

CoolZone

TECHNICAL DATASHEET



CoolZone, the high thermal mass ceiling solution

Armstrong CoolZone uses the latest and most advanced phase change technology to **maximise comfort** while **minimising energy use**. CoolZone high thermal mass cassettes incorporating phase change materials absorb heat during the day saving energy costs and **reducing CO₂ emissions** associated with the cooling of buildings.

Armstrong CoolZone cassettes are produced from unperforated Armstrong

metal ceiling tiles with a 24mm infill incorporating BASF Micronal phase change material. The CoolZone cassettes are suspended in standard Armstrong exposed grid systems and can be installed in conjunction with standard Armstrong ceiling tiles to **optimise** both the **thermal comfort** and the **acoustic comfort** of the room.

Typically 30-50% of the ceiling area would comprise of the Armstrong CoolZone cassettes with standard tiles

and service elements making up the remainder of the installation, although this will depend on many factors including the building construction, orientation and thermal loads. **Contact Armstrong Atelier** for information and calculations to help determine the right quantity of CoolZone cassettes for an individual project.

Product Specification & Technical Performance

	Item No.	Nominal Size (mm)	Thickness (mm)	Weight (kg)
COOLZONE TEGULAR 8/16	BPCZ4980M	600x600	25	9.0
COOLZONE MICROLOOK 8/16	BPCZ4981M	600x600	25	9.0

Other systems and modules are also available on request.



WEIGHT
25 kg/m²



THERMAL CAPACITY

The CoolZone infill contains **25% BASF Micronal** with a melt point temperature of **23°C** providing a total heat storage capacity of **136.2 Wh/m²**.



FINISH

Factory applied polyester powder coat, minimum thickness **55 microns**.



COLOUR

	STANDARD		SEMI-STANDARD	
	RAL 9010	Global White	RAL 9006	RAL 9007
EN ISO 2813:2000 GLOSS	20%	12%	30%	30%
LIGHT REFLECTANCE EN ISO 7742-2 & 3	85%	75%	n/a	n/a

Other colours available upon request.

ACOUSTIC PERFORMANCE



EN ISO 354
& EN ISO 11654

α_w : 0.25	NRC: 0.20	Hz	125	250	500	1000	2000	4000
Sound Absorption Class: E	α_p		0.35	0.20	0.15	0.25	0.25	0.20



EN ISO 10848-2
& EN ISO 717-1

Dnfw: 40 dB



EN 13501-1

FIRE PERFORMANCE

EEA, Euroclass **B-s1, d0**



Up to **95% RH**
(for short term exposure)



EN ISO 14021

RECYCLED CONTENT

Metal ceiling tiles: up to **30%**

Service life

BASF has conducted extensive tests on Micronal to ensure its long term performance. The material was put through 10,000 cycles with no loss of performance. Assuming 300 cycles per year this delivers a durability of over 30 years.

Product Lifecycle & Disposal

CoolZone cassettes are assembled in the UK at an ISO 9001 and ISO 14001 certified manufacturing plant.

Armstrong CoolZone cassettes can be recycled at the end of their life. The phase change material insert between the metal tiles can be recycled as part of the gypsum wallboard recycling programme.



