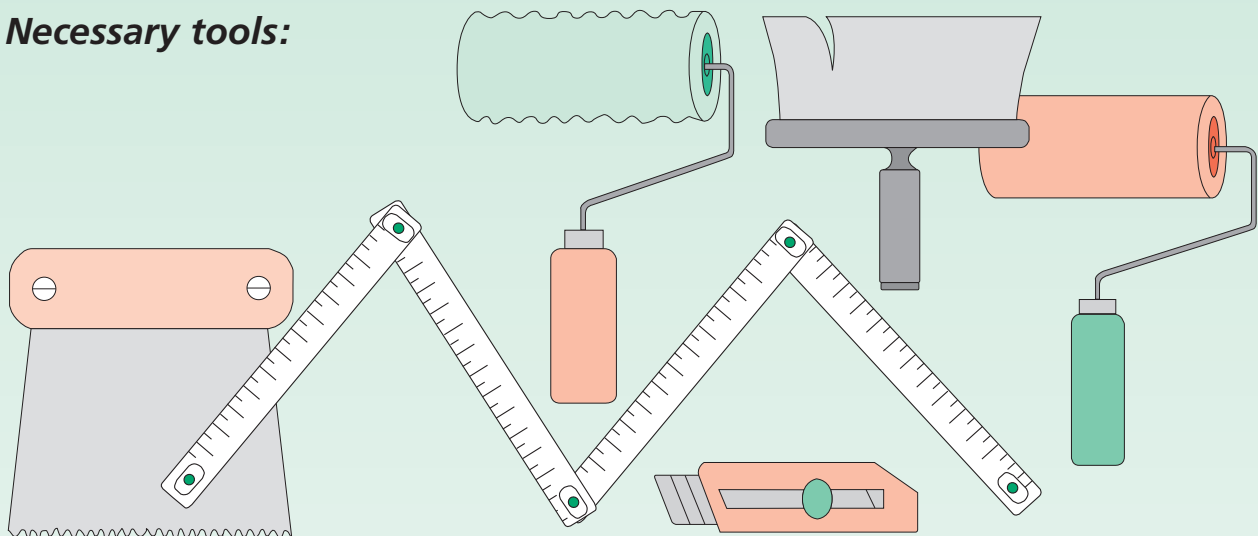




## The insulating panel for energy conscious interior renovation.

Necessary tools:



# Tips for saving heating costs

The heating cost shock due to the increased energy price will only hit most occupants when the next heating bill comes in!

If there are separating walls between two differently heated rooms (e.g. 22°C/16°C) heat loss will occur. With regard to energy usage this fact is becoming more and more significant with high and further increasing energy prices.

In order to reduce heat losses, it is advantageous to efficiently insulate the separating wall e.g. with a functional 6 mm thick Depron insulating panel (see diagram) on both sides. The fine, closed cell structure provides excellent insulation even with a relatively thin insulating thickness (e.g. in relation to construction polystyrene, glass wool or rock wool). Around 34 litres of fuel oil per year „flow“ through an uninsulated 10 m<sup>2</sup> wall (4 x 2.5 m) with a k-value = 1.96 (11.5 cm cellular concrete, plastered on both sides).

Around 20 litres of fuel oil per year „flow“ through the same wall when it is covered with a 6 mm Depron insulating panel on both sides with a k – value of 1.18.

