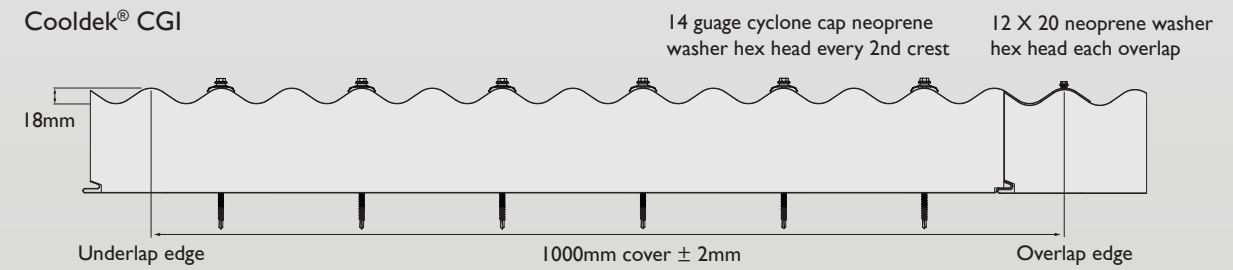
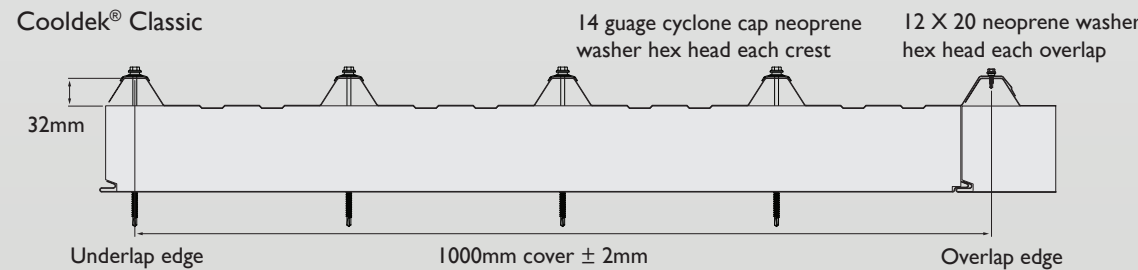


125mm COOLDEK® ROOFING PERFORMANCE IN REGIONS A & B

Roof Sheet : 0.42mm BMT G550
Ceiling Sheet: 0.60mm BMT G300

FEB 2022



Maximum Allowable Spans (mm)														
Terrain Category	KI	5m Maximum Height						10m Maximum Height						
		Region A			Region B			Region A			Region B			
		Pz, Strength (kPa)	End/Internal	Max. Overhang	Pz, Strength (kPa)	End/Internal	Max. Overhang	Pz, Strength (kPa)	End/Internal	Max. Overhang	Pz, Strength (kPa)	End/Internal	Max. Overhang	
1.0	1.0	1.33	5460	1200	2.13	4680	1050	1.0	1.51	5200	1150	2.42	4140	900
	1.5	1.87	4570		3.00	3480		1.5	2.13	4170		3.41	3120	
	2.0	2.41	3720		3.87	2780		2.0	2.74	3360		4.40	2420	
	3.0	3.50	2780		5.61	-		3.0	3.98	2490		6.38	-	
1.5	1.0	1.16	5860	1400	1.85	5370	1150	1.0	1.35	5460	1250	2.17	4600	1000
	1.5	1.63	4950		2.61	3890		1.5	1.90	4480		3.06	3430	
	2.0	2.10	4230		3.37	3150		2.0	2.46	3660		3.94	2720	
	3.0	3.05	3110		4.89	-		3.0	3.56	2740		5.72	-	
2.0	1.0	1.00	6320	1500	1.60	5960	1150	1.0	1.20	5800	1350	1.93	5160	1150
	1.5	1.40	5320		2.25	4350		1.5	1.69	4950		2.72	3770	
	2.0	1.81	4660		2.91	3570		2.0	2.19	4050		3.51	3040	
	3.0	2.63	3480		4.21	2540		3.0	3.17	3010		5.09	-	
2.5	1.0	0.91	6550	1500	1.46	6270	1250	1.0	1.01	6180	1500	1.62	5930	1150
	1.5	1.28	5560		2.06	4800		1.5	1.42	5200		2.28	4370	
	2.0	1.66	4900		2.66	3840		2.0	1.83	4710		2.94	3540	
	3.0	2.40	3730		3.85	2790		3.0	2.65	3450		4.26	2510	
3.0	1.0	0.83	6600	1500	1.33	6550	1400	1.0	0.83	6600	1500	1.33	6460	1400
	1.5	1.17	5830		1.87	5320		1.5	1.17	5800		1.87	5320	
	2.0	1.51	5150		2.42	4140		2.0	1.51	5150		2.42	4140	
	3.0	2.18	4050		3.51	3040		3.0	2.18	4050		3.51	3040	

Note: When an overhang is applied minimum back span shall be 1.5 x overhang.

