

# 14 TECHNICAL DATA

RAUVISIO crystal is designed for vertical indoor use. Horizontal use and alternative applications must be checked by the customer and compared with the currently applicable requirements.

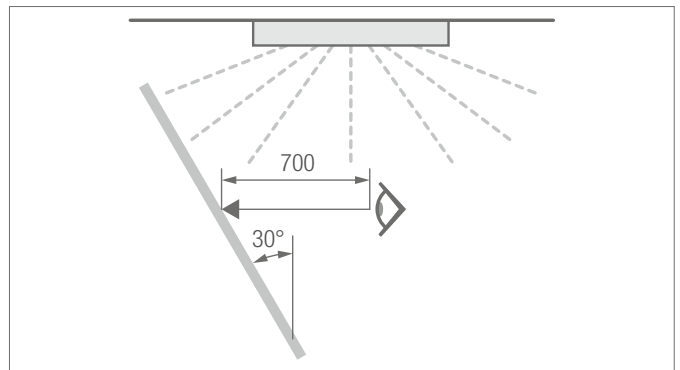
The HardCoat PMMA surface of the glass laminate is protected by a special PE foil that must not be removed until after installation.

## An overview of general information on RAUVISIO crystal (applies to all product variants):

Visual characteristics	Test standard	Requirements	Test result
Surface gloss level	AMK-MB-009, 09/2010	Measurement with 60° geometry	High-gloss: $\geq 85$ GLE Matt: $\leq 6$ GLE
Colour/decor	AMK-MB-009, 09/2010	no significant change to the master sample; Uniform coverage properties/decor pattern	Fulfilled
Light fastness	Based on DIN EN ISO 4892-2, Meth. B (behind window glass)	Assessment according to the blue scale	$\geq$ level 7
	Assessment according to DIN EN ISO 105 A02	Assessment according to the grey scale	$\geq$ level 4
Surface	AMK-MB-009, 09/2010 based on EN ISO 7823-2 <sup>1)</sup>	Uniform surface, surface defects must not affect the overall appearance from a distance of 0.7 m. A flawless surface cannot be reproduced due to the industrial production process; small blemishes and surface irregularities are permissible.	Fulfilled

The following boundary conditions apply:

- Viewing distance: 700 mm
- Illumination intensity: 1000 – 2000 lx
- Angle of inclination: 30° out of vertical
- Light source's colour temperature (daylight, diffused light or D65 lamps): 6500 K
- Viewing time: 20 s max.



<sup>1)</sup> This standard applies to the extrusion process only. Downstream steps in the process are not affected.

Surface and colours within tight application-compliant tolerance limits – defined tolerance limits are colour-tone specific and must be agreed with the customer

Surface properties - mechanical / physical	Test standard	Requirements	Test result
Chemical resistance <sup>1)</sup>	DIN 68861 / T1	High gloss: 1A Matt: 1B	See table 'Substances' Page 50
Scratch resistance	DIN 68861 / T4	High gloss: 4C Matt: 4B	Fulfilled
Micro-scratch resistance	DIN CEN TS 16611 (Proc. A/B)	Procedure A: High-gloss/matt: max. 5% Procedure B: High-gloss/matt: Class 5 mirror: Class 4	Fulfilled
Performance in dry heat	68861/T7/DIN EN 12722 DIN CEN TS 16209	7D Class C	70 °C 100 °C
Performance in moist heat	DIN 68861 / T8 / DIN EN 12721	8B	70 °C
Cross-hatch test	DIN EN ISO 2409	GT 0-1	Fulfilled
Performance in water vapour	DIN 438-2	Level 5 No changes	Fulfilled
Flexural modulus of elasticity <sup>2)</sup>	DIN EN ISO 178		3080 N/mm <sup>2</sup>
Flexural strength <sup>2)</sup>	DIN EN ISO 178		98 N/mm <sup>2</sup>
Impact strength <sup>2)</sup>	DIN EN ISO 179-1		11 kJ/m <sup>2</sup>
Linear thermal expansion coefficient per Kelvin temperature change <sup>2)</sup>	DIN 11359-2	-40 °C ... +20 °C +10 °C ... +40 °C +20 °C ... +80 °C	0.590 E <sup>-4</sup> 0.667 E <sup>-4</sup> 0.754 E <sup>-4</sup>