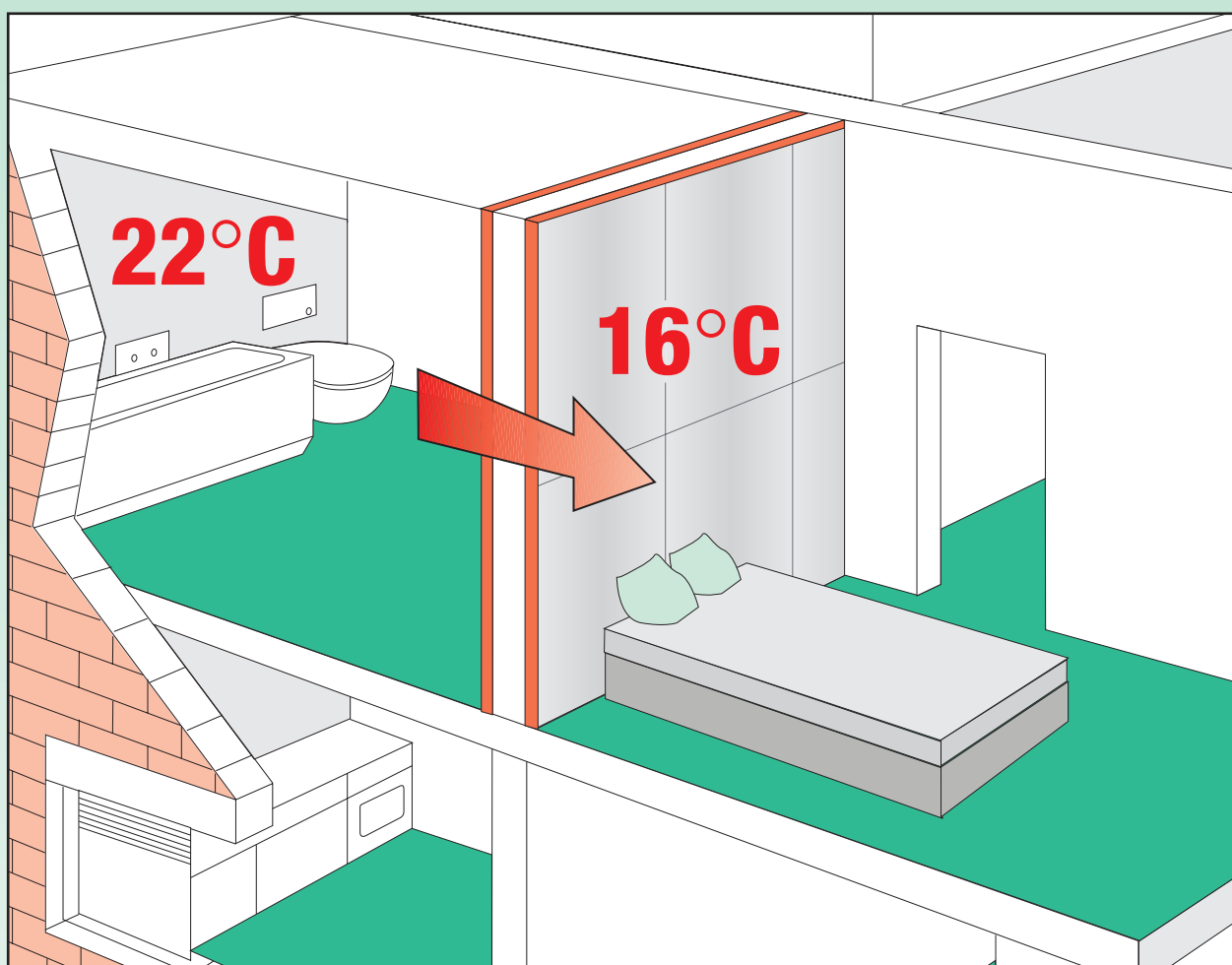
That's a saving of 40%.

If an unheated room has a temperature of just 7°C (e.g. staircase) with the double side heat insulation there is a reduced heat loss or an annual saving of 35 litres of fuel oil.

In this way the total heating costs can be reduced by 11% to 14.4%.

The surface temperature of the inner wall can be increased by up to 5% in winter.

The time it takes for the room to heat up will be accelerated.



**Stick on Depron – save heating costs**

## **Problem areas**

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### *Damp and mould damages due to formation of condensation, marks, heat loss*

#### **On cold component surfaces:**

- Wall surfaces behind furniture and curtains
- Outside walls with high heat absorption (heavy materials)
- Ceiling areas under unheated rooms
- Separating walls to unheated adjoining rooms/staircases

#### **On thermal bridges:**

- Ceiling coating (ring beam)
- Window lintels
- Reveals
- Room corners
- Mortar joints
- Joints of construction and insulation panels
- Fasteners (steel anchors, nails, screws)

## **Measures**

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- Check penetration of wet and damp from outside
- Eliminate possible constructional defects
- Dry components
- Take off wallpaper with a wall paper remover
- Clean plastered areas (abrade, suck out)
- Impregnate plastered areas with fungicidal solution
- Dry plastered areas and room very well (turn on heater or condensation dryer)
- Move cupboards away from wall areas, hang curtains at a large interval from the wall (rear ventilation is required!)
- Outside wall corners must remain clear (do not place any furniture there)
- Control air humidity and temperature in the room with a hygrometer/thermometer
- By ventilating and heating consistently keep the room air humidity under 60% relative humidity (in winter time)

## **Renovation / refurbishment**

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- Improve damaged areas of wall and ceiling with a filler and smooth out uneven and rough areas with a smoother.
- Stick Depron insulating panels onto ceiling areas, outside walls, window jambs, roller shutter areas
- Use high quality filled dispersion adhesive to stick it on
- Always stick Depron insulating panels onto edges which close tightly, preferably in a double cut procedure (see processing instructions)
- Carry out spatula work on Depron insulating panel with dispersion spackle.
- Before wallpapering with high quality wallpapers and wall coverings, stick on the roll maculature. This serves as a tension bearer and a damp buffer together with the wallpaper

You can get Depron insulating panels in 3 mm and 6 mm thickness, each with ready to use wall paper primer or without primer.

### Suitable undercoat

Wall and ceiling surfaces which are professionally laid out in a normal construction. The under coat must be dry, stable, clean, even, smooth and absorbent.

