

Table 4.1: Properties of Insulation Materials

Insulation Material	Thermal Conductivity ^a (W/mK)	Installation Method	Key Raw Materials	Expected Lifespan (years)	End-of-Life Options
Cellulose	0.040	Manual/ Mechanical	Recovered newsprint	60	Recycle or Disposal
Fibreglass	0.040	Manual/ Mechanical	Silica sand	30-50	Recycle or Disposal
Mineral wool ¹⁰	0.044	Manual/ Mechanical	Mineral rock	50	Recycle or Disposal
Thermafleece	0.039	Manual	Wool, polyester	>50	Recycle or Disposal
Sheep's wool	0.042	Manual	Sheep's wool	50-100	Recycle or Disposal
Eco-wool	0.0425	Manual	Recycled Plastic (PET)	>50	Recycle or Disposal
Hemp	0.038	Manual	Hemp	Lifespan of building	Recycle or Disposal
Polystyrene	0.037	Manual/ Mechanical	Expanded Polystyrene	Lifespan of building	Recycle or Disposal
Polyurethane	0.023	Manual	Polyurethane	Lifespan of building	Recycle or Disposal
Polyisocyanurate	0.023	Manual	Polyisocyanurate	Lifespan of building	Recycle or Disposal
Phenolic	0.021	Manual/ Mechanical	Phenolic	Lifespan of building	Recycle or Disposal

The lifespan of the different materials according to technical specifications and agreement certification indicates that the materials will last for indicative lifetimes providing that the materials are installed correctly and are not damaged during their lifetime. It is also important to note that externally applied insulations have shorter lifespans than internal insulation applications.

^a These are guideline values. There may be specific products within each type with a slightly different thermal conductivity value

¹⁰ e.g. Rockwool – Rockwool also has a take back recycling programme however other mineral wools may need to go for disposal