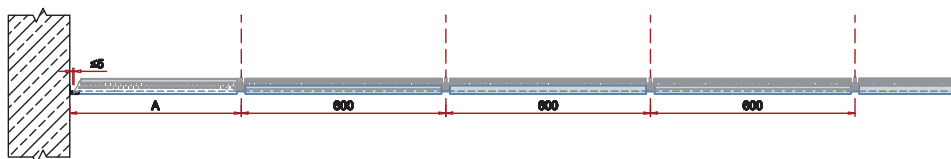
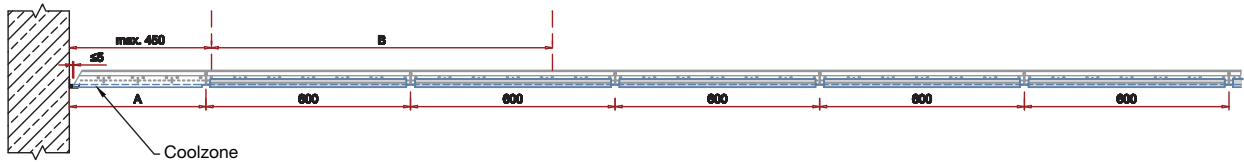
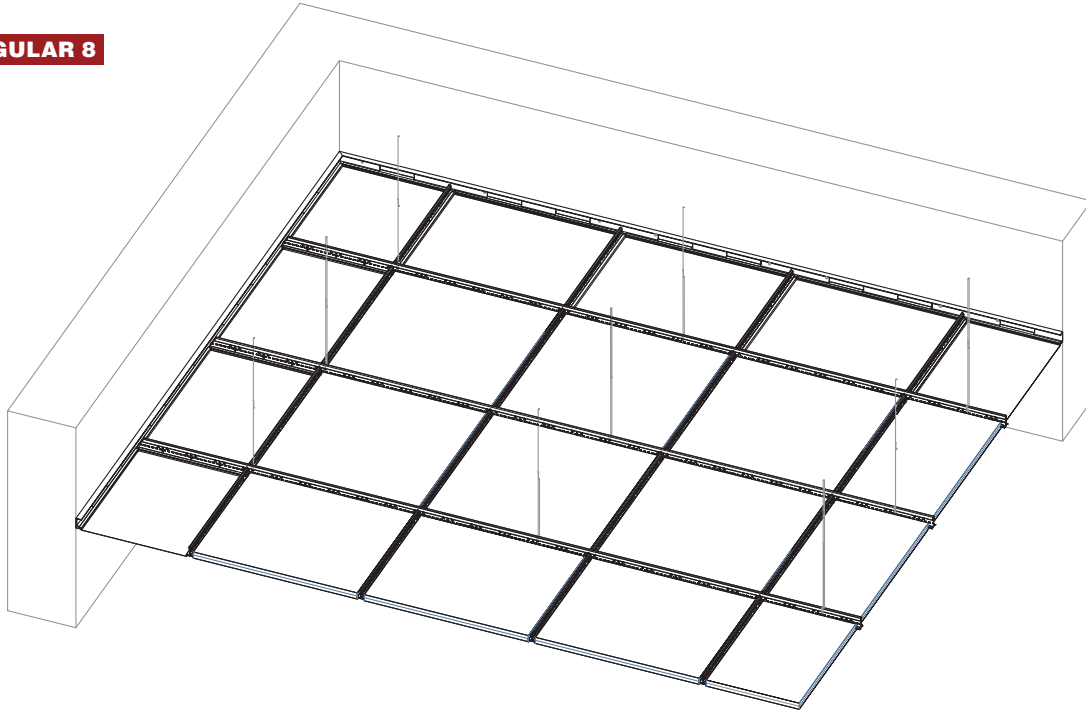
Installation & Maintenance Information

- CoolZone cassettes should be stored under conditions of use in a dry interior location and should remain in cartons until installation. Cartons should be stacked and oriented as shown on the carton. Care must be exercised during handling and opening of cartons to avoid damage. The use of soft cotton gloves is recommended for tile installation. **Individual CoolZone cassettes weigh 9Kg, significantly more than standard metal ceiling tiles, and care should be taken during installation.** Due to this weight, special considerations need to be made when considering the grid system.
- For new CoolZone installations, Armstrong Prelude 15mm or Prelude 24mm exposed grid installation is recommended with main runners at 600mm centres and with hangers at 1000mm along the main runners. The first hangers should be within 450mm of the perimeter trim. This will maintain Class 1 deflection as per EN 13964:2004+A1:2006.
- For refurbishment installations, please contact us for specific detailed loading calculations.
- As the the CoolZone cassettes are formed from two Armstrong Metal tiles, one with an 8mm return and a one with a 16mm return, the tiles are reversible and can be installed with either the 8mm or the 16mm return visible.
- Armstrong CoolZone cassettes are re-locatable and can be easily relocated within a space, supplemented with additional cassettes, or moved to another room in the building as required by the cooling loads. Care must be exercised when moving CoolZone cassettes due to their heavier weight and consideration must be given to the grid support if moving CoolZone cassettes into new areas.
- Armstrong CoolZone cassettes should not be cut. Perimeter tiles and tiles required to be cut for service elements should be standard ceiling tiles.
- Armstrong CoolZone cassettes require no more maintenance than a standard metal ceiling tile and are washable with a sponge dampened in water containing mild soap or diluted detergent. Abrasive cleaning agents should not be used.

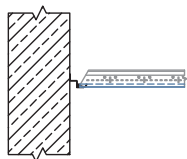
Details & Drawings

CAD drawings are available for ceilings utilising Tegular or MicroLook CoolZone cassettes and with either the 8mm or the 16mm return. An Armstrong Prelude 24 XL² grid installation utilising Tegular CoolZone cassettes with the 8mm return visible is shown below as an example.

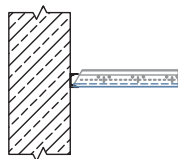
TEGULAR 8



Alternative perimeter solution



Alternative perimeter solution



A - 600 mm or cut to size
B - ≤ 1000 mm

Contact Armstrong for further details and CAD drawings.



WANT TO LEARN MORE ?

For more questions about **CoolZone**
or any Armstrong products or services,
contact us today!

www.armstrong-atelier.eu
www.armstrong-ceilings.co.uk
www.armstrong-ceilings.ie

United Kingdom • Republic of Ireland

Armstrong World Industries Ltd.
Building Products Division
Armstrong House
38 Market Square, Uxbridge UB8 1NG
0800 371 849 (UK) • 1800 409 002 (RoI)
Fax: +44 (0) 1895 274287