Installation Requirements

Cooldek sheets should be laid into the prevailing wind within the maximum allowable spans allocated above subject to the design criteria. Alternatively, a suitably qualified engineer may assess spans in accordance with the design pressures.

The Cooldek Classic profile shall be installed to maintain a minimum 2° roof pitch while Cooldek CGI shall maintain a minimum 3° roof pitch. Refer to Stratco if any criteria is outside that as nominated on this detail sheet.

Maintenance Requirements

The performance of Cooldek over time depends on its correct application and maintenance. Maintenance should be performed as often as is required to remove any dirt, salt and pollutants. Where Cooldek is used in severely corrosive environments, cleaning should be performed more often. It is important that screws have the same life expectancy as the Cooldek cladding you have specified. Packs of Cooldek should always be kept dry and stored above ground level on site. If the sheets have become wet, they should be separated, wiped and placed in the open to dry. Refer to the Stratco "Selection, Use and Maintenance" brochure for more detailed information about the correct use and maintenance of this product.

Limitations

- Design pressures and maximum allowable spans are based on fixing with one screw per crest per support for Classic profile and one screw every second crest for CGI profile.
- If fixing over insulation, screw length should be increased to ensure sufficient penetration of the fastener.
- For 125mm Cooldek Roofing the back-span shall be minimum 1.5 x the deck overhang.
- Refer AS/NZS 1170.2 for definition of local pressure (KI) zones. KI=3.0 is only applicable in the upwind corner of roofs with a pitch less than 10°.

Notes

- Testing in accordance with AS1562.1, Design and installation of sheet roof and wall cladding and AS4040.2, Methods of testing sheet roof and wall cladding - resistance to wind pressures for non-cyclone regions.
- Design criteria determined in accordance with AS/NZS 1170.2:2012 Wind Actions.
- Cooldek 125 & 150 Static Testing, Report no. 198, Rev. B, 15-01-2016, Stratco Testing Facility, Gepps Cross, South Australia.

Group I Fire Resistance

Stratco Cooldek is classified as a Group I material and achieves a SMOGRARC of 1.9 m2s-2 x 1000, as tested by Exova Warringtonfire in accordance with AS5637.1 and AS/ISO 9705. For enclosed buildings the intersections of walls and Cooldek ceiling panels must be completely covered with 65 mm x 65 mm x 1.2 mm thick steel corner flashings that are fastened to the walls and ceiling with 6-3 steel rivets at 300 mm centres maximum.

Fastener Details		
Steel	Minimum 1.5mm (BMT)	14 gauge self drilling screws with cyclonic washer assembly
Timber	Hardwood (F17)	14 gauge timber screws with cyclonic washer assembly and minimum 35mm embedment depth.
	Softwood (F7)	14 gauge timber screws with cyclonic washer assembly and minimum 45mm embedment depth.

Side lap fixing at maximum 1000mm centres with 12x20mm self drilling screws.

Note: One fixing required per crest for Cooldek Classic.
One fixing required every second crest for Cooldek CGI.
All fasteners require neoprene seals.

Design Criteria

The following criteria were used in the development of the tables:

- Region A & B with a design return period of 500 years for Strength Limit State and 25 years for Serviceability Limit State.
- Region A: V_r = 45m/s strength, 37m/s serviceability
Region B: V_r = 57m/s strength, 39m/s serviceability
- M_s/M_t/M_d = 1.0
- K_{c,e} = K_{c,i} = 0.9

Height (m)	Terrain/height Multiplier (M _{z,cat})				
	1.0	1.5	2.0	2.5	3.0
≤5.0	1.05	0.98	0.91	0.87	0.83
≤10.0	1.12	1.06	1	0.92	0.83

Pressure Coefficients for Roofing of Enclosed Building:

Internal, C_{p,i} = +0.2
External, C_{p,e} = -0.9

Pressure Coefficients for Roof Overhang*:

Internal, C_{p,i} = +0.7
External, C_{p,e} = -0.9

* Allocation of roof overhang allows for KI=3.0 for worst case design consideration.

Span (mm)	Design Pressures (kPa)	
	Serviceability End / Internal	Strength End / Internal
2400	2.80	4.45
3000	2.16	3.57
3600	1.70	2.88
4200	1.43	2.38
4800	1.16	2.07
5400	0.92	1.84
6000	0.74	1.66
6600	0.61	1.51

Interpolation is permitted for determination of design pressures at spans between those shown.