

PANEL DESCRIPTION / COMPOSITION

Barestone™ - Graphite

APPLICATIONS

	Result
Applications	Facades and Cladding, Internal Linings, Eaves, Ceilings and Soffits
Type of Building Structure	Residential Housing Buildings within the scope of AS4055, Commercial & Other
Wet Areas	No

PANEL - DIMENSIONAL & GEOMETRICAL CHARACTERISTICS

Dimensional/Geometrical Characteristic	Specification	Manufacturing Tolerance	Relevant Standard
Panel Dimensions	1200mmW x 2400mmL x gmmD (special order for Ash, Lunar and Graphite) 1200mmW x 3000mmL x gmmD	Width +0.0mm / -2.0mm Length +0.0mm / -2.0mm Thickness +0.9mm / -0.0mm	
Profile	Square Edge		
Perpendicularity/squareness of edges	1mm/linear meter	(+2.0mm / 0.0mm)	
Weight (typical)	17.8kg/m ²		
Layout Options	Horizontal, Vertical, Diagonal		
Jointing	Expressed		

PANEL - STRENGTH & MOISTURE RELATED PROPERTIES

Physical Property	Result	Relevant Standard
Modulus of Rupture (Wet)	>18MPa	AS/NZS 2908.2
Modulus of Elasticity (Wet)	9-13GPa	
Density (Oven Dry)	1625 kg/m ³	AS/NZS 2908.2
Water Vapor Diffusion	Not Required	Not Required
Water Tightness (24hrs)	No water droplet	AS/NZS 2908.2
Water Absorption (Saturated - 48hrs)	18 wt%	ASTM C 1186
Moisture Content (EMC)	7 Wt %	ASTM C 1186

Physical Property	Result	Relevant Standard
Moisture Movement	0.04%	ASTM C 1186

PANEL - OTHER DURABILITY/WEATHER RESISTANCE INDICATORS

Test	Result	Relevant Standard
Heat Rain	PASSED (25 Cycles)	AS/NZS 2908.2
Freeze Thaw	PASSED (50 Cycles)	AS/NZS 2908.2
Warm Water Resistance	PASSED (56 days)	AS/NZS 2908.2
Soak Dry	PASSED (25 Cycles)	AS/NZS 2908.2

PANEL - FINISH CHARACTERISTICS

Characteristic	Result	Relevant Standard
Finish	Prefinished	
Coating Type	Barestone Original External: Silane (Water Repellent) Barestone Internal: Acrylic Barestone Colours External: Silane + Acrylic	
Colour Bodied	No - Barestone Original Yes - Barestone Colours	
Paint Type		
UV Resistance	Yes	N/A
Formaldehyde Emission Rate	N/A	N/A
VOC Emission Rate	N/A	N/A

Spectral Reflectivity Values	Solar Reflectance %	Solar Absorption %	Basix Colour	Relevant Standard
Barestone Graphite	8.7	91.3 (+/-0.3)	Dark	ASTM E903-96

PANEL - FIRE RESISTANCE, THERMAL & ACCOUSTIC PROPERTIES

Characteristic	Result	Relevant Standard
FIRE RESISTANCE		
Combustibility	Suitable for use in applications where non-combustible materials are specified by the Deemed to Satisfy Provisions of the NCC 2022 C2D10 [2019: C1.9]	
Fire Hazard Properties	Group Number 1 SMOGRARC \leq 0.2 (m2.s2 x 1000)	
Classification		
THERMAL CONDUCTIVITY		
Thermal Conductivity (λ -Factor)	0.4108 W/m.K. \pm 4%	ASTM C 518-10

Characteristic	Result	Relevant Standard
Thermal Expansion Co-efficient	0.005-0.01mm/mK	N/A
ACOUSTIC VALUE		
Sound reduction (depends on construction)	N/A	N/A

SYSTEM SOLUTIONS

(EXTERNAL) Characteristic	Result	Relevant Standard
Within Scope of AS4055?	Yes	
Wind Loading - Residential housing buildings within the scope of AS4055	N1, N2, N3, N4, N5, N6, C1, C2, C3, C4	
Weatherproofing	Assessed for serviceability loads to 2.5kPa	AS/NZS 4284
Cyclonic Conditions	Tested and assessed to 7.0 kPa	AS 4040.3
Fire Resistance Limits (FRLs)	Up to 120/120/120 & -/180/180	Refer to The Red Book™ 1 – Design Guide
Bushfire Construction	BAL-40 (Construction for Bushfire Attack Level 40 for an external wall)	AS 3959-8
Acoustic	Acoustic solutions of up to RW/RW+CTR 56/47dB are detailed	Refer to The Red Book™ 1 – Design Guide
Thermal	Thermal solutions of up to RT(sum) /RT(win) 3.5/3.8m ² .K/W are detailed	Refer to The Red Book™ 1 – Design Guide

FIXING

Characteristic	
Maximum Span (Stud Spacing)	Up to 600mm
DIRECT FIX	
Nail to Timber Frame	No
Screw to Timber Frame	No
Screw to Steel Frame	No
Screw to Timber Battens	Yes
CAVITY FIX	
Timber Frame	Yes
Steel Frame	Yes
Masonry Wall	Yes (refer to Designlink for custom solution)
EXPOSED FASTENERS	
Screw	Yes

Characteristic	
Rivet	Yes
Nail	No
CONCEALED FASTENERS (INTERNAL USE ONLY)	
Clip	No
Countersunk Screw/Nail	No
Adhesive, Split Batten, etc.	Yes
Hidden by Overlapping Panel	No
Flush Jointed (Taped)	No

WARRANTY 10 YEARS

August 29, 2023