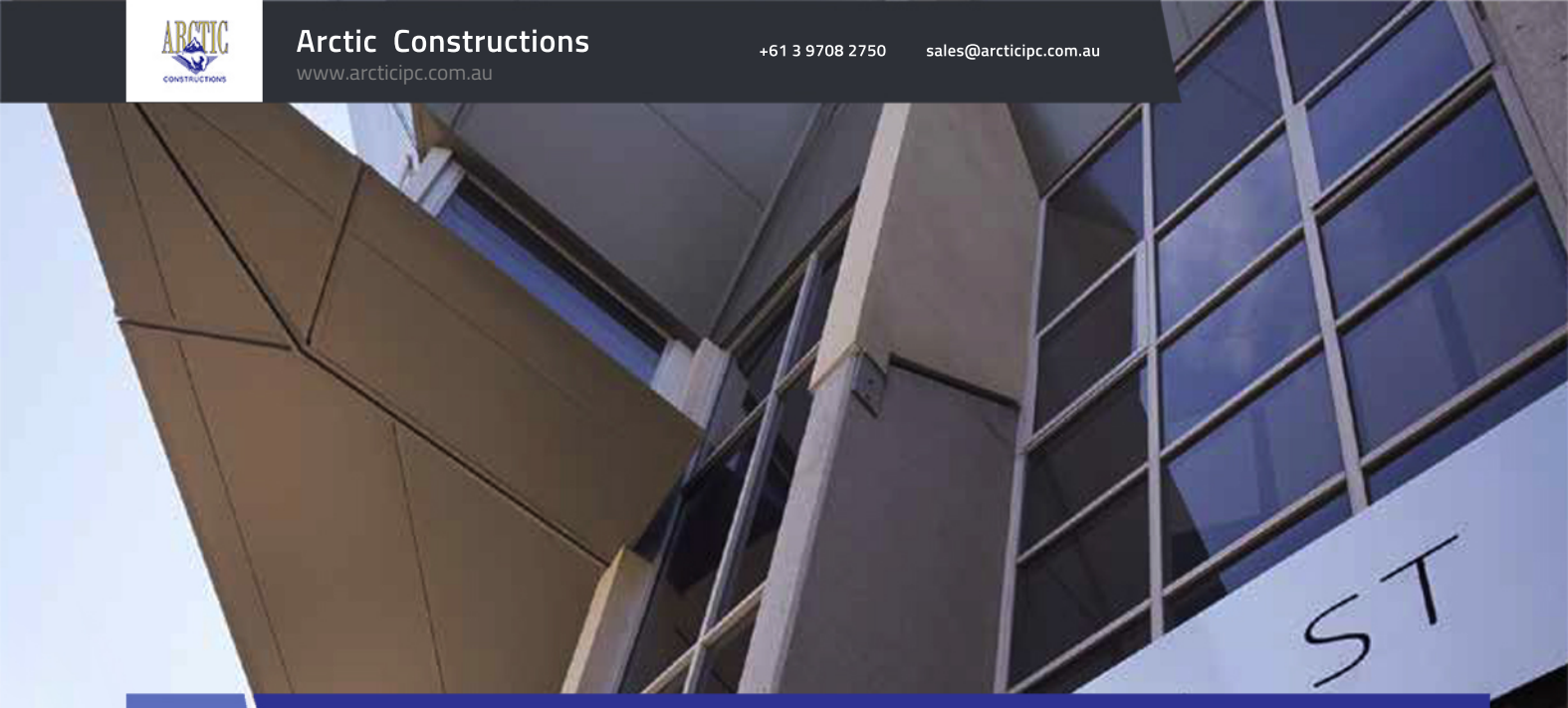

# ENGINEERING DATA

## Table 01. Physical Properties

| CRITERIA | XFLAM | EPS | PIR | MINERAL WOOL |
|---|---|---|---|---|
| Density | 32 kg/m³ | 13.5kg/m³ | 36-45 kg/m³ | 100 kg/m³ |
| Recyclable | 415 µg/m².s | 218 µg/m².s | 215 µg/m².s | N/A |
| Workability | Yes | Yes | No | No |
| Traficability | Resistant to pedestrian traffic (1 person/m2) | Resistant to pedestrian traffic (1 person/m2) | 140kg per panel, use load spreaders | No pedestrian Traffic – Crawl boards required |

