based adhesive).
- 1 hour after the installation the adhesive has fully cured and you can start the finishing of the wall (painting, plastering, sealing, etc..).
- Install the blocks within 8 minutes from extrusion of the adhesive and before skinning.
- If a block is removed from the adhesive layer, the surplus adhesive should be scraped off and a new layer of adhesive should be extruded before replacing the block.

## Installation of contact boxes in walls

### INSTALLATION OF CONTACT BOXES IN WALLS

- Ready to use.
- Fast curing.
- Saves time.
- Fills up to 20mm space.
- Improves air tightness.

#### INSTALLATION METHOD

- Remove dust from the wall cavity, if necessary with pressurized air.
- Fill cavity maximum 30% with Soudabond Easy
- Leave to set for up to 5 minutes – allows you to fill several cavities in one go.
- Insert the contact box into the adhesive and hold in place for ca 30 seconds.
- The contact box needs to be installed at the latest 10 minutes after extruding the adhesive.
- If necessary, fill empty space with more Soudabond Easy.
- After 1 hour the application has fully set and can be finished (trimmed, painted, plastered, etc...).



## ■ Installation of covering stones, plinths and more

### COVERING STONES, PLINTHS AND MORE

In addition to the construction of non-load bearing walls, Soudabond Easy can be used for a wide range of stone bonding and tiling applications:

- Bonding of covering stones and other finishing stones onto low walls.
- Bonding of stone- and tile plinths onto walls in brickwork, plasterwork, composite panels, timber based panels, plasterboard panels, etc.
- Bonding of decorative elements onto walls:
  - PU and PS based decorative elements.
  - Ornaments.
  - Decorative trims.



### TRADITIONAL CONSTRUCTION FOAM APPLICATIONS

Soudabond Easy is also suitable for all classical applications for which a regular construction foam is used:

- Filling of gaps and cavities.
- Filling of wall penetrations.
- Installation of doors and windows.





## Interior and exterior Insulation Panels

**Soudabond Easy** is the solution for the adhesive bonding of insulation panels, both in vertical (wall) and horizontal (floor and ceiling) applications. Due to the fact that the adhesive can also be used as an insulating filler the complete insulation skin of the construction can be installed both air- and vapor tight. Thermal bridges as a result of mechanical fixing or due to badly insulated connection areas can now be avoided. With traditional systems, the cost of the installation of these panels by means of mechanical fixing increases in price due to the fact that insulation panels are offered in ever thicker dimensions. With **Soudabond Easy** the cost per m<sup>2</sup> remains unchanged, irrelevant of the thickness of the insulation panel.

This type of insulation is relevant in countries with cold climates where heat needs to be kept inside and cold kept outside of the building as well as in countries with warm climates where heat is kept outside and cool air created by air conditioning should be retained inside.

# Insulation applications

## INSULATION APPLICATIONS



Ceiling Insulation



Exterior Perimeter Insulation below the soil level



Cavity Insulation



Interior Wall Insulation



Interior insulation with cardboard covered drywall panels



Sanitary Insulation



Acoustic Insulation



Attic Insulation



Insulation with subfloor heating



Exterior Insulation with finishing plaster layer



Exterior façade insulation at the back of façade panels



Exterior Insulation of flat roofs

## Insulation materials

### TO BE USED WITH MOST TYPES OF HARD INSULATION PANELS

#### SYNTHETIC INSULATION PANELS:

- Hard Polyisocyanurate Foam (PIR) or Polyurethane (PUR) panels.
  - Uncovered.
  - Covered with aluminium foil layer\*.
  - Covered with a fiberglass coating.
  - Covered with a sanded bituminous coating.
  - Covered with a mineral fiberglass coating.
- Expanded Polystyrene Foam Panels (EPS).
- Extruded Polystyrene Foam Panels (XPS).
  - Uncovered.
  - Covered with cement layer.
- Ureum, phenol- or resorsinol formaldehyde foam.



#### MINERAL INSULATION PANELS:

- Glass wool.
- Rockwool.
- Cellular concrete.



#### NATURAL INSULATION PANELS:

- Cork.
- Timber wool.



#### ACOUSTIC INSULATION PANELS:

- Acoustic panels.
- Acoustic Foams.

### Remark

**Insulation Material based on glass-, rock- or timber wool can be bonded with Soudabond Easy. We recommend an additional number of mechanical fixing points per m<sup>2</sup> as these materials are not solid and may tear easily.**

- \* Insulation panels covered with a layer of aluminium foil need to be suitable for adhesive bonding (the aluminium foil needs to be attached well to the insulation core). Always consult the technical documentation of the insulation material and execute a preliminary compatibility test. In heavy duty applications with the risk of exposure to heavy winds (eg insulation of flat roofs) the approval of the insulation material manufacturer should be requested if these materials need to be bonded with Soudabond Easy.
- \*\* XPS – Extruded Polystyrene Panels: we always recommend preliminary compatibility tests as many panels have a very smooth surface onto which the adhesive does not bond. We therefore recommend to sand down these panels to ensure the adhesion. Some XPS panels have a wafered surface structure and are specifically designed for adhesive bonding.



## SUBSTRATES ONTO WHICH INSULATION MATERIALS ARE BONDED

SODABOND EASY HAS EXCELLENT ADHESION ON MOST BUILDING SURFACES: PLASTER, CONCRETE, CEMENTITIOUS SURFACES, PAINTED AND UNPAINTED TIMBER, COATED AND UNCOATED METALS, PVC, ... AND CAN BE USED TO BOND INSULATION PANELS ONTO EACH OTHER

Can be used for the insulation of walls, ceilings, cellars, flat roofs, attics as well as for doors...

