

Embodied Energy

Embodied energy is defined as all of the energy required for the entire life cycle of a product. It is the sum of energy required to extract, manufacture, assemble, transport, install, disassemble and put back into the environment. Listed below are several materials and their embodied energy in Mega joules per Kilogram.

Values

MATERIAL	E.E. (MJ/kg)
Concrete block	1.5
Poured-in-place concrete	1.9
Clay Brick	2.5
Kiln-dried sawn softwood	3.4
Gypsum Board	4.4
Portland Cement	5.6
Local Dimension Granite	5.9
Recycled Steel	9.8
Plywood	10.4
MDF	11.3
Glass	12.7
Imported Dimension Granite	13.9
Galvanized Steel	38.0
PVC	80.0
Paint	93.3
Aluminum	170.0

The values for embodied energy listed above are taken from www.ecospecifier.org a knowledge based website and member of the USGBC. **Ecospecifier Australasia** has a knowledge base of over 3500 eco-products, ecomaterials, technologies and resources, the leading global source of sustainable development & life-cycle assessed green product information. Linking independent information with a powerful search interface, ecospecifier does your materials research for you, delivering innovative sustainable product solutions with unique difference. Categorizing products according to rating scheme compliance such as Green Star, ecospecifier helps you reduce the time and costs of implementing Best Practice Green Buildings & Developments.