

VITAL® 040

Cellulose wool insulation batt ideally suited for timber-frame construction

GENERAL

VITAL 040 batts are semi-rigid insulation batts made from oxygen-bleached cellulose and viscose fibres, food grade cellulose based binder, and a pH neutral boron liquid that provides **permanent protection against rot and fire**. They are manufactured in Finland in a patented manufacturing process which produces 40% more energy than it consumes.

VITAL 040 is able to absorb over **20% moisture** without losing significantly on thermal performance (7 times more moisture than a mineral wool product of equivalent density). In addition, its excellent specific heat capacity ensures that VITAL 040 not only insulates during the winter, but also prevents **summer overheating** (2.4 times better than a mineral wool of equivalent density).

VITAL 040 is a hygroscopic material. It is therefore able to bind, transfer and release humidity and so regulate the indoor climate. Its use in timber frames constructions will also **protect the timbers** from moisture, fire, and biological (mould, fungi, bacteria, insects) damage. **Structural timbers without preservative treatment** can therefore be used.

At the end of its useful life VITAL 040 insulation can be recycled or disposed of as **compost**.

ADVANTAGES

Composition & Manufacture

- Completely natural and ecological
- By-products recycled into process

Installation & Disposal

- A pleasure to handle, cut and install
- No release of harmful emissions
- Avoids the use of treated (toxic) timber
- Durable / Low maintenance
- Reusable / recyclable / compostable

Performance

- Excellent thermal performance in Winter
- Excellent thermal performance in Summer
- Excellent acoustic dampening properties
- High vapour permeability
- Hygroscopic (absorbs & releases moisture)
- Absorbs harmful VOC's and toxins
- Vermin and fungus resistant
- Electrically neutral / does not corrode metals
- Prevents the growth of mould on structure
- Protects structure from spread of flame
- Free from toxins and allergens



Applications

- Suitable for floors, walls and roof constructions
- Pre-fabrication or in-situ
- New and renovation work

PRODUCT DATA

Composition

Raw materials	Cellulose / Viscose fibres
Binder	CMC adhesive
Fire protecting agent	Boron mineral solution

Dimensions

Batt size	870 x 565 mm
Batt thickness	50 / 100 / 150 mm
Coverage per pack	5.90 / 2.95 / 1.97 m ²
Coverage per pallet	94.4 / 47.1 / 31.5 m ²

Technical data

Density, ρ	20 - 60 kg/m ³
Thermal conductivity, λ_{10}	0.034 W/ m.K
Thermal conductivity, λ_n	0.037 W/m.K
Specific heat capacity, c	2000 J/Kg.K
Diffusion resistance, μ	1
Air permeability	45 x 10 ⁻⁶ m ³ /m.s.Pa
Fire rating	Class B1 / B2
Embodied energy PEI _{nr}	MJ / kg
Global Warming GWD ₁₀₀	kg CO ₂ equiv

Standards

- Certification Z-23.11-1266 (DIBt)