



- 4.9.4.2.** Generally cores used in the sandwich panels based on their intended application are Polyisocyanurate Foam (PIR), Polyurethane Foam (PUR), Expanded or Extruded Polystyrene (EPS and EXPS) or Non-combustible mineral wool or fiberglass.
- 4.9.4.3.** Sandwich panels are generally used as external wall systems in low rise building such as warehouses and roofing. As internal partitions and ceiling applications, sandwich panels are used in, cold storages, food industries, warehouses and industries.

4.9.5. Specific Requirements

- 4.9.5.1.** Where Sandwich panels are installed on the exterior walls, they shall not reduce the fire resistance rating of the wall.
- 4.9.5.2.** Sandwich panels shall be Marked/labeled to verify its certification mark from accredited certification laboratory with its intended end use and application (Such as Internal wall, External wall, cold storage, roofing etc.), in compliance with this code.
- 4.9.5.3.** Sandwich panels installed as exterior walls shall be completely separated from the building interior and plenum by a thermal barrier, complying to test standards of **Section 7.1.11.** of this chapter.
- 4.9.5.4.** Thermal barrier shall not be required in masonry or concrete wall, floor or roof constructions where the sandwich panel is covered on each face by concrete or masonry with a minimum thickness of 25 mm.
- 4.9.5.5.** Thermal barrier shall not be required in fully Sprinkler protected cooler or freezer or cold rooms and the rooms they are located in, when sandwich panel is minimum 4 inch thick and has Class A rating as per UL 723 or ASTM E 84 (FSI-25, SDI-450 or less), when tested both core and panel. Moreover, sandwich panel shall have self ignition temperature, not less than 427⁰C in accordance with ASTM D 1929.
- 4.9.5.6.** Thermal barrier shall not be required in roof assemblies where sandwich panels are separated from the interior of the building by wood structural sheathing not less than 12 mm in thickness. And the sandwich panel is part of roof covering assembly tested and passes with FM 4450 or UL 1256 or FM 4471.
- 4.9.5.7.** Foam plastic insulation, exterior facings and coatings shall be tested separately in the thickness of intended use as per **Table 1.17.c.**