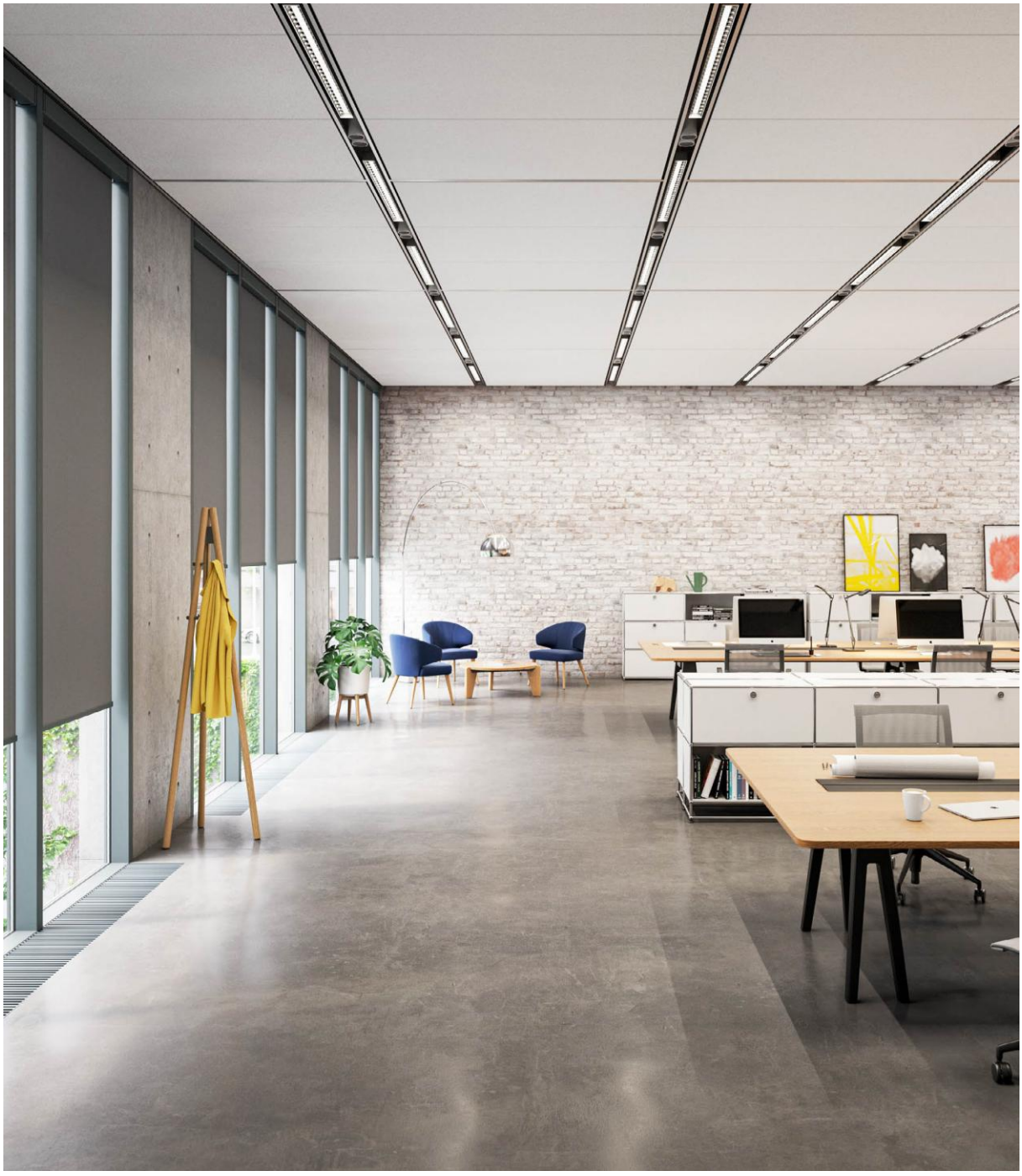
kvadrat expert centre



Curtain performance reporting of Technicolour Cloud in conjunction with reference glazing from EN 14501:2021+A1:2025

