

CHAPTER 1 - MATERIALS AND RESOURCES

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701.01 THERMAL AND ACOUSTICAL INSULATION MATERIALS



INTENT

To limit toxic contents and thereby provide quality assurance in insulation materials.

REQUIREMENT

For all new buildings, insulation materials that are installed in the building must:

1. Be manufactured without the use of Chlorofluorocarbons (CFCs).
2. Be non-toxic and does not release toxic fumes during combustion.
3. Have 0.05 ppm or less of added formaldehyde.
4. Have a Threshold Limit Value (TLV) of 0.1 or less of Individual Volatile Organic Compounds.
5. Be fire resistant as per the requirements set forth by Dubai Civil Defence.
6. Thermal insulation materials should be certified by Dubai Central Laboratory.
7. Achieve all the requirements set forth by Dubai Municipality.

All thermal and acoustical insulation must be installed as per the manufacturer's instructions and must be approved by Dubai Municipality.

SIGNIFICANCE

In hot climates, most of the buildings are fully air conditioned and these buildings need to be adequately insulated to avoid any energy losses. Insulation materials are an integral part of building in not only reducing the energy use by restricting heat transfer within the building but also by contributing to make the building space more comfortable for the occupants.

Thermal insulation is used to reduce heat transfer between objects while acoustical insulation is used to reduce transfer of noise that enters, exits or travels within a room or space. Each type of insulation materials has their own usability, adaptability and performance properties. As large volumes of thermal and acoustical insulation materials are used in the construction of buildings, it is important to minimise their environmental impact. Impacts of insulation materials can be reduced by restricting the use of certain hazardous substances such as formaldehyde binders, CFCs etc., during the manufacturing process.

The Montreal Protocol, to which UAE is a signatory, bans the use of CFCs and restricts the use of Hydrochlorofluorocarbons (HCFCs).