XPS Technical Data

Product: XPS

End Use: Insulation

Nominal Composition: Extruded Polystyrene

Nominal Mass per Unit/Density: 32 -35 kg/m3

Board Dimensions: 2500 x 600mm

Board Thicknesses: 25mm, 30mm, 50mm, 75mm and 100mm

Testing Facility: AWTA Product Testing Australia

Test Date: November 2015

Steady State Thermal Transmission Properties Testing Method: ASTM C518-2010 (NATA Accredited)

- Product Thickness: 50 mm
- Thermal Conductivity: .0288 W/m.K @ 23°C
- Thermal Resistance (R Value): 1.74 m^2K/W

Compressive Resistance Properties Testing Method: ASTM C165-07 Procedure A

- Deformation Load at 1%
- Result: Average Mean 108kPa
- Deformation Load at 10%
- Result: Average Mean 359kPa

Water Vapour Transmission Properties Testing Method: ASTM E96-2012 (NATA Accredited)

- Temperature: 24.8°C
- Humidity: 53.7 %
- Permeance: 2.39 10^{-7} $g/Pa.m^2.S$

Water Absorption of Core Materials for Structural Sandwich Conditions Testing Method: ASTM C272-2007

- Increase in Weight: 7.1%

Fire Tests on Building Materials, Components and Structures Testing Method: AS/NZS 1530.3-1999 (NATA Accredited)

- Nominal Thickness: 50 mm
- Ignition Time: 11.48 min
- Flame Propagation time: Nil sec

- Heat Release integral: 71.2 KJ/m²
- Smoke Release, log d: -0.452
- Optical Density, d: 0.3617 / metre

Regulatory Indices:

- Ignitability Index: 9 (Range 0-20)
- Spread of Flame Index: 0 (Range 0-10)
- Heat Evolved Index: 2 (Range 0-10)
- Smoke Developed Index: 6 (Range 0-10)

Heat and Smoke Release Rates for Materials and Products using an Oxygen Consumption

Calorimeter Testing Method: AS/NZS 3837-1998 (NATA Accredited)

- Nominal Thickness: 50 mm
- Average Heat Release: 130.5 kW/m²
- Average Specific extinction area: 1076.2 m²/kg
- Irradiance: 50kW/m²
- Exhaust flow rate: 24 L/sec
- Time to sustained flaming: 22 sec
- Test Duration: 314 sec
- Peak heat release after ignition: 332.1 kW/m²
- Average heat at 60s: 258.9 kW/m²
- Average heat at 180s: 199.1 kW/m²
- Average heat at 300s: 130.5 kW/m²
- Total heat release: 37.9 MJ/m²
- Average effective heat of combustion: 28.6 MJ/kg
- Initial thickness: 38.0 mm
- Initial mass: 12.5g
- Mass remaining: 0.1 g Mass percentage pyrolysed: 99.2 %
- Mass loss: 12.4 g Average rate of mass loss: 4.6 g/m².s