### Under coat pre-treatment

Loosen old wallpaper, water soluble and non fixed adhesive paint with paint stripper and remove completely. Use a filling spackle to fill in fissures, holes, joints and breaks. Remove dust from smoothed putty areas and ground with penetrating primer.

Rough plaster/structural plaster: Chip off prominent graining, clean areas and smooth

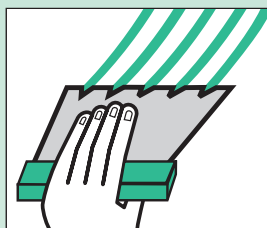
with smoothing spatula. Prime and/or fix highly absorbent under coats, lightly sandy and chalky plaster with penetrative primer. Solution containing primers (e.g. on wooden construction panels) must be completely ventilated. Thoroughly clean and dry damp undercoats, mouldy areas or blooms and eliminate the cause of the moisture penetration.

### Adhesives for Depron insulating plates

On absorbent under coats we recommend using a filled dispersion adhesive. On non absorbent under coats e.g. plastics, metal, glass, ceramics, contact adhesives can be used.

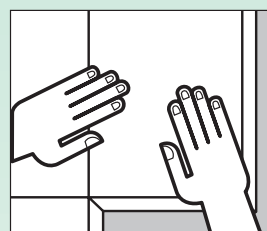
## Work steps

Depron insulating panel with ready to use wallpaper primer coat:



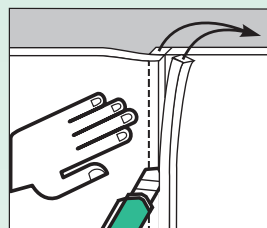
### Applying adhesive

Apply the adhesive to the under coat evenly in an area the size of the panel using a notched trowel (notch shape B1).



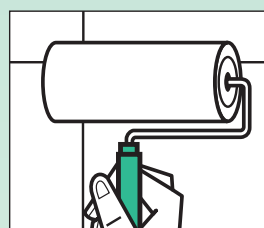
### Laying the panel

Place the Depron insulating panel with the marked backside („DEPRON“ imprint) in the wet adhesive and roll it out well. Roll out air bubbles to the sides.



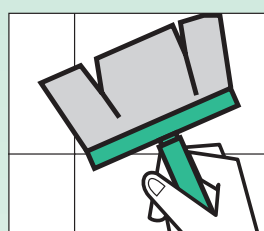
### Gluing the caulked joint

Always glue the following insulating panels tightly to the joint or so that they are overlapping (remove the double cut - remaining strips).



### Roll it out well

Roll out the cutting edges evenly with the rubber roller. Any later filling which is required is to be carried out using dispersion spackle. Remove dust from smoothed putty areas and prime in the case of high absorbency.



### Depron insulating panel without primer coat:

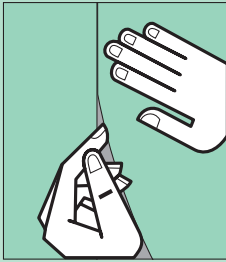
A primer coat should be applied onto the untreated Depron surface directly after gluing.



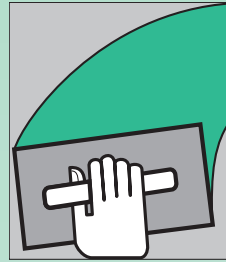
### Drying times

Adhesive and subsequently applied primer coats must be left to dry for at least 24 hours. The drying of the adhesive and firm position of the Depron insulating panels are to be checked in several positions using a cross section and removal test, before it is further processed.

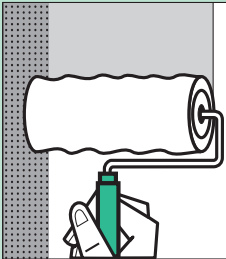
- Omission of a work process
- Cost saving
- Increased processing safety
- Facilitation of processing
- EPÜ Patent No. 0 109 663 on primer coat



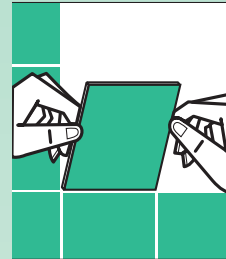
**Wallpapers and wall coverings** can be affixed with paste or glue products according to the type. In the case of very high quality and very high tension wallpapers, roll maculature is to be glued on beforehand.



**Artificial resin, dispersion and roller plater** of all kinds ... are applied to the Depron insulating panels without reinforcement textiles. As an additional primer we recommend painting plaster with 10% water addition, matched to the colour of the subsequent plaster application.



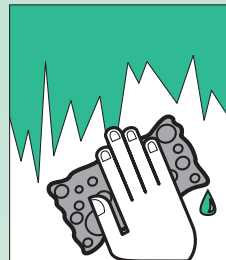
**Glass fibre textiles and structural fibre fleece** are glued. After drying they can be painted over with acrylic, latex or dispersion paints.