Report with curtain performance measurements, calculations and performance classification in compliance with EN 14500:2021 & EN 14501:2021+A1:2025

Kvadrat Expert Centre

Kvadrat Shade together with Kvadrat High Performance Textiles (KHPT), formerly known as Verosol, is well-known as the specialist in designing and manufacturing technically superior textiles for curtains and internal blinds. Kvadrat Expert Centre as part of KHPT can play an important role in the design phase of a building project.
We have a modern, well equipped, laboratory to measure the performances of textiles according to the latest standards EN 14501:2021+A1:2025. We calculate according to the detailed method EN 52022-3:2017. This enables us to create custom-made reports of the impact our curtains in conjunction with building specific glazing. We do this at Kvadrat's Expert Centre, where we aim to create ever more sustainable advantaged and superior value.
By engaging with design teams at the earliest possible stage, Kvadrat can maximise the impact of the curtain system. We assist architects, consultants and façade engineers to create the optimal combination of curtains with glazing. Our aim is to consistently maximise natural (day)light without creating thermal or visual discomfort. Put it simple, minimise energy cost for the building without compromising occupant comfort.

This report shows the results of Techni in combination with the reference glazings, the most common glazing types, from EN 14501:2021+A1:2025 to give an impression on the achievements that can be made. If you wish a tailor made report for your project, please contact the local Kvadrat sales contact.



ing. Evert Bos



ir. Lindsay Hovenier

Glass composition and performance data

Performance calculations are made with all relevant reference glazings from EN 14501:2021+A1:2025. The glazings A and B are configured with integrated performance values, glazings F, G, H and I are configured with panes with full spectral data that are included in the standard. Full spectral data is required to perform accurate and detailed calculations in compliance with EN-ISO 52022-3

No	Glazing composition from outdoor to indoor	U-value	g-value	LT-value
1	EN14501 ref glazing A Pane : CEN EN14501-2025 clear glass 4 mm	5.81	0.88	0.91
2	EN14501 ref glazing B Pane : CEN EN14501-2025 clear glass 4 mm Gap : Air 12 mm Pane : CEN EN14501-2025 clear glass 4 mm	2.90	0.80	0.82
3	Reference F (EN 14501:2021+A1:2025) Double Low-E Pane : CEN EN14501-2025 clear glass 4 mm Gap : Air-Argon 10/90 16 mm Pane : CEN EN14501-2025 LOW-E glass 4 mm	1.06	0.65	0.82
4	Reference G Solar Control (EN 14501:2021+A1:2025) Pane : CEN EN14501-2025 Solar control 6 mm Gap : Air-Argon 10/90 16 mm Pane : CEN EN14501-2025 clear glass 4 mm	0.98	0.33	0.70
5	reference H triple insulation (EN 14501:2021+A1:2025) Pane : CEN EN14501-2025 LOW-E glass 4 mm Gap : Air-Argon 10/90 12 mm Pane : CEN EN14501-2025 clear glass 4 mm Gap : Air-Argon 10/90 12 mm Pane : CEN EN14501-2025 LOW-E glass 4 mm	0.72	0.53	0.74
6	glazing I triple SC with ref pane Pane : CEN EN14501-2025 Solar control 6 mm Gap : Air-Argon 10/90 14 mm Pane : CEN EN14501-2025 clear glass 4 mm Gap : Air-Argon 10/90 14 mm Pane : CEN EN14501-2025 LOW-E glass 4 mm	0.62	0.31	0.64

1. Reference glazing A is a single clear glass.
2. Reference glazing B is a double clear glass.
3. Reference glazing F is a double insulation glazing, coating on position 3.
4. Reference Glazing G is a double solar control glazing coating on position 2.
5. Reference Glazing H is a triple insulation glazing, coating on positions 2 and 5.
6. Glazing I is a triple solar control glazing, coatings on positions 2 and 5, composed with full spectral reference panes from outdoor to indoor: Pane 3 (Tables A-18/19) - Pane 1 (Tables A-14/15) - Pane 2 (Tables 16/17) conform EN 14501:2021+A1:2025.