- No perforation of the insulation panels required.
  - therefore no cold bridges.
- Insulation materials tend to get thicker.
  - No additional fixing points necessary.
  - The cost of adhesive bonding with Soudabond Easy remains the same independent of the thickness of the insulation panel.
  - Excellent insulation value: ( $\lambda = 36\text{mW/m.K}$ ).
- Less expensive than mechanical fixing by means of metal or plastic plug fittings.
- Due to its high insulation performance ideal as edge sealant around the insulation panels:
  - Complete sealing of the substrate which needs to be insulated.
  - No cold bridges at the connection area's.

## Installation method insulation panels

### INSTALLATION METHOD INSULATION PANELS



Apply Soudabond Easy onto the panel, creating closed compartments



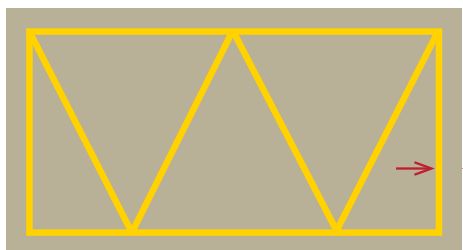
Wait ca 5 minutes (thread formation) until the adhesive has developed its strength. In this period 6-8 panels of 600x1200mm can be prepared



Position the panel correctly



Apply pressure for ca 60 seconds. 1 hour after installation the application can be finished if necessary



## CAREFUL !

For **vertical applications** it is important to wait for ca 5 minutes after the extrusion of the adhesive onto the insulation panel to allow the strength build-up of the adhesive to take place prior to installing the insulation panels onto the wall. \*



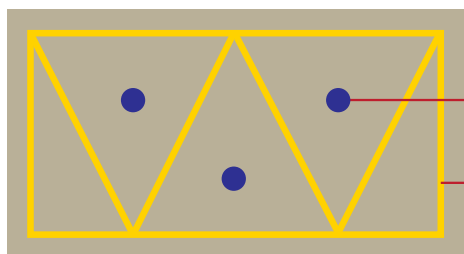
\* Please note that these values depend on temperature and humidity of the environment (measurements at 20°C, 50% relative humidity). In warm and humid environments the strength build-up period will be shorter, in cool and dry surroundings it will be longer.

In **horizontal applications** (floor and attic insulation, flat roof insulation) the panels can be installed immediately after application of the adhesive. No waiting time is required.

## Installation of hard insulation panels on ceilings

### INSTALLATION OF HARD INSULATION PANELS ON CEILINGS

**Soudabond Easy** has only limited green strength. Therefore it is necessary to apply pressure onto the panel for a period of more than 1 minute in these types of applications. We therefore recommend to use struts or props to keep the panel in place during the curing time. It is also possible to apply a number of dots of a high grip adhesive such as Soudal Fix All High Tack or Fix All X-treme to maintain an initial bond until the full cure of the adhesive, depending on the weight and dimension of the panel.



Dots of Soudal **Fix All High Tack**

Bead of **Soudabond Easy**

- Apply Soudabond Easy onto the panel in the usual pattern.
- Apply dots of Soudal Fix All High Tack in the area between the zigzag pattern avoiding the possibility to get into direct contact with Soudabond Easy.
- For heavy panels the use of Soudal Fix All Xtreme is recommended.
- Respect the time required for the adhesive to build up its strength (ca 5 minutes).
- Install at the ceiling and press on strongly to allow the Soudal Fix All High Tack or Soudal Fix All Xtreme to create an initial bond.

### Careful

- > **Very heavy panels (such as insulated drywall panels) need some mechanical fixing in addition to adhesive bonding**



Extrude Soudabond Easy onto the insulation panel



Extrude dots of Soudal Fix All High Tack or Soudal Fix All Xtreme in the empty space between the zigzag pattern



Install the insulation panel ca 5 minutes after the application of Soudabond Easy



Press strongly into substrate



The panel is now firmly installed – while Soudabond Easy continues to cure the Fix All High Grip adhesives keeps the panel in place



The next insulation panel can be installed immediately

## Exterior Perimeter Insulation below soil level

### INSULATION FOR SUBSOIL

In modern construction, where high insulation values are a legal requirement it is often necessary to insulate the exterior building perimeter below the soil level. The insulation panels used for this application are quickly installed with **Soudabond Easy**.

#### ADVANTAGES OF SOUDABOND EASY

- Safe to work, no need to torch the insulation material onto the substrate.
- No perforation of the substrate, therefore no risk of water penetration.
- Soudabond Easy does not absorb moisture once fully cured.
- Soudabond Easy offers sufficient resistance against subsoil water pressure.
- Soudabond Easy withstands the vertical forces and lap shear forces of rising groundwater.
- Soudabond Easy is an adhesive which at the same time will fill and seal cavities and joint seams → insulation skin remains intact; no thermal bridges.
- Soudabond Easy offers the permanent solution.

#### SUITABLE FOR MOST CONSTRUCTION SUBSTRATES

- Concrete.
- Bituminous surfaces, vapor barriers, bituminous rolls even when coated with sand or slate flakes.
- Not on a PE vapor barrier or other vapor barriers with a PE or PTFE protection layer.

