

## **SOLAR ABSORPTANCE**

The colour of a wall is represented by its **solar absorptance** value, a decimal number that is an indicator of the colour's ability to absorb radiation from the sun.

"Absorptance,  $(\alpha)$ , is a measure of the ability of a surface to absorb radiation. It is the ratio of the thermal radiation absorbed by a surface to that absorbed by a perfectly absorbing surface", and "Solar absorptance, refers to the ability of a surface to absorb all the radiation wavelengths of the sun's emission spectrum".

To design energy efficient buildings, it is a requirement of energy assessors to calculate the heat loss or gain of materials used to construct any new buildings. Solar absorptance is an indication of the amount of solar energy or heat that passes into a material, compared to the amount that is reflected from the material. Solar absorptance relies on colour, no matter what material you use. Dark materials have a higher solar absorptance and will absorb more solar energy. Selecting lighter coloured materials will reduce the amount of heat energy entering a building, leading to lower energy costs, and greater thermal comfort.

Assessors enter the solar absorptance values of walls as Light, Medium, or Dark, per table below.

BCA Classification		BASIX Solar Absorptance	
Typical Colour	Solar Absorptance	Typical Colour	Solar Absorptance
Light & Very Light	<0.35	Light	<0.475
Medium	0.35 – 0.55	Medium	0.475 – 0.7
Dark	>0.5	Dark	>0.7

Island Block & Paving BASIX solar absorptance classification for all coloured walling products- Bricks for the Future, Bespoke Bricks and Blocks for the Future are summarised in the table below. These categories are used to comply with the Building Sustainability Index (BASIX) design requirements.







COLOUR	SURFACE FINISH	BASIX CLASSIFICATION
	Smooth Finish	Light
Ash ECO	Exposed Finish	Light
	Refined/Polished Finish	Light
	Smooth Finish	Medium
Auburn	Exposed Finish	Light
	Refined/Polished Finish	Medium
	Smooth Finish	Light
Dune	Exposed Finish	Light
	Refined/Polished Finish	Light

	Smooth Finish	Dark
Ebony ECO	Exposed Finish	Medium
,	Refined/Polished Finish	Dark
	Smooth Finish	Dark
Graphite	Exposed Finish	Medium
	Refined/Polished Finish	Dark
	Smooth Finish	Light
Limestone	Exposed Finish	Light
	Refined/Polished Finish	Light
	Smooth Finish	Light
Mist ECO	Exposed Finish	Light
	Refined/Polished Finish	Light
	Smooth Finish	Dark
Mocca	Exposed Finish	Medium
	Refined/Polished Finish	Dark
	Smooth Finish	Light
Pearl ECO	Exposed Finish	Light
	Refined/Polished Finish	Light
	Smooth Finish	Medium
Pewter ECO	Exposed Finish	Light
	Refined/Polished Finish	Light
	Smooth Finish	Light
Platinum ECO	Exposed Finish	Light
	Refined/Polished Finish	Light
	Smooth Finish	Light
Pontville ECO	Exposed Finish	Light
	Refined/Polished Finish	Light
	Smooth Finish	Light
Pure White	Exposed Finish	Light
	Refined/Polished Finish	Light
	Smooth Finish	Medium
Storm Grey ECO	Exposed Finish	Medium
,	Refined/Polished Finish	Medium
	Smooth Finish	Light
Taupe	Exposed Finish	Light
·	Refined/Polished Finish	Light
	Smooth Finish	Medium
Walnut ECO	Exposed Finish	Medium
	Refined/Polished Finish	Medium
	Smooth Finish	Light
Whisper White ECO	Exposed Finish	Light
	Refined/Polished Finish	Light



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"No one knows Bricks, Blocks & Pavers better"