Textile Performance Indicators

Measured performances acc. EN 14500:2021

Curtain textile	Solar Reflec-tion	Solar Trans-mission	Visible Trans-mission	UV Trans-mission	Open-ness Factor	IR-Emis-sivity	Ra
Technicolour Cloud colour 0110	0.55	0.25	0.22	0.09	3%	0.80	95
Technicolour Cloud colour 0130	0.52	0.22	0.17	0.08	3%	0.80	97
Technicolour Cloud colour 0210	0.52	0.25	0.20	0.10	3%	0.80	92
Technicolour Cloud colour 0220	0.52	0.23	0.19	0.08	3%	0.80	90
Technicolour Cloud colour 0230	0.53	0.21	0.17	0.06	3%	0.80	84
Technicolour Cloud colour 0250	0.44	0.22	0.14	0.08	3%	0.80	93
Technicolour Cloud colour 0350	0.45	0.20	0.12	0.07	3%	0.80	85
Technicolour Cloud colour 0380	0.33	0.17	0.06	0.06	3%	0.80	91
Technicolour Cloud colour 0780	0.32	0.17	0.06	0.06	3%	0.80	98
Technicolour Cloud colour 0950	0.41	0.23	0.14	0.08	3%	0.80	96
Technicolour Cloud colour 0980	0.33	0.18	0.07	0.07	3%	0.80	98
Technicolour Cloud colour 0740	0.50	0.23	0.17	0.10	3%	0.80	92

Performances classifications acc. EN 14501:2021+A1:2025

Curtain textile	Glare Control Class	Visual Contact Class	Daylight use Class	Night Privacy Class	g-tot Value Class
Technicolour Cloud colour 0110	1	0	2	2	2
Technicolour Cloud colour 0130	1	1	2	2	2
Technicolour Cloud colour 0210	1	0	2	2	2
Technicolour Cloud colour 0220	1	0	2	2	2
Technicolour Cloud colour 0230	1	1	2	2	2
Technicolour Cloud colour 0250	1	1	2	2	2
Technicolour Cloud colour 0350	1	1	2	2	2
Technicolour Cloud colour 0380	3	2	1	2	2
Technicolour Cloud colour 0780	3	2	1	2	2
Technicolour Cloud colour 0950	1	1	2	2	2
Technicolour Cloud colour 0980	2	2	1	2	2
Technicolour Cloud colour 0740	1	1	2	2	2

Explanation of the Textile Performance indicators

- All reflection and transmission properties are measured in compliance with EN 14500:2021. These properties are based on averages and are subject to production tolerances, misprints, errors and technical modifications
- Ra = Colour Rendering Index and is an indicator for natural daylight passing through the shade. Ra = 100 is best. For offices Ra should be at least 80.
- Glare Control Class = Glare control - Classification, determined in compliance with Table 7 from EN 14501:2021+A1:2025.
- View Through Class = Visual contact with the outside - Classification, determined in compliance with Table 9 from EN 14501:2021+A1:2025.
- Daylight Use Class = Daylight utilization - Classification, determined in compliance with Table 10 from EN 14501:2021+A1:2025 using formula 32 from EN 14500:2021. Smart curtain control systems will/can neutralise the low Daylight Use rating.
- Night privacy Class = Privacy night - Classification, determined in compliance with Table 8 from EN 14501:2021+A1:2025.
- g-tot Value Class = Total solar energy transmittance g-tot classification in conjunction with reference glazing G and compliant with Table 2 from EN 14501:2021+A1:2025.
- Classifications classes: 0 - very little effect; 1 - little effect; 2 - moderate effect; 3 - good effect; 4 - very good effect.

Calculated Fenestration Performances

All calculations are made in WIS 3.0.1.sp2 and are in compliance with EN-ISO 52022-3:2017 under reference conditions. Calculated values are mid-pane values. Framing and spacerbars are not taken into account.
The cavity between glazing and curtain is set at 300mm and is assumed to be free ventilated due to small gaps at the perimeter of the curtain.

