

Technical and Test Institute for Construction Prague, SOE is notified, authorized and accredited for verification, assessment, certification and testing of a wide range of thermal insulation materials and products used in building construction. The thermal insulation materials are manufactured in a form of boards, rolls, mats, felts, insulating of pipelines, lamellar mats, belts with or without facing. Technical and Test Institute for Construction Prague, SOE verifies and tests innovative products made of natural raw materials (flax, hemp, cotton, cellulose, etc.), synthetic thermal insulation materials made by the latest technologies (eg in-situ formed sprayed PUR/PIR foam products with new blowing agents) and thermal insulation materials made from recycled raw materials.

For the most of thermal insulation products, European harmonized standards (hEN) are applied. These products and materials must be CE marked in accordance with Regulation (EU) No 305/2011 of the European Parliament and of the Council, including information about basic technical parameters and characteristics. These characteristics must be verified according to the requirements of the relevant harmonized standard (hEN) and must be declared by the manufacturer in the 'Declaration of Performance'.

Harmonized standards for thermal insulation materials and products (examples):

1) Thermal insulation products for buildings

- EN 13162 Factory made mineral wool (MW) products
- EN 13163 Factory made products of expanded polystyrene (EPS)
- EN 13164 Factory made products of extruded polystyrene foam (XPS)
- EN 13165 Factory made rigid polyurethane foam (PUR) products
- EN 13166 Factory made phenolic foam (PF) products
- EN 13167 Factory made cellular glass (CG) products
- EN 13168 Factory made wood wool (WW) products
- EN 13169 Factory made products of expanded perlite (EPB)
- EN 13170 Factory made products of expanded cork (ICB)
- EN 13171 Factory made wood fibre (WF) products
- EN 14063-1 In-situ formed expanded clay lightweight aggregate products (LWA)
- EN 14064-1 In-situ formed loose-fill mineral wool (MW)
- EN 14315-1 In-situ formed sprayed rigid polyurethane (PUR) and polyisocyanurate (PIR) foam products
- EN 14316-1 In-situ thermal insulation formed from expanded perlite (EP) products
- EN 14317-1 In-situ thermal insulation formed from exfoliated vermiculite (EV) products
- EN 14318-1 In-situ formed dispensed rigid polyurethane (PUR) and polyisocyanurate (PIR) foam products



2) Thermal insulation products for building equipment and industrial installations

- EN 14303 Factory made mineral wool (MW) products
- EN 14304 Factory made flexible elastomeric foam (FEF) products
- EN 14305 Factory made cellular glass (CG) products
- EN 14306 Factory made calcium silicate (CS) products
- EN 14307 Factory made extruded polystyrene foam (XPS) products
- EN 14308 Factory made rigid polyurethane foam (PUR) and polyisocyanurate foam (PIR) products
- EN 14309 Factory made products of expanded polystyrene (EPS)
- EN 14313 Factory made polyethylene foam (PEF) products
- EN 14314 Factory made phenolic foam (PF) products
- EN 14319-1 In-situ formed dispensed rigid polyurethane (PUR) and polyisocyanurate foam (PIR) products
- EN 14320-1 In-situ formed sprayed rigid polyurethane (PUR) and polyisocyanurate foam (PIR) products
- EN 15501 Factory made expanded perlite (EP) and exfoliated vermiculite (EV) products

3) Light weight fill and thermal insulation products for civil engineering applications (CEA)

- EN 14933 Factory made products of expanded polystyrene (EPS)
 - EN 14934 Factory made products of extruded polystyrene foam (XPS)
 - EN 15732 Expanded clay lightweight aggregate products (LWA)
- In case of absence of a harmonized standard for a thermal insulation product, the manufacturer, importer or distributor is obliged to ensure that the product is placed on the market in accordance with national

regulations, e.g. according to Government Decree No. 163/2002 Coll. (as amended) and issues the "Declaration of Conformity". In this case the product cannot be CE marked.

If a harmonized standard does not exist for a thermal insulation product or if the product deviates significantly from it and the manufacturer still wishes to affix the CE marking to the EU market, manufacturer can ask Technical and Test Institute for Construction Prague, SOE as a Technical Assessment Body (TAB) for issuing of a European Technical Assessment (ETA) based on an EAD (European Assessment Document).



Examples of existing EADs for thermal insulation products (see www.eota.eu):

- EAD 040005-00-1201 Factory-made thermal and/or acoustic insulation products made of vegetable or animal fibres
- EAD 040138-01-1201 In-situ formed loose fill thermal and/or acoustic insulation products made of vegetable fibres
- EAD 040288-00-1201 Factory-made thermal and acoustic insulations made of polyester fibres
- EAD 040007-00-1201 Thermal insulation products for buildings with radiant heat reflective components

Accredited testing laboratories of Technical and Test Institute for Construction Prague, SOE in individual regional branches are equipped to perform a wide range of tests of thermal insulation materials:

- determination of physical (water vapor permeability, etc.) and mechanical properties (compressive, tensile, flexural strength, etc.)
- determination of geometry
- tests for subsequent classification of reaction to fire according to ČSN EN 13501-1 (single-flame source test, gross heat of combustion test, non-combustibility test)
- resistance to environmental influences (water, heat, frost, UV radiation with sprinkling)
- settlement of loose materials
- determination of thermal characteristics (thermal conductivity, thermal resistance, calculation of declared values)
- determination of metal corrosion resistance
- determination of deformation under specified compression and specified temperature conditions
- creep



In addition to testing and certification, Technical and Test Institute for Construction Prague, SOE provides series of verification tests for customers and investors, experts in the field of quality control of supplied products.

Contact

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