#### RECOMMENDED INSULATION MATERIALS FOR SUBSOIL APPLICATIONS

- Polyisocyanurate (PIR) or Polyurethane (PUR), uncoated or coated with a finishing layer of mineral glass fiber, bitumen coated glass fiber or aluminium foil.
- Extruded Polystyrene (XPS\*): as mentioned previously this type of material should be roughened to ensure the bonding of the adhesive.



XPS, Extruded Polystyrene Panels: we always recommend preliminary compatibility tests as many panels have a very smooth surface onto which the adhesive does not bond. We therefore recommend to roughen these panels to improve the adhesion. Some XPS panels have a wafered structure and are specifically designed for adhesive bonding.

The substrate needs to be completely watertight. Soudabond Easy is not a moisture barrier and will therefore not ensure the water tightness of the substrate.



Control the substrates and remove dust, grease, etc.



Extrude the adhesive onto the insulation panels according to the correct procedure



Install the insulation panels according to the correct procedure



Maintain pressure on the installed panels according to the correct procedure



Finish the application by installing the panels in the various corners.

## Important Comments:

- > When filling the space around the cellar with soil make sure not to damage and tear off the insulation panels.
- > Soudabond Easy contains flammable propellants. Ensure appropriate ventilation in closed area's during and after the installation and make sure no potential source of ignition is in the surrounding of the installation.

## Installation of cavity insulation panels

### CAVITY INSULATION PANELS

**Soudabond Easy** is the ideal support adhesive for the installation of cavity insulation panels. The product is used in addition to mechanical anchoring and will improve the insulation performance of the installation.



- The norms and requirements for insulation are becoming increasingly strict. Panels used are thicker and heavier and difficult to press over the anchors. Therefore the bonding of Insulation Panel with Soudabond Easy before the installation of the anchors will make the job easier.
  - First install the insulation panels by means of adhesive bonding with Soudabond Easy
  - It is even possible to bond two panels to each other.
  - Only then install plugs and mechanical anchors.
- Insulation panels are getting thicker. For insulation requirements of more than 120mm thickness often two thinner panels are applied crosswise. With Soudabond Easy it is possible to bond these panels together lastingly.
  - The adhesive is in itself an excellent insulator ( $\lambda = 36\text{mW/m.K}$ )
  - Guaranteed integrity of the insulation – No penetrations means one continuous insulation layer without cold spots or thermal bridges.
- In areas where no anchoring is provided Soudabond Easy offers the fastest and most economical solution for the installation of insulation panels.



- **Soudabond Easy** is perfectly suited for the sealing and filling of the areas surrounding the insulation panels.
  - One single product for the installation and the finishing which in itself is an excellent insulator ( $\lambda = 36\text{mW/m.K}$ ).
- The following insulation panels are recommended for cavity insulation.
  - Polyphenol (PF) covered with an aluminium foil layer.
  - Polyisocyanurate (PIR) or Polyurethane (PUR), covered with an aluminium foil layer.
  - Extruded Polystyrene (XPS).
  - Expanded Polystyrene (EPS).



## POINTS OF ATTENTION:

- > Some panels covered with an aluminium layer are fitted with a PE- or other coating. Soudabond Easy will not adhere to such a coating.
- > It is therefore necessary to execute preliminary compatibility tests prior to a full scale application: Apply Soudabond Easy to a small piece of panel, leave to set for 5 minutes, install another piece of panel into the adhesive and leave to cure: If the panels can be removed easily and on one of the two panels there are no adhesive stains Soudabond Easy is not suitable for the adhesive bonding of these panels. If after one hour it is possible to tear off the panels, but one of the following breaks can be noted, Soudabond Easy is suitable for the application:
  - Break of the insulation panel itself.
  - The aluminium layer is removed from the insulation material.
  - Cohesive break in the adhesive, there are stains of adhesive on both panels.

## Acoustic insulation

### ACOUSTIC INSULATION

Soudabond Easy is not only suitable for installation of thermal insulation, also for the bonding of acoustic insulation material this adhesive offers a durable solution. It is important to know which type of sound needs to be muffled (sound through the air, sound through contact, secondary sound). Acoustic insulation solutions can be achieved by means of absorption, reflection, diffusion or decoupling.

**Soudabond Easy** can be used for the installation of materials which ensure absorption, reflection and diffusion of sound. Lightweight materials such as acoustic foams can be installed onto walls, floors and ceilings. Heavier sound insulation panels can be bonded with Soudabond Easy onto floors and walls, if necessary in combination with temporary mechanical support (required during the curing time of the adhesive).



Apply Soudabond Easy onto the panel



Wait for ca 5 minutes until the adhesive has built up its strength.



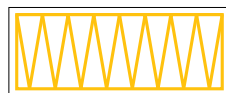
Press against the substrate and maintain pressure for ca 60 seconds

**Soudabond Easy** offers the following advantages:

- Less adhesive required than bonding with traditional contact adhesives.
- Faster to work than when bonding materials with traditional contact- or panel adhesives.
- Better acoustic insulation performance than when mechanical fixing is used due to complete adhesive transfer.
- The material in itself has acoustic performance.

Apply sufficient adhesive in zig-zag pattern

To achieve 100% adhesive contact after pressing against substrate



100%

#### Important Comments:

- > In order to avoid additional resonance boxes it is important to have a 100% adhesive contact. This can be achieved by thinner but closer adhesive beads.
- > To achieve complete finishing of soundproof walls and to further reduce sound we recommend the use of Soudal Flexifoam to fill the gaps and openings between the insulation elements and to fill the open area at the edge of the insulation panels. This ensures that the complete surface is covered with sound deadening material.

