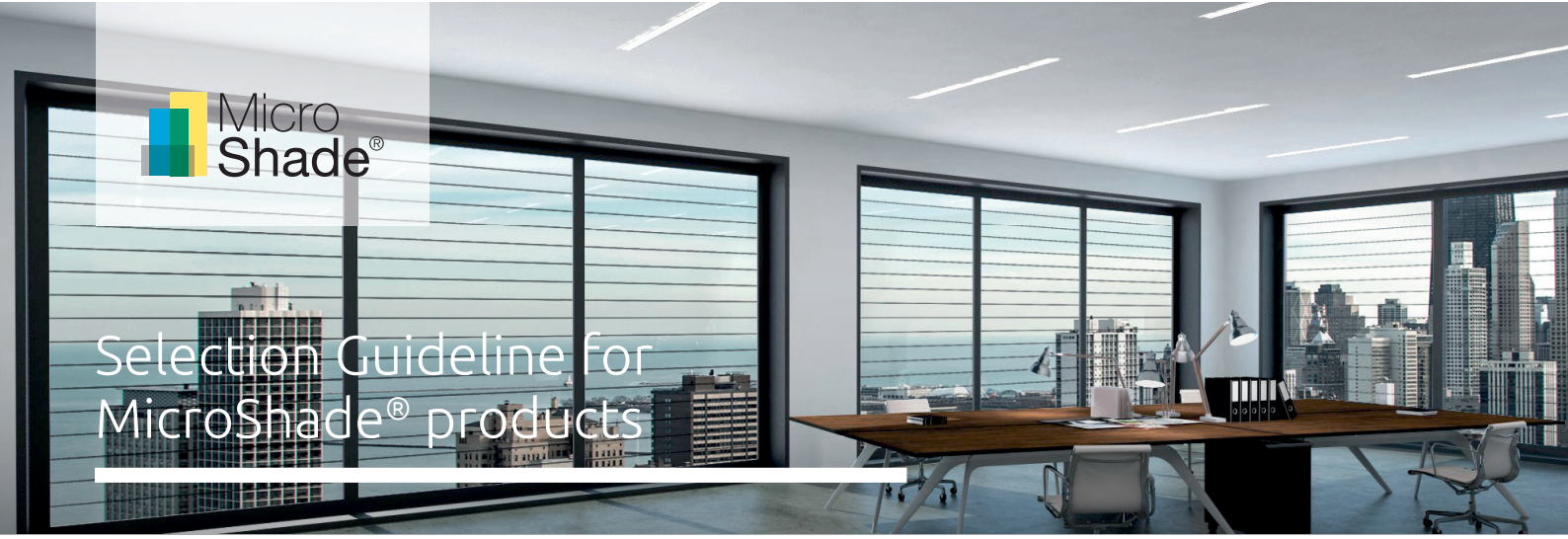


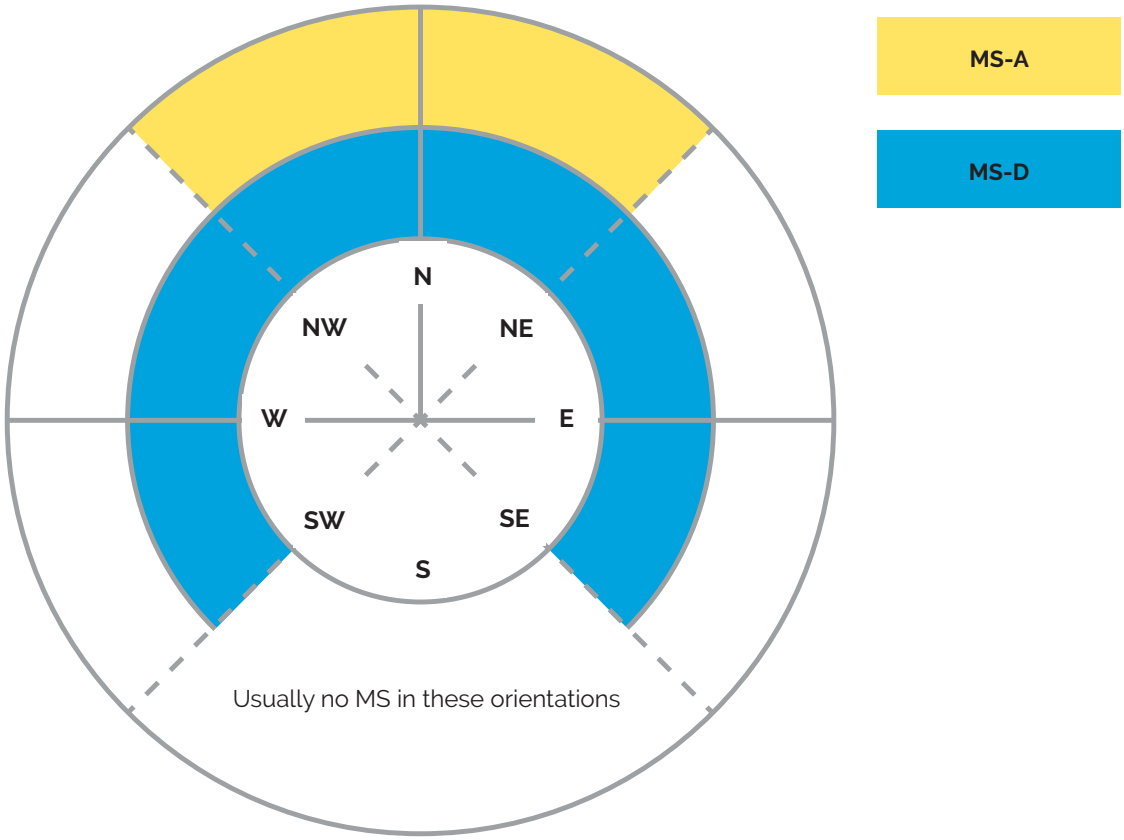
Selection Guideline for MicroShade® products

