KNAUF INSULATION

Insulation Specifications and Standards for Insulated Partition Systems

A. All partitions shall be filled with 50mm thick glass mineral wool insulation manufactured by Knauf Insulation using no added formaldehyde, to give adequate STC (Sound Transmission Class) to the drywall system.

B. Glass mineral wool insulation technical properties:

1. Nominal Density:
   - 16 kg/m³ Knauf Insulation Partition (Folded Batt / Batt / Roll); thermal conductivity of 0.0354 W/mK)
   - 20 kg/m³ Knauf Insulation Partition (Folded Batt / Batt / Roll); thermal conductivity of 0.0344 W/mK)
   - 24 kg/m³ Knauf Insulation Partition (Folded Batt / Batt / Roll); thermal conductivity of 0.0332 W/mK)
2. Thickness: 50mm
3. Insulation material shall be Knauf Insulation Partition (Folded Batt / Batt / Roll) glass mineral wool insulation manufactured Knauf Insulation using up to 80% recycled glass and no added formaldehyde.
4. Insulation shall have thermal conductivity tested at 20°C mean temperature in accordance to ASTM C518, and declared to three significant figures in accordance with MS1020:2022 (Thermal Insulation products for buildings – Factory made mineral wool products – Specification).
5. Knauf Insulation Partition (Folded Batt / Batt / Roll) insulation shall have noise reduction coefficients (NRC) of at least 0.85, declared in accordance with the test methods outlined in ISO 354:2003 (Acoustics – Measurement of sound absorption in a reverberation room).
6. Insulation shall be non-combustible in accordance with BS476-4:1970 (Fire tests on building materials and structures. Non-combustibility test for materials).
7. No CFCs, HCFs, HCFCs or asbestos shall be used in the manufacture of the insulation product.
8. Insulation shall not sustain fungus growth under normal conditions according to ASTM C1338-08 (Standard test method for determining fungi resistance of insulation materials and facings).
9. Any metal plates (steel and aluminum) in contact with the insulation shall show no corrosion greater than that observed on the comparative plates in contact with sterile cotton according to ASTM C665 (Standard specification for mineral fiber blanket thermal insulation for light frame construction and manufactured housing).
10. The glass mineral wool insulation shall achieve CLASS O classification in accordance to BS 476 Part 4 (Non Combustibility Test for Materials) OR shall achieve CLASS O classification in accordance to BS 476-6:2009 (Method of test for fire propagation for products) AND BS 476-7:1997 (Surface Spread of Flame Test).
11. TVOC emissions after 28 days shall be less than 100µg/m³ when tested in accordance with EN 16516 (Construction products: Assessment of release of dangerous substances - Determination of emissions into indoor air).
12. Water vapor sorption shall be less than or equal to 5% in accordance with ASTM C665-17 (Standard specification for mineral fiber blanket thermal insulation for light frame construction and manufactured housing).
13. The glass mineral wool insulation shall be endorsed and approved by local green building council such as Singapore Green Building Council for green building product certification and/or MyHIJAU.
14. The glass mineral wool insulation shall be manufactured in accordance with EUCEB requirements and be provided with EUCEB certification. Mineral wool products bearing the EUCEB trademark are bio-soluble and not classified as carcinogenic.
15. The glass mineral wool insulation shall be provided with a Declare certification as provided by the International Living Futures Institute and demonstrate a Red List Free status.
16. The glass mineral wool insulation shall have a maximum level of embodied carbon of 1.2kg CO_2 eq. per 1.0kg of finished product for Life Cycle Assessment (LCA) stages A1-A3 when calculated and declared in accordance with ISO 14025: 2006 (Environmental labels and declarations — Type III environmental declarations — Principles and procedures).