## Insulation of attic floors

### INSULATION OF ATTIC FLOORS

In order to achieve optimal insulation it is possible to insulate the floor of attics and lofts in addition to insulating the roof. If the attic is only used as a storage area and not a living area, this type of insulation is cheaper than insulating the whole roof. **Soudabond Easy** is the ideal means to ensure the optimal insulation of attic floors.

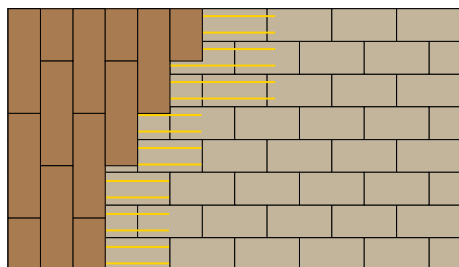
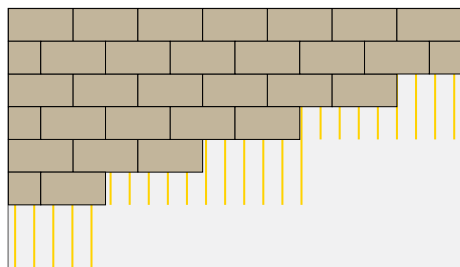
After the installation of the insulation panels the floor can further be finished with panels which can be walked upon (Multiplex, OSB, MDF). Soudabond Easy can be used to bond these panels onto the insulation panels previously installed.

Recommended insulation panels for attic floors are:

- Polyphenol (PF) covered with an aluminium foil layer.
- Polyisocyanurate (PIR) or Polyurethane (PUR), covered with an aluminium foil layer.
- Expanded Polystyrene (EPS).



### PROPOSED DESIGN OF THE INSTALLATION OF AN INSULATED ATTIC FLOOR



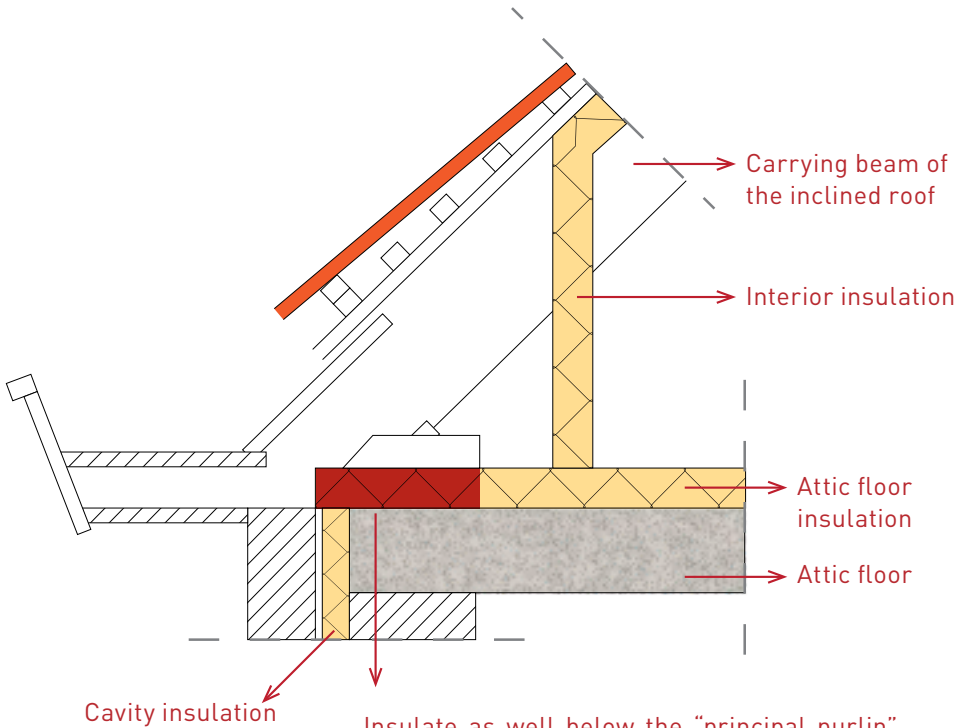
## • INSTALLATION METHOD INSULATED ATTIC FLOOR

- All surfaces need to be clean.
- If substrates are very powdery it is recommended to stabilize them with Soudal Deep Primer.
- If substrates are very dusty it is recommended to fix them with Soudal Surface Primer.
- In floor applications it is easier to apply the adhesive onto the substrate than onto the panel.
- Soudal offers a special applicator with a long barrel to apply Soudabond Easy without bending.
- Extrude a bead of adhesive every 30cm in a 90° angle to the length of the insulation panel. There should be at least 3 adhesive beads per meter of panel.
- Insert the insulation panels immediately and not later than 8 minutes after the extrusion of the adhesive into the adhesive beads. Press on strongly. Do not walk on the application during at least 60 minutes.
- Fill the gaps and seal around the edges with Soudabond Easy to achieve a completely insulated surface.
- It is possible to install panels which can be walked upon (OSB, Multiplex, MDF) on top of the insulation panels.
- These can be bonded in the same manner with Soudabond Easy, preferably crosswise to the insulation panels.



## AN EYE FOR DETAILS

In roof applications it is important to ensure that the complete floor surface is insulated, not only the visual part of it. If this is not done, cold bridges will create condensation which could result in mold formation. In some circumstances it is therefore necessary to install a vapor barrier.



Insulate as well below the “principal purlin”, if possible with the same insulation panel, otherwise with rockwool or with Soudafoam Gun / Soudafoam 1K.