Australia – façade applications

MicroShade® is a highly effective shading product containing microscopic shading lamellas. The shading efficiency depends on the incidence angle of the sun on the lamellas. When the sun is high in the sky during the summer, MicroShade® provides the strongest shading and during winter when the sun is low more heat is allowed into the building. Similarly, the shading efficiency also varies during the course of the day due to the different positions of the sun morning, noon and evening.

For façade applications[1] two MicroShade® product types are commonly used – the MicroShade® MS-A and MS-D. Aesthetically, these are similar, only the MS-D provides a stronger shading whilst the MS-A allows more daylight inside.

The obtained shading is best expressed using the effective Solar Heat Gain Coefficient, SHGC – and with MicroShade® MS-A or MS-D glazing, this depends on the orientation of the façade. The figure below shows which MicroShade® product is suitable at given façade directions.



[1] Façade application means glazing mounted in a near vertical position.

Key performance data for 2-layer glazing with MicroShade® MS-A or MS-D

The tables below indicate the light transmittance LT¬0 and the mean effective SHGC in the summer period (December to end of February) for two layer MicroShade glazing.

MS-A	U-value (W/m²K)	LT_o	Effective SHGC, summer period (Dec to end of February)						
Orientation			225° SW	270° W	315° NW	0° N	45° NE	90° E	135° SE
Cairns	1.12	0.49	-	-	0.20	0.22	0.20	-	-
Brisbane			-	-	0.20	0.19	0.19	-	-
Sydney			-	-	0.20	0.17	0.20	-	-
Perth			-	-	0.20	0.16	0.20	-	-
Melbourne			-	-	0.21	0.16	0.20	-	-
Hobart			-	-	0.21	0.17	0.21	-	-

MS-D	U-value (W/m²K)	LT_o	Effective SHGC, summer period (Dec to end of February)						
Orientation			225° SW	270° W	315° NW	0° N	45° NE	90° E	135° SE
Cairns	1.12	0.43	0.19	0.20	0.16	0.19	0.16	0.20	0.19
Brisbane			0.19	0.20	0.16	0.16	0.15	0.21	0.19
Sydney			0.20	0.21	0.16	0.14	0.16	0.21	0.19
Perth			0.20	0.21	0.15	0.12	0.15	0.21	0.19
Melbourne			0.20	0.21	0.16	0.13	0.16	0.21	0.20
Hobart			0.20	0.21	0.17	0.13	0.17	0.21	0.20

1) The optical and thermal data above are valid for glazing structure: 4 mm Heat tempered float+ MS – 16 mm argon – 4 mm lowE.
2) The performance of the MicroShade® system depends on the glazing structure – for exact information about your glazing, please contact MicroShade support – support@microshade.dk
3) U-value is calculated according to EN673-2011.
4) Effective SHGC calculated according to ISO 9050 (AM1.5).

Key performance data for 3-layer glazing with MicroShade® MS-A or MS-D

The tables below indicate the light transmittance LT¬0 and the mean effective SHGC in the summer period (December to end of February) for three layer MicroShade glazing.

MS-A	U-value (W/m²K)	LT_0	Effective SHGC, summer period (Dec to end of February)						
Orientation			225° SW	270° W	315° NW	0° N	45° NE	90° E	135° SE
Cairns	0.72	0.44	-	-	0.15	0.18	0.14	-	-
Brisbane			-	-	0.14	0.14	0.14	-	-
Sydney			-	-	0.14	0.12	0.14	-	-
Perth			-	-	0.14	0.11	0.13	-	-
Melbourne			-	-	0.15	0.11	0.15	-	-
Hobart			-	-	0.15	0.11	0.15	-	-

MS-D	U-value (W/m²K)	LT_0	Effective SHGC, summer period (Dec to end of February)						
Orientation			225° SW	270° W	315° NW	0° N	45° NE	90° E	135° SE
Cairns	0.72	0.38	0.15	0.16	0.13	0.15	0.13	0.16	0.15
Brisbane			0.15	0.16	0.13	0.13	0.12	0.16	0.15
Sydney			0.16	0.17	0.13	0.11	0.12	0.17	0.15
Perth			0.16	0.18	0.12	0.09	0.12	0.17	0.15
Melbourne			0.16	0.17	0.13	0.10	0.13	0.17	0.16
Hobart			0.16	0.17	0.13	0.09	0.13	0.18	0.16

1) The optical and thermal data above are valid for glazing structure: 4 mm Heat tempered float+ MS – 12 mm argon – 4 mm lowE – 12 mm argon – 4 mm lowE
2) The performance of the MicroShade system depends on the glazing structure – for exact information about your glazing, please contact MicroShade support support@microshade.dk
3) U-value is calculated according to EN673-2011.
4) Effective SHGC calculated according to ISO 9050 (AM1.5).