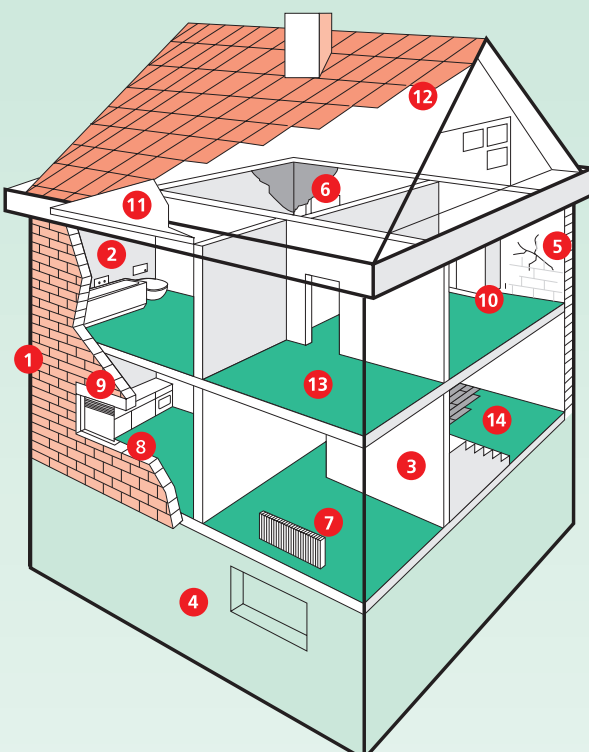
**Stoneware wall tiles** Can be directly applied to the Depron insulating panel with dispersion tile adhesive. They can be attached after four days drying time.



**Renovation fleece and painters fleece** can be affixed using unfilled dispersion adhesive or can be embedded in special dispersion spackle and filled dispersion adhesive which overlaps the joints.



**Renovation work on Depron** Old wallpaper can be removed without damaging the Depron insulating panels. If it is not possible to remove it dry, the wallpaper should be loosened with a wallpaper remover.



- 1 on cold outside walls (as an addition to a WDVS)
- 2 on damp – cold outside walls
- 3 on cold separating walls
- 4 on cold cellar walls
- 5 on thermal bridges (marks), cracks in plaster
- 6 in room corners (mould)
- 7 for heat loss in heater niches
- 8 in window and door jambs
- 9 on and in roller shutter casings
- 10 on walls behind furniture
- 11 on ceiling surfaces
- 12 on roof slopes
- 13 as an under coat for floor heating
- 14 under chip board, prefabricated parquet and laminate floors (tongue and groove systems) and for many handicrafts in model building

Type of material: *CFC free* extruded polystyrene hard foam in panel form

Thickness: 3 mm and 6 mm

Density: 40 kg/m<sup>3</sup> / 33 kg/m<sup>3</sup> according to DIN 53420

Dimension: 1,25 m x 0,80 m

Heat conductance: 0.030 W/mK (measurement according to DIN 52612)

When graded in the heat conductance group 035 (calculation value  $\lambda_R = 0.035$  W/mK) there is a thermal resistance of 0.17m<sup>2</sup> K/W for Depron insulating panels, thickness 6 mm.

**Depron insulating panel 6 mm**  
has the same heat insulation value as:

	24 mm pine wood
	100 mm brick wall
	360 mm normal concrete

Depron insulating panel 3 mm: half values

## Special features:

### Depron insulating panel

- quickly increases the surface temperature during heat circulation
- does not take in any water, is not imbued
- reduces the penetration of water vapour, offers moisture protection for walls and ceilings

### Depron insulating panel 3 mm / 6 mm

Water vapour diffusion resistance value: 650 / 450 according to DIN 52615

Water vapour retarder value  $\mu \cdot s$ : 2,0 m / 2,7 m

### Depron insulating panel

- with ready to use wallpaper primer it is: B2 (normally flammable) according to DIN 4102, in connection with many different wallpapers. Testing by MPA NRW, Dortmund. Test certificate no. 23 1044 392-2
- with ready to use wallpaper primer it is flame retardant in connection with tiles, plastic plaster, dispersion paint, glass fibre material
- is resistant to cement, lime scale, gypsum and salt (blooms), alkalis and against nearly all aqueous media (not resistant to organic solvents)

- does not decay and go mouldy, does not offer nutrition for mildew, is odourless
- can be used both as a moisture protective middle layer and to increase the heat and impact noise insulation under chipboard, ready to use parquet and laminate floors (tongue and groove systems)

Impact noise improvement measure  $\Delta I_w$ : +16 dB according to DIN 52210

Compressive stress at 10% compression: 0.1 MPa according to DIN 53421

The processing guidelines of the parquet manufacturer must be adhered to.