## Acclimatization of floors and walls

### ACCLIMATIZATION OF FLOORS AND WALLS

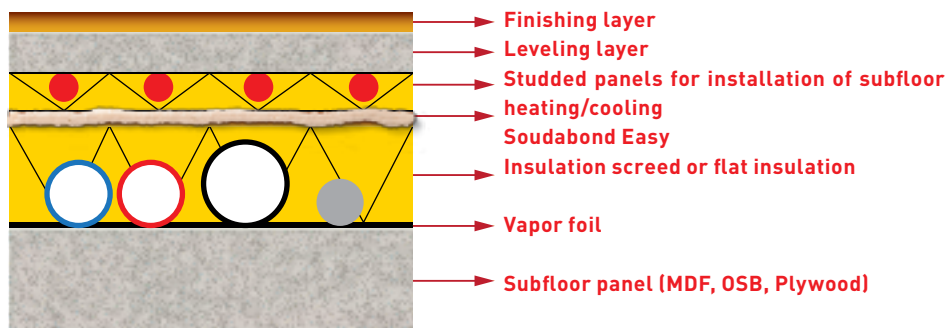
Legal requirements for the insulation of ground floors are becoming increasingly stringent. Next to the traditional sprayed insulation and insulation screed it is also possible to work with additional insulation panels.

After covering the water and electrical pipe systems with a traditional product such as a cement based or anhydrite based screed or sprayed PU Foam insulation the studded panels in which the subfloor heating pipes are inserted can be bonded with Soudabond Easy to fix these panels and create a unified system with the different layers required:

- Pouring of the finishing floor layer.
- Installation of under-floor heating and cooling system.



### DESIGN OF THE SYSTEM



## INSTALLATION METHOD

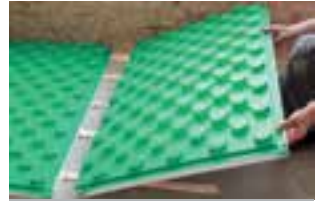
- See "attic insulation".
- One hour after installation, once the adhesive has fully cured, the subfloor heating/cooling pipes can be inserted into the studded panel.



Extrude Soudabond Easy onto the substrate



Insert studded panel into the adhesive beads



Insertion time: maximum 9 minutes from extrusion of the adhesive



Press panels firmly into the adhesive



Seal at the side of the panels with Soudabond Easy to create a completely insulated layer



One hour after installation the subfloor heating/cooling pipes can be inserted

## ALSO POSSIBLE FOR WALL HEATING SYSTEMS

The studded panels are bonded to the wall with Soudabond Easy and after installation of the heating pipes are finished with a layer of plaster.



## Installation of exterior façade insulation panels

### EXTERIOR FAÇADE INSULATION PANELS

**Soudabond Easy** is the ideal adhesive for the bonding of insulation panels on exterior façades, with or without plaster, as well as behind other types of façade finishing applications.



- Huge time saving – up to 80% less installation time needed in comparison with traditional plaster adhesive.
- Simple, clean and ergonomic installation.
- Very economical due to its precise application system.
- Much lighter than traditional resin based plaster adhesives:
  - 1 can of 750ml Soudabond Easy = up to 8m<sup>2</sup> insulation material
  - = 25kg plaster adhesive
- Much better adhesion than the traditional adhesive systems.
- Fast initial bond.
- Fast curing time – one hour after installation a finishing layer can be applied.
- In some situations, possible to install without mechanical fixing (plugs), therefore no cold bridges at surface levelness of  $\leq 10\text{mm}/2\text{m}$  and not higher than 10m above soil level.
- Absorbs unevenness in the substrate of up  $\leq 10\text{mm}/2\text{m}$ .
- Excellent thermal insulator:  $\lambda = 36\text{mW/m.K}$  – also suited to fill the gaps around insulation panels and at the edges.
- Withstands wind.
- Flexible bonding, will not become brittle.
- Very economical – amount of adhesive used does not depend on the panel thickness.

### SUITABLE FOR MOST TYPES OF SUBSTRATES

- Traditional substrates, porous substrates such as concrete, brickwork, natural stone, cellular concrete, cementitious substrates, plastered surfaces (both fresh and “old”), ...

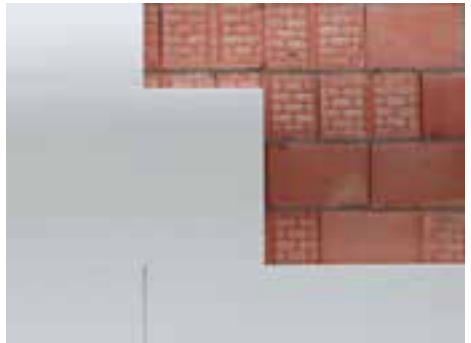
- > **Contrary to traditional plaster adhesive Soudabond Easy can also be used on :**
  - Timber.
  - PVC and other plastics.
  - Metals.
  - Painted substrates.



## RECOMMENDED INSULATION PANELS FOR EXTERIOR FAÇADE INSULATION

- Expanded Polystyrene (EPS)
  - Without cover.
  - Covered with a layer of aluminium foil.
- Polyphenol (PF) covered with an aluminium layer.
- Polyisocyanurate (PIR) or Polyurethane (PUR), covered with an aluminium layer.