## Table 02. Engineered Panel Spans

ASKIN Panel Spanning Capacity – Guide to ASKIN ULS Panel Spanning Capacity (Metres)

| | XFLAM | | | | EPS | | | | PIR | | | | MINERAL WOOL | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.6 Skins | 0.5 kPa | 0.87 kPa | 1.0 kPa | 1.2 kPa | 0.5 kPa | 0.87 kPa | 1.0 kPa | 1.2 kPa | 0.5 kPa | 0.87 kPa | 1.0 kPa | 1.2 kPa | 0.5 kPa | 0.87 kPa | 1.0 kPa | 1.2 kPa |
| 50mm | 5.7 | 4.4 | 4.1 | 3.3 | 4.4 | 3.3 | 3.2 | 2.7 | 4.1 | 3.9 | 3.2 | 3.0 | 2.9 | 2.2 | 2.1 | 1.8 |
| 75mm | 7.0 | 5.5 | 5.0 | 4.2 | 5.5 | 4.1 | 3.9 | 3.3 | 5.1 | 4.5 | 4.0 | 3.6 | 4.0 | 3.1 | 2.9 | 2.4 |
| 100mm | 8.1 | 6.1 | 5.7 | 5.0 | 6.3 | 4.8 | 4.5 | 3.8 | 5.9 | 5.0 | 4.5 | 4.1 | 4.6 | 3.8 | 3.5 | 2.7 |
| 150mm | 9.9 | 7.6 | 6.9 | 5.8 | 7.8 | 5.9 | 5.5 | 4.8 | 6.8 | 4.2 | 5.1 | 4.6 | 5.2 | 4.0 | 4.8 | 3.4 |
| 200mm | 11.5 | 8.9 | 8.1 | 6.7 | 9.0 | 6.8 | 9.0 | 6.8 | 6.3 | 4.5 | 8.3 | 7.5 | 5.9 | 5.5 | N/A | N/A |
| 250mm | 12.0 | 9.5 | 8.7 | 7.6 | 10.1 | 7.6 | 7.1 | 6.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 300mm | 12.0 | 10.0 | 9.1 | 8.6 | 11.0 | 8.3 | 7.8 | 6.8 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

0.5 kPa, 0.87 kPa,1.0 kPa and 1.2 kPa are arbitrary loads which apply to common building applications. The table is designed to give the reader a brief understanding of the panels spanning capabilities.

## Table 03. Cyclone Performance

0.6/0.6 XFLAM Panel Span at Load Table Extrapolated from Test Results performed by the University of Adelaide.

| | XFLAM FLAT | | | | XFLAM METRIC | | | |
|---|---|---|---|---|---|---|---|---|
| Pressures / Fixing Centres | 6 kPa 600 | 8 kPa 600 | 12 kPa 400 | Impact m/s | 6 kPa 200 | 8 kPa 250 | 12 kPa 250 | Impact m/s |
| 75mm (Extrapolated) | 1.6 | 1.4 | 0.8 | | 1.8 | 1.5 | 0.9 | |
| 100mm (Certified) | 1.8 | 1.5 | 1.2 | 39 | 2.4 | 2.0 | 1.2 | 40 |
| 150mm (Extrapolated) | 2.2 | 1.8 | 1.4 | | 3.5 | 2.9 | 1.7 | |

*100mm EPS Panel has been impact tested successfully to 38 m/s

## Table 04. Peel Strength

| Average N/mm | XFLAM | EPS | PIR |
|---|---|---|---|
| Initial Peel | 1.27 | 2.4 | .074 |
| Propagation | 0.31 | 0.59 | 0.16 |

## Table 05. Manufacturing Tolerances

| | XFLAM | EPS | PIR | MINERAL WOOL |
|---|---|---|---|---|
| Length | +5mm (T=5mm) | +5mm (T=5mm) | +/-5mm (T=10mm) | +5mm (T=5mm) |
| Width | +/-1mm (T=2mm) | +/-1mm (T=2mm) | +/-2mm (T=4mm) | +/-1mm (T=2mm) |
| Thickness < 100mm | +/-1mm (T=2mm) | +/-1mm (T=2mm) | +/-2mm (T=4mm) | +/-1mm (T=2mm) |
| Thickness > 100mm | +/-1mm (T=2mm) | +/-1mm (T=2mm) | +/-4mm (T=8mm) | +/-1mm (T=2mm) |
| Flatness | +/-2mm (T=4mm) | +/-2mm (T=4mm) | +/-3mm (T=6mm) | +/-2mm (T=4mm) |

T= Total Variance