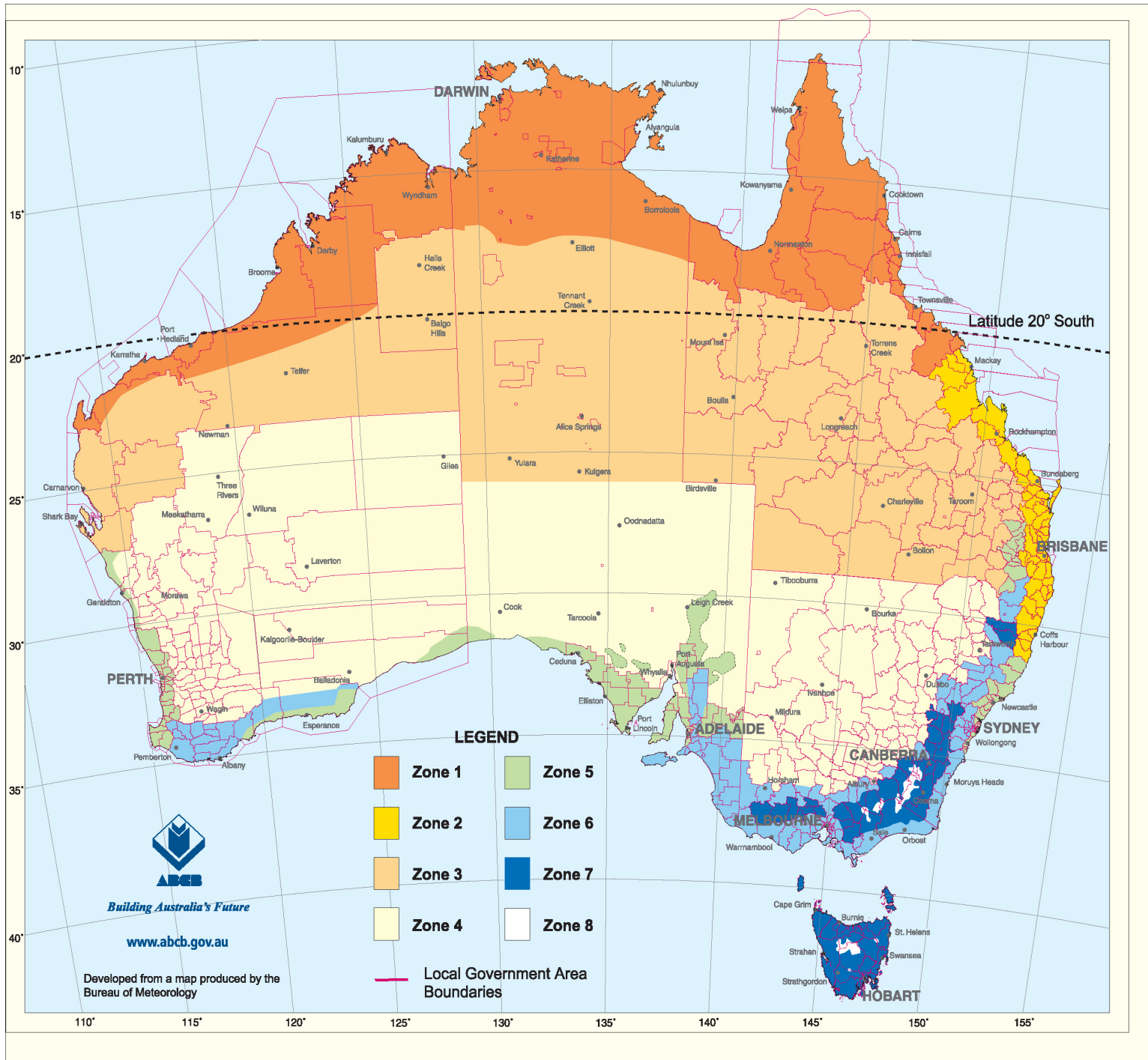


Formshield Pipe Insulation

Hot & Cold Sectional Pipe Insulation

BCA 2009 Requirements for Insulating of Hot & Cold Piping

The 2009 requirements by the Building Code of Australia, specification J5.4, requires piping insulation to comply with specific R values for specified climate zones in Australia as indicated in the map below.



The table below indicates the Total R Values for the various climate zones and the type of installation as specified by the BCA under AS/NZS 4859.1.

Refer to Table 3 on the next page to match the pipe size and wall thickness to the designated R value specified in the table below.

Table 2 Piping-Minimum Total R Value.