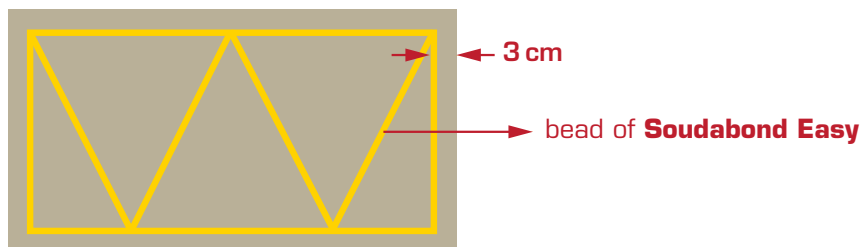
## APPLICATION OF INSULATION PANELS FOR EXTERIOR FAÇADE INSULATION



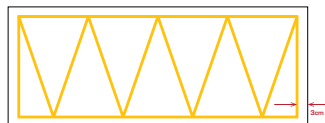
- Exterior façade insulation where the insulation panels are bonded directly to the carrying wall with **Soudabond Easy**. The façade finishing is then installed onto a carrying structure, a timber frame or a metal frame which is anchored or fixed into the carrying wall.
- Exterior façade insulation systems based on the ETICS standard where EPS insulation panels are bonded directly to the substrate with **Soudabond Easy** (where required in combination with mechanical fixing). Onto the insulation panel reinforced leveling layers are applied and then finished with a layer of finishing plaster.

## INSTALLATION METHOD

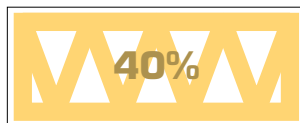
Extrude **Soudabond Easy** onto the panel.



Apply sufficient adhesive around the perimeter and in a zigzag pattern

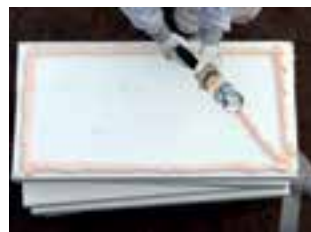


To achieve at least 40% adhesive surface after pressing into the substrate



The adhesive is extruded in a closed bead at the perimeter of the panel and then in a zigzag pattern inside of the perimeter bead in a way that at least 40% of the panel surface will be covered with adhesive after pressing the panel into the substrate. The zigzag pattern must result in closed compartments which optimize the insulation value of the application.

The perfect W in practice:



## INSTALLATION METHOD FAÇADE INSULATION



Profiles and connections need to be installed previously



Take measurements



Cut insulation panels to the correct dimensions



Extrude Soudabond Easy onto the panels and leave to set for ca 5 minutes



Install panel onto the substrate



Check that there is sufficient contact with the substrate



Control vertical and horizontal levelness



In various directions



Ca 60 minutes after installation of the panels it is possible to continue working on the wall

## POINTS OF ATTENTION

- Always check the consistence of the substrate and the compatibility of the substrate – if required use an adequate Primer.
- Make sure that the distance of the extruded adhesive to the edge of the panel is ca 3cm to ensure complete adhesive contact once the panel is pressed onto the substrate. Otherwise the panel may bend in time due to changes in temperature. This will have repercussions on the plaster layer applied on top of the insulation panel.
- The adhesive is extruded onto the panel in a closed bead at the perimeter and then in a zigzag pattern which touches the perimeter bead, to allow at least 40% surface coverage of the adhesive after installation of the insulation panel.
- The installation of the panel, the contact with the substrate and the levelness check have to take place in one continuous action. Never push a panel too strongly into the substrate and then pull it back. This will result in a break in the adhesive layer and loss of the required bond strength.
- Insulation panels which are not bonded with sufficient adhesive surface will bend in time due to changes in temperature. This may be visible and can influence the finishing layer of plaster. If the panel has been pulled back from the substrate a new layer of adhesive should be applied.
- Do not apply pressure on the panels during the curing period.

**ALWAYS EXTRUDE SUFFICIENTLY WIDE ADHESIVE BEADS OR  
USE SUFFICIENTLY THICK INSULATION PANELS WHERE REQUIRED**



**Sufficient adhesive contact with substrate**  
(Please note that the maximum thickness of the cured adhesive bead may not be more than 10mm. If the adhesive layer is more than 10mm additional mechanical fixing needs to be installed or thicker panels should be used).



**Not OK:** not enough adhesive / substrate levelness is not correct. Install thicker adhesive beads or use panels which are 1cm thicker.

**POINTS OF ATTENTION**

- > Take care not to press the insulation panels too strongly into the substrate and then pulling them back.
- > Press the insulation panel carefully into its position to create a perfect adhesive bond which will ensure that the panels will not bend at a later stage.

Soudal cannot give any warranty for the use of **Soudabond Easy** for the complete ETICS system of façade insulation (the adhesive bonding of insulation material in exterior façade insulation systems which are finished with plaster). The installer must ensure that the installation will be done correctly, depending on the requirements of each façade).

The insulation materials and the substrates on which they will be installed must conform to the requirements of BuTg. 2003/2 and TV 209 of the WTCB (Wetenschappelijk en Technisch Centrum voor het Bouwbedrijf – the Belgian scientific and technical advice organization for the Construction Industry). Always work conform to the instructions of the manufacturers of the insulation panels and the finishing products. Ensure that the bonding system is approved by them. The manufacturer of the insulation materials needs to approve the use of **Soudabond Easy** for the bonding of his materials.

## ■ Bonding of Insulation Panels to each other

### BONDING OF INSULATION PANELS TO EACH OTHER

Due to the fact that the norms and requirements for insulation become increasingly rigorous, the insulation panels required are increasingly thick. To facilitate work and due to the fact that some types of panels are not available in the required thickness it may be necessary to bond two panels to each other crosswise.