EN14501 ref glazing A	U-tot value	g-tot value	LT-tot value	FC-value	Ra
Glazing only	5.81	0.88	0.91		99
+ Technicolour Cloud colour 0110	3.70	0.38	0.22	0.43	96
+ Technicolour Cloud colour 0130	3.70	0.40	0.17	0.45	97
+ Technicolour Cloud colour 0210	3.70	0.40	0.20	0.46	93
+ Technicolour Cloud colour 0220	3.70	0.40	0.18	0.45	90
+ Technicolour Cloud colour 0230	3.70	0.39	0.17	0.44	84
+ Technicolour Cloud colour 0250	3.70	0.44	0.13	0.50	94
+ Technicolour Cloud colour 0350	3.70	0.43	0.12	0.48	86
+ Technicolour Cloud colour 0380	3.70	0.48	0.05	0.55	91
+ Technicolour Cloud colour 0780	3.70	0.48	0.05	0.55	99
+ Technicolour Cloud colour 0950	3.70	0.46	0.14	0.52	96
+ Technicolour Cloud colour 0980	3.70	0.48	0.07	0.55	97
+ Technicolour Cloud colour 0740	3.70	0.41	0.16	0.46	91

EN14501 ref glazing B	U-tot value	g-tot value	LT-tot value	FC-value	Ra
Glazing only	2.90	0.80	0.82		99
+ Technicolour Cloud colour 0110	2.15	0.40	0.22	0.50	97
+ Technicolour Cloud colour 0130	2.15	0.42	0.16	0.52	98
+ Technicolour Cloud colour 0210	2.15	0.42	0.20	0.53	93
+ Technicolour Cloud colour 0220	2.15	0.42	0.18	0.52	91
+ Technicolour Cloud colour 0230	2.15	0.41	0.16	0.51	85
+ Technicolour Cloud colour 0250	2.15	0.46	0.12	0.58	94
+ Technicolour Cloud colour 0350	2.15	0.45	0.11	0.57	86
+ Technicolour Cloud colour 0380	2.15	0.51	0.05	0.64	92
+ Technicolour Cloud colour 0780	2.15	0.51	0.05	0.64	98
+ Technicolour Cloud colour 0950	2.15	0.48	0.13	0.60	96
+ Technicolour Cloud colour 0980	2.15	0.51	0.06	0.64	96
+ Technicolour Cloud colour 0740	2.15	0.43	0.15	0.54	90

Reference F (EN 14501:2021+A1:2025) Double Low-E	U-tot value	g-tot value	LT-tot value	FC-value	Ra
Glazing only	1.06	0.65	0.82		98
+ Technicolour Cloud colour 0110	0.91	0.38	0.21	0.58	97
+ Technicolour Cloud colour 0130	0.91	0.39	0.16	0.61	98
+ Technicolour Cloud colour 0210	0.91	0.40	0.19	0.61	94
+ Technicolour Cloud colour 0220	0.91	0.39	0.17	0.61	91
+ Technicolour Cloud colour 0230	0.91	0.39	0.16	0.60	85
+ Technicolour Cloud colour 0250	0.91	0.44	0.12	0.69	94
+ Technicolour Cloud colour 0350	0.91	0.44	0.11	0.68	87
+ Technicolour Cloud colour 0380	0.91	0.50	0.05	0.78	93
+ Technicolour Cloud colour 0780	0.91	0.51	0.05	0.79	98
+ Technicolour Cloud colour 0950	0.91	0.46	0.12	0.71	96
+ Technicolour Cloud colour 0980	0.91	0.50	0.06	0.78	96
+ Technicolour Cloud colour 0740	0.91	0.41	0.15	0.63	89

