

Isolina is a company that develops, manufactures and markets products based on flax.

This natural fibre combines elements that make it an ideal insulating material.

Our products are made of flax and manufactured in an environmentally conscious way.

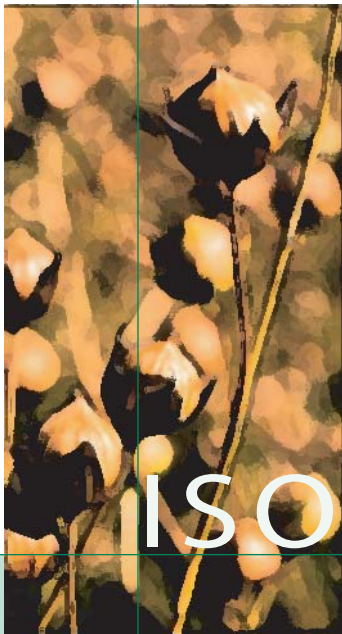
In the old days, most houses were poorly insulated but they were able to breathe. As a consequence, a lot of heat was lost, but the inside air quality was in many cases better than nowadays.

On the positive side, current houses are generally much better insulated than before.

The downside results from the plastic foils necessary in the wall and roof constructions:

First of all, they can have a negative influence on the indoor air quality, because the interior gets too humid. Secondly, trapped moisture in the construction may create big problems.

Flax insulation offers the best of both worlds: a good thermal and acoustical insulation combined with the ability to exhale excess humidity from the wall and roof construction.



ISOLINA THE NATURAL CHOICE FOR INSULATION

The main product line consists of thermal and acoustical insulation products. New applications that benefit from the extraordinary properties of flax fibre are being developed. By listening carefully to our (potential) customers, we are able to introduce innovative products regularly.

PRODUCTS

- * thermal and acoustical insulation
- * log and sockle band
- * door and window frame sealing
- * (walking-) noise barrier
- * humidity regulating building papers
- * loose flax fibre

PROPERTIES

- * breathing construction
- * natural fibre: natural advantages
- * better indoor climate
- * sustainable construction

Environmental and human health advantages:

- * fibres form no possible health risk;
- * biodegradable and disposable;
- * low load on the environment:
 - no pollution of air and water,
 - no emission of harmful chemicals like formaldehydes, isocyanates, organohalogens, (H)CFCs, etc.;
- * total process: good energy balance;
- * the annually regrowing crop flax is an inexhaustible resource that does not contribute to global warming; on the contrary: during its growth, it converts the greenhouse gas CO₂ into oxygen.

Application advantages:

- * roll-form reduces the amount of seams (points of heat loss) and speeds up installation process (one piece from ceiling to floor);
- * no need to wear various inconvenient personal protection means to avoid irritation of the eyes, skin and lungs;
- * areas need not be forced ventilated during installation.

Physical advantages:

- * very good thermal and acoustical insulating properties;
- * flax insulation offers excellent temperature buffering characteristics, resulting in gradual temperature changes for a comfortable indoor living climate;
- * very good "breathing" properties due to its hollow-fibre composition which can have beneficial effects on surrounding constructions as well.

Flax insulation products and properties:

Range of application: thermal and acoustical insulation for walls, ceilings, floors and roofs

Application type: W and WL, according DIN 18165-1

Flax insulation consists of: Flax fibre, textile binder fibre and environmentally friendly flame retardant

Thermal conductivity:
 $\lambda_{10} = 0.038 \text{ W/mK}$,
 acc. ISO 8301 / DIN 52616 and WLG 040 acc. DIN 18165

Treated with environmentally friendly flame retardant for fire protection according EN-ISO 11925-2 and class B2 according DIN 4102-1 for building materials and meets Euroclass E acc. EN13501-1

Products	Thickness	Width	Length	Applications
Insulation - roll	50-150 mm	565 / 865 mm	10 / 7.5 / 5 m	air-laid thermal and acoustical insulation, breathing, form-stabile, flexible, good R-value
Insulation - plate	50-150 mm	565 / 870 mm	1320 mm	
Felt band	4 / 6 / 8 mm	10-300 mm	21 m	log, joist and sill band (pressure/noise/temperature)
Insulation band	10-150 mm	30-300 mm	5-15 m	insulating band to close seams between logs and material to deal with settling constructions
Frame sealing	10-30 mm	30-300 mm	10 m	door and window frame expansion-band
Contact-noise insulation	4 / 6 / 8 mm	10-2400 mm	21 m	e.g. felt layer under parquet and wooden floors
Papers	0.3 mm	1300 mm	46 m	humidity regulating building papers (fortified)

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Specific heat capacity:
 $c = 1600 \text{ J/kgK}$

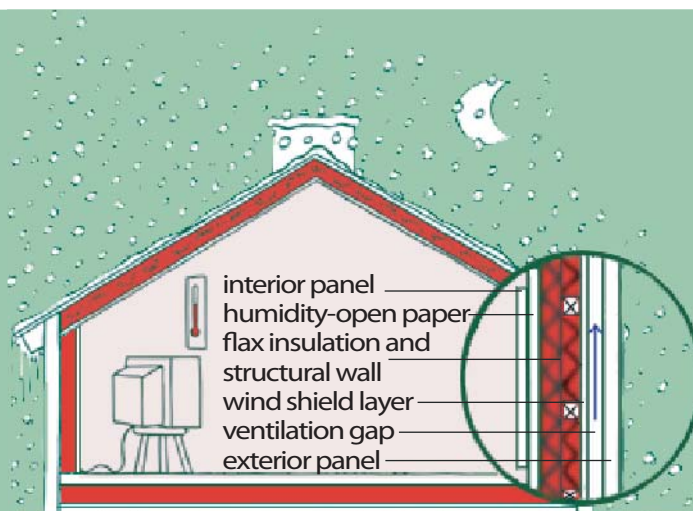
Water vapour diffusion coefficient: $\mu = 1-2$ according DIN 52615 / DIN 4108-5

Humidity sorption:
 according EN-ISO 12571 / DIN 52620

Air permeability ζ ;
 $230 \times 10^{-9} \text{ m}^3/\text{m.s.Pa}$

Estimated service life:
 minimum 75 years

NIBE environmental classification: class 1a (best achievable, reference)



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