**Soudabond Easy** offers the following advantages:

- Time saving of up to 30% compared with traditional bonding methods.
- No need for contact adhesives, transfer method and long waiting periods.
- No need of (expensive) plugs, perforation of panels, therefore no risk of thermal bridges.
- The adhesive is in itself an insulator.
- 1 can of 750ml = up to 12m<sup>2</sup> of insulation panels.
- High initial bond strength.



## Insulation of flat roofs

### INSULATION OF FLAT ROOFS

The insulation of flat roofs is increasingly done by means of adhesive bonding which offers a number of important advantages; no thermal bridges, no risk of damage to cables or pipes in roof renovation projects, no visual connection parts at the interior of a steel roof, cost per m<sup>2</sup> of adhesive bonding remains the same whatever the thickness of the insulation layer...

**Soudabond Easy** is ideally suited for the adhesive bonding of insulation materials on flat roofs, both in new construction and in renovation projects. The product can be applied for the adhesive bonding of insulation panels onto various substrates, onto the vapor barrier\* and unto old bituminous roofing material.



### ADVANTAGES OF ADHESIVE BONDING OF FLAT ROOF INSULATION

- Bonds and fills at the same time → no thermal bridges.
- 750ml Soudabond Easy = bonding of up to 14m<sup>2</sup> of insulation materials in 4 adhesive beads or adhesive loops per m<sup>2</sup>\*\*.
- Time saving – up to 25% faster than traditional liquid PU roof adhesives.
- Fast curing – can be walked upon 1 hour after installation.
- Simple, clean and ergonomic to use due to the long barrel extrusion tools.
- Very precise installation, no loss of surplus adhesive.
- Less heavy than traditional PU roof adhesives and bitumen based roof adhesives:
  - 1 can of 750ml Soudabond Easy replaces 2kg of liquid PU adhesive.
  - 1 can of 750ml Soudabond Easy replaces 8kg of bitumen based adhesive.
- Fast setting, even at low temperatures (as low as +5°C).
- Fast curing, 1 hour after installation of the insulation material the finishing layer can be installed without the risk of bending of the insulation panels.
- Adhesive does not drip or slump, therefore also suitable for vertical bonding of roof edges, etc.
- Absorbs unevenness of the substrate of up to 1cm per insulation panel → ideal for renovation projects.
- In itself excellent thermal insulator:  $\lambda = 36\text{mW/m.K}$ , therefore also suited as filler and sealant around the edges of the insulation panels and at the connection areas.
- Wind resistant once fully cured.
- Adhesive bond remains slightly flexible, therefore more suited for bonding on steel deck than traditional PU adhesives.

## Points of attention

- > Extrude adhesive beads of ca 30mm in straight lines or in a loop pattern every 15-30cm (depending on the height of the installation measured from the soil level, the type of insulation panel, the exposure to wind and the situation on the flat roof) onto the roof substrate, not onto the insulation panels.
- > Apply sufficient adhesive to ensure that there is at least 50% adhesive coverage after installation of the panels onto even or slightly uneven substrates.
- > The insulation panels for flat roofs may be installed immediately after the application of the adhesive. For vertical bonds the 5 minute period required for the adhesive to build up its strength (formation of threads) is required.
- > If the adhesive has started to skin (ca 8-9 minutes after extrusion) remove and apply a fresh bead of adhesive.
- > If the substrate is not completely even, do not walk on the application during the curing time. This may break the filling adhesive layer. If the adhesive layer is broken, the old adhesive needs to be removed and a fresh bead of adhesive applied prior to reinstallation of the panel.
- > To avoid excessive exposure to wind suction it is important to ensure that the edges of the insulation panels are filled and sealed by means of Soudabond Easy.

## SUITABLE INSULATION PANELS FOR FLAT ROOF APPLICATIONS

- Polyisocyanurate (PIR) or Polyurethane (PUR), coated with a finishing layer of mineral glass fiber, bitumen coated glass fiber or aluminium foil.
  - Expanded Polystyrene (EPS\*): as mentioned previously this type of material should be roughened down to ensure the bonding of the adhesive.
  - Mineral Wool, Rockwool,
- \* The application of Soudabond Easy on vapor barriers needs to be approved by the supplier/manufacturer of these materials. Therefore always consult the technical data sheet and installation instructions of the materials which need to be bonded.
- \*\* The amount of adhesive required depends on a number of variables such as the location of the building, the height of the building, the exposure to wind and the situation of the roof. For low buildings in normal wind zones we recommend to extrude at least 4 beads or loops of adhesive per m<sup>2</sup>. For edges and corners the amount of adhesive should be doubled. For bonding rockwool a double amount of adhesive is required. It is the responsibility of the installer to ensure the correct amount of adhesive to be used.



## SUBSTRATES FLAT ROOF INSULATION

- Concrete, both extruded on site and precast.
- Steel, steel deck, zinc.
- Timber, timber beams, Multiplex, OSB, ... .
- Bituminous roofing membranes and roofing rolls, also suited for insulation on top of old bituminous roofing substrates.
- Bituminous roofing which has been sanded.
- Aluminium vapor barriers (if approved by the supplier for adhesive bonding).
- Not suited for bonding on PE based vapor barriers or other vapor barriers with a protective layer based on PE or PTFE. On such material only mechanical fixing is approved.
- Not suited for bonding on EPDM roofs or other synthetic roofs. In this case, first the old roofing membrane needs to be removed prior to the adhesive bonding of the insulation panels.
- Always respect the instructions of the supplier of the vapor barrier. The type of vapor barrier used in new construction depends on the requested insulation value.