Reference G Solar Control (EN 14501:2021+A1:2025)	U-tot value	g-tot value	LT-tot value	FC-value	Ra
Glazing only	0.98	0.33	0.70		94
+ Technicolour Cloud colour 0110	0.85	0.18	0.18	0.55	96
+ Technicolour Cloud colour 0130	0.85	0.20	0.14	0.60	96
+ Technicolour Cloud colour 0210	0.85	0.20	0.16	0.60	96
+ Technicolour Cloud colour 0220	0.85	0.20	0.15	0.60	94
+ Technicolour Cloud colour 0230	0.85	0.20	0.14	0.59	89
+ Technicolour Cloud colour 0250	0.85	0.24	0.10	0.71	97
+ Technicolour Cloud colour 0350	0.85	0.23	0.09	0.70	91
+ Technicolour Cloud colour 0380	0.85	0.28	0.04	0.86	97
+ Technicolour Cloud colour 0780	0.85	0.29	0.04	0.86	94
+ Technicolour Cloud colour 0950	0.85	0.24	0.11	0.73	95
+ Technicolour Cloud colour 0980	0.85	0.28	0.05	0.85	91
+ Technicolour Cloud colour 0740	0.85	0.20	0.13	0.62	86

reference H triple insulation (EN 14501:2021+A1:2025)	U-tot value	g-tot value	LT-tot value	FC-value	Ra
Glazing only	0.72	0.53	0.74		97
+ Technicolour Cloud colour 0110	0.65	0.34	0.20	0.64	97
+ Technicolour Cloud colour 0130	0.65	0.36	0.15	0.67	98
+ Technicolour Cloud colour 0210	0.65	0.36	0.18	0.67	95
+ Technicolour Cloud colour 0220	0.65	0.36	0.16	0.67	92
+ Technicolour Cloud colour 0230	0.65	0.35	0.15	0.67	86
+ Technicolour Cloud colour 0250	0.65	0.40	0.11	0.75	95
+ Technicolour Cloud colour 0350	0.65	0.39	0.10	0.74	88
+ Technicolour Cloud colour 0380	0.65	0.44	0.04	0.84	94
+ Technicolour Cloud colour 0780	0.65	0.45	0.04	0.85	97
+ Technicolour Cloud colour 0950	0.65	0.41	0.12	0.77	96
+ Technicolour Cloud colour 0980	0.65	0.44	0.06	0.84	94
+ Technicolour Cloud colour 0740	0.65	0.36	0.14	0.69	88

glazing I triple SC with ref pane	U-tot value	g-tot value	LT-tot value	FC-value	Ra
Glazing only	0.62	0.31	0.64		93
+ Technicolour Cloud colour 0110	0.56	0.19	0.17	0.61	95
+ Technicolour Cloud colour 0130	0.56	0.20	0.13	0.66	95
+ Technicolour Cloud colour 0210	0.56	0.20	0.15	0.66	96
+ Technicolour Cloud colour 0220	0.56	0.20	0.14	0.66	94
+ Technicolour Cloud colour 0230	0.56	0.20	0.13	0.65	90
+ Technicolour Cloud colour 0250	0.56	0.23	0.10	0.76	96
+ Technicolour Cloud colour 0350	0.56	0.23	0.09	0.76	92
+ Technicolour Cloud colour 0380	0.56	0.27	0.04	0.89	98
+ Technicolour Cloud colour 0780	0.56	0.28	0.04	0.90	92
+ Technicolour Cloud colour 0950	0.56	0.24	0.10	0.78	93
+ Technicolour Cloud colour 0980	0.56	0.27	0.05	0.89	90
+ Technicolour Cloud colour 0740	0.56	0.21	0.12	0.68	84

Explanation of the Performance indicators

- The U-tot value (U-value of the total system), the thermal insulation value and reflects the thermal heat gains and losses through glazing & shade together. The figure reflects the energy flow through the fenestration.
- The g-tot value is the g-value of the total system and reflects the shading property. This is the part of the solar radiation which enters through the fenestration. g-Value is also known as Solar Heat Gain Coefficient and Solar Factor.
- The LT-value is the light transmission through the fenestration. This figure is needed when forecasting glare risks. On all sunlit elevations this shouldn't be higher than 5% to ensure visual comfort when working with computer screens where 4% is even better.
- Fc-value is the reduction factor of the g-value due to the curtain.
- The Ra is the colour rendering index. Values of 90 and higher mean the admitted daylight is close the natural daylight. A high Ra value is good for well-being of people. If the Ra value is N/A, the transmitted light is too low to detemine the value