

ChameleonCore EXT

ChameleonCore EXT is a composite foam insulation product for use against most external roof and walling finishes. The reflective foil and high density resistance based foam outer layers allow **ChameleonCore EXT** will within its limitations, regulate its own temperature to a comfortable 23 degrees Celsius.

The Hero of **ChameleonCore** Product line is the Phase Changing centre. The silicone based foam is impregnated during the manufacturing process with a Phase Change material.

Phase Change Material (PCM) is a substance that is engineered to freeze and melt at a specified temperature, in our case 23 degrees Celsius. As the material changes its state from solid to liquid, the material must draw substantial amounts of heat energy from its surrounding environment. It's the reverse effect as the PCM changes its state from liquid to Solid. During this process, the PCM must Release substantial amounts of energy into the surrounding environment to return to the solid state.

This transfer of energy, centralised at 23 degrees Celsius creates a large window of time that the surrounding environment is "passively" controlled to maintain this temperature. This eliminates the need for Heating/cooling in this time window. If the ambient indoor temperature does rise above 25 degrees or fall below 21 degrees, artificial heating or cooling is required to return the indoor environment back to the comfortable temperature zone.

This process can massively reduce heating and cooling costs and associated greenhouse gas emissions.

Characteristics	Test Method	Results	
		ChameleonCore EXT 1.0	ChameleonCore EXT 1.5
Product Code		CCEXT10	CCEXT15
Material Thickness		9.5mm	11mm
Material Weight		1354GSM	1640GSM
Package Size		1200mm x 20m (24m ²)	
Roll Diameter		500mm	540mm
Package Weight		32.5kg	38.5kg
Energy Storage Capacity (Kj/m ²)		12Kj/m ²	18Kj/m ²
Energy Storage Capacity (Wh/m ²)		3.33Wh/m ²	5.00Wh/m ²
Flammability Index	AS 1530.2	≤ 5	
Material Thermal Resistance	ASTM C518	0.23	0.24
Emittance	ASTM E408	Anti-Glare Face E0.05	
Vapour Barrier	ASTM E96	Medium Resistance	
Dry Delamination	AS/NZS 4201.1	Pass	
Wet Delamination	AS/NZS 4201.2	Pass	
Water Barrier	AS/NZS 4201.4	High Resistance	
Corrosion Resistance	AS/NZS 4589.1	Pass	