Soudal will not issue any warranty for the adhesive bonding of insulation panels on flat roofs with Soudabond Easy. The contractor/installer needs to ensure the proper installation, depending on the insulation requirements of the flat roof. Soudabond Easy has not been tested in official wind uplift tests.

In Belgium the materials and its installation needs to be conform to the requirements of the TV 215 "flat roofs: construction, materials, installation, maintenance) of the WTCB, dated March 2000, concerning internal cohesion, form stability, thermal movement, fire performance, moisture performance, substrate preparation, etc... Consider the requirements and standards in the country of application.

Always respect the instructions of the suppliers of the insulation materials, the vapor barrier and the sealing. Consider that they have to approve the installation of flat roof insulation by means of adhesive bonding.



## Technical Data

### TECHNICAL DATA : PRODUCT

<b>Base</b>	Polyurethane based prepolymer
<b>Curing System</b>	Cures by absorption of moisture
<b>Color</b>	Orange
<b>Packaging</b>	Aerosol can, 750ml content, available with threaded adaptor, Click & Fix adaptor, in manual version and with Soudal's patented Genius Gun system.
<b>Storage</b>	Shelf life at least 15 months in original packaging, stored in a dry environment at temperatures below 25°C. Always store with the valve pointed upwards

### TECHNICAL DATA : APPLICATION

<b>Tools</b>	Trigger version: apply with the Soudal Foam Gun (long barrel gun available for floor and flat roof applications) with Click&Fix adaptor or threaded adaptor. No special tools required when working with Soudabond Easy Genius Gun, or in manual version..
<b>Preparation</b>	Ready to use, no mixing required
<b>Yield* per can</b>	Up to 14m <sup>2</sup> of insulation material with beads of 30mm Up to 12m <sup>2</sup> of cellular concrete walls (H25xL60x10cm)
<b>Drying time: skin formation*</b>	Ca 8min at +20°C, 65% rH, 30mm bead
<b>Drying time: tack free*</b>	Ca 9min at +20°C, 65% rH, 30mm bead
<b>Drying time: can be cut*</b>	Ca 40min at +20°C, 65% rH, 30mm bead
<b>Drying time: full cure*</b>	Ca 60min at +20°C, 65% rH, 30mm bead
<b>Application temperature</b>	Min. +5°C, max +35°C. The temperature of the can should be between +5°C and +25°C. If required acclimatize in a bucket of water at room temperature
<b>Clean</b>	Remove uncured Soudabond Easy with Soudal Gun&Foam Cleaner. Cured product can only be removed mechanically or with the help of Soudal PU Foam Remover. <b>Never remove cured adhesive by burning off.</b>
<b>Repair</b>	With <b>Soudabond Easy</b>

\* these values may vary according to the ambient temperature, relative humidity, surfaces, environment etc. ...

**TECHNICAL DATA : THE ADHESIVE FOAM**

<b>Post expansion</b>	Minimal
<b>Fire Rating (DIN 4102)</b>	B2
<b>Shrink after cure</b>	< 1%
<b>Cellular structure</b>	70-80% closed cell
<b>Thermal Insulation (DIN 52612)</b>	$\lambda = 36\text{mW/m.K}$

**TECHNICAL DATA : THE ADHESIVE BOND****Thickness of adhesive layer 8mm for panel bonding:**

<b>Elongation at break</b>	Ca 25%
<b>Shear Strength (DIN 53427)</b>	120 kPa
<b>Maximum tension (DIN EN 1607)</b>	180 kPa
<b>Bending resistance (DIN 5342)</b>	600 kPa
<b>Pressure resistance (ISO 844)</b>	300 kPa
<b>Density of the cured adhesive</b>	$\pm 24 \text{ kg/m}^3$
<b>Temperature resistance fully cured</b>	-35°C until +90°C – short term 120°C (up to 60 min)
<b>UV resistance</b>	Exterior applications need to be covered by means of a filler, plaster or paint. Do not expose to UV radiation

## SAFETY

- Keep out of reach of children.
- Only extrude in well ventilated areas as the product contains flammable propellants.
- When ventilation is not sufficient, wear protective mask with appropriate gas filter (type A1 to EN 14387).
- Do not extrude in vicinity of sources of ignition and towards sources of fire and hot/glowing substrates and tools.
- No not smoke when working with the product
- When transporting in a car, store in a strong box, with the valve pointed upwards and wrapped in a towel or other protective material. Make sure that the can will not move during transportation.
- Never transport can loose, in the back or front seat or the floor of a car.
  - During the driving time, the can will roll around and when coming in contact with a sharp surface may burst.
- Never keep can inside a car during warm periods.
  - When left inside a car during high temperatures the can will overheat and may burst.
- Contains Isocyanates. Avoid contact with eyes and skin. Wear protective clothes, gloves (protection time > 5min) and safety goggles or other eye protection.
- Consult the label and the material safety data sheet for more information.

## REMARKS

- Bonding of Extruded Polystyrene (XPS) can be problematic. Bonding success varies from type to type. This is due to the fact that on the very smooth top layer of these panels some-time ingredients are incorporated which prevent adhesive bonding. These panels are better suited for mechanical fixing on flat roofs where a reversed roof with ballast is installed.



**Soudal N.V.**

Everdongenlaan 18-20

B-2300 Turnhout

Belgium

Tel.: +32 14 42 42 31

info@soudal.com

[www.soudal.com](http://www.soudal.com)

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