Location	Minimum Total R value for each climate Zone.				
	Climate Zones 1,2,3 and 5	Climate Zones 4,6 and 7	Climate Zones 8		
1. Heating water piping for systems of no more than 65 kW heating capacity.					
(a) Located Internally	0.2	0.2	0.2		
(b) Located within a wall space, an enclosed sub-floor area or an enclosed roof space	0.3	0.45	0.6		
(c) Located outside the building or in an unenclosed sub-floor area or an unenclosed roof space.	0.3	0.6	0.6		
2. Heating water piping for systems of more than 65kW heating Capacity					
(a) Located Internally	0.5	0.6	0.8		
(b) Located within a wall space, an enclosed sub-floor area or an enclosed roof space	0.6	0.7	0.9		
(c) Located outside the building or in an unenclosed sub-floor area or an unenclosed roof space.	0.7	0.8	1.0		
3. Cooling water piping for systems of more than 65kW capacity but less than 250kW capacity.					
(a) Located Internally	1.0	0.9	0.8		
(b) Located within a wall space, an enclosed sub-floor area or an enclosed roof space	1.1	1.0	0.9		
(c) Located outside the building or in an unenclosed sub-floor area or an unenclosed roof space.	1.2	1.1	1.0		
4. Cooling Water piping for systems of more than 250kW capacity					
(a) Located Internally	1.5	1.2	1.0		
(b) Located within a wall space, an enclosed sub-floor area or an enclosed roof space	1.6	1.3	1.1		
(c) Located outside the building or in an unenclosed sub-floor area or an unenclosed roof space.	1.8	1.4	1.3		

Note: Piping to be insulated includes all flow and return piping, cold water supply piping within 500 mm of the connection to the heating and cooling system and pressure relief piping within 500 mm of the connection to the heating and cooling system.

R values for Thermobreak Pipe Insulation per Pipe ID (mm) and Insulation wall thickness (mm) in Accordance with AS/NZ 4859.1.

Wall T(mm)	10	15	20	25	30	35	40	50	55	60	65
Pipe ID(mm)											
6	0.60	1.01	1.46	1.95	2.47	3.02	3.58	4.76	5.37	5.99	6.63
9	0.53	0.89	1.30	1.73	2.20	2.68	3.19	4.25	4.80	5.37	5.94
12	0.49	0.82	1.19	1.59	2.02	2.46	2.93	3.91	4.42	4.95	5.48
15	0.46	0.77	1.12	1.49	1.89	2.30	2.74	3.66	4.14	4.63	5.14
19	0.44	0.73	1.04	1.39	1.76	2.15	2.55	3.41	3.86	4.32	4.79
22	0.42	0.70	1.00	1.33	1.69	2.06	2.44	3.27	3.70	4.14	4.59
25	0.41	0.68	0.97	1.29	1.63	1.98	2.35	3.14	3.56	3.98	4.42
27	0.41	0.67	0.95	1.26	1.59	1.94	2.30	3.07	3.48	3.89	4.32
32	0.39	0.64	0.91	1.21	1.52	1.85	2.19	2.92	3.31	3.70	4.11
34	0.39	0.63	0.90	1.19	1.49	1.82	2.16	2.87	3.25	3.63	4.03
38	0.38	0.62	0.88	1.15	1.45	1.76	2.09	2.78	3.14	3.52	3.90
42	0.38	0.61	0.86	1.13	1.41	1.72	2.03	2.70	3.05	3.42	3.79
48	0.37	0.59	0.83	1.09	1.37	1.66	1.96	2.60	2.94	3.29	3.65
50	0.37	0.59	0.83	1.08	1.36	1.64	1.94	2.57	2.91	3.25	3.60
54	0.36	0.58	0.81	1.07	1.33	1.61	1.90	2.52	2.85	3.18	3.52
60	0.36	0.57	0.80	1.04	1.30	1.57	1.85	2.45	2.77	3.09	3.42
64	0.36	0.56	0.79	1.03	1.28	1.55	1.82	2.41	2.72	3.04	3.36
67	0.36	0.56	0.78	1.02	1.27	1.53	1.80	2.38	2.69	3.00	3.32
73	0.35	0.55	0.77	1.00	1.25	1.50	1.77	2.33	2.63	2.93	3.24
76	0.35	0.55	0.77	1.00	1.24	1.49	1.75	2.31	2.60	2.90	3.21
80	0.35	0.55	0.76	0.99	1.22	1.47	1.73	2.28	2.57	2.86	3.17
89	0.35	0.54	0.75	0.97	1.20	1.44	1.69	2.22	2.50	2.79	3.08
101	0.34	0.53	0.74	0.95	1.17	1.41	1.65	2.16	2.43	2.70	2.99
110	0.34	0.53	0.73	0.94	1.16	1.39	1.62	2.12	2.38	2.65	2.93
114	0.34	0.53	0.72	0.93	1.15	1.38	1.61	2.11	2.36	2.63	2.90
127	0.34	0.52	0.71	0.92	1.13	1.35	1.58	2.06	2.31	2.57	2.83
140	0.33	0.52	0.71	0.91	1.11	1.33	1.55	2.02	2.26	2.51	2.77
152	0.33	0.51	0.70	0.90	1.10	1.31	1.53	1.99	2.23	2.47	2.72
168	0.33	0.51	0.69	0.89	1.09	1.30	1.51	1.96	2.19	2.43	2.67
203	0.33	0.50	0.68	0.87	1.06	1.26	1.47	1.90	2.12	2.34	2.58
219	0.33	0.50	0.68	0.86	1.06	1.25	1.45	1.87	2.09	2.31	2.54

For pipe sizes not included in the above table, please contact your sales representative or Youngbo Australia.