<sup>1)</sup> The testing of the chemical resistance in accordance with DIN 68861-1 comprises the substances set out in the table below; other substances have not been explicitly tested and must be tested independently by the customer. Test results apply exclusively to the varnished board surface and not to mechanically exposed radii or chamfers in the milled area or on the surface.

<sup>2)</sup> Only RAUVISIO crystal slim

### Component tests on the edged component

The scope of supply by REHAU comprises RAUVISIO crystal as of the individual laminate and pressed board with or without edging. The details below relate to the finished edged component pressed by REHAU with RAUKANTEX visions pro. Attention is drawn to the fact that REHAU accepts liability under warranty law for its scope of supply only in accordance with the REHAU specification, but not for any pressing or edging processes performed outside of REHAU. The results of the component tests on the finished edged component are particularly dependent on the machine and process parameters to be set by the customer for the processing of RAUVISIO crystal, on the use of suitable adhesives and edgebanding, and on the observance of REHAU's processing instructions in accordance with this Technical Information publication. REHAU Applications Engineering Department provides appropriate support for the setting of machine and process parameters. Please note that our advice relating to technical applications is correct to the best of our knowledge, but we cannot accept any liability for this free service, which is provided without obligation.

Component tests	Test standard	Test result
Temperature resistance	Assessment to AMK-MB-001 (05/03)	passed
Infiltration of water vapour	Assessment to AMK-MB-005 (07/2007), Module 1	passed
Humid climate resistance	Assessment to AMK-MB-005 (07/2007), Module 2	passed
Alternating climate resistance	Assessment to AMK-MB-005 (07/2007), Module 3	passed
Long-term heat storage 4 weeks 50 °C	Assessment after 24h acclimatisation	passed

<sup>1)</sup> The component tests refer to the AMK parts specified in the AMK table with the respectively stated status.

Material properties	Test standard	Technical data
Raw density of glass laminate/decor variant	DIN EN 323 DIN EN 323	1.18 kg/dm <sup>3</sup> /decor: 1.19 kg/dm <sup>3</sup> 1.16 kg/dm <sup>3</sup>
Raw density of balancing sheet		
Fire behaviour	DIN 4102/1	B 2
Material purity / sand content	Residue on ignition	≤ 1 %
Shore hardness D	DIN ISO 7619-1	91 ± 3
Vicat softening temperature	DIN EN ISO 306 – Meth. B50	≥ 99 °C
Glass laminate & balancing sheet		

## An overview of the specific data of RAUVISIO crystal:

Product data	Test standard	Laminate	Slim (4 mm panel)	Composite (pressed board)	Complete (edged component)
RAUVISIO crystal – surface					
Total thickness of glass laminate		2.0 mm ± 0.1 mm			
Transparent layer		1.6 mm ± 0.1 mm			
Coloured layer		0.4 mm ± 0.1 mm			
RAUVISIO crystal – balancing sheet					
Acrylic/styrene copolymer		2.0 mm ± 0.1 mm			
Thickness	as per technical drawing based on DIN 438-2	2.0 mm ± 0.1 mm	4.0 mm ± 0.2 mm		
Furniture front pressed board (Substrate MDF 15 [mm])				19.0 mm ± 0.4 mm	19.0 mm ± 0.4 mm
Backsplash pressed board (Substrate MDF 12 [mm])				16.2 mm ± 0.4 mm	16.2 mm ± 0.4 mm
Width	as per technical drawing based on DIN 438-2	1300 mm ± 1.5 mm	1300 mm ± 1.5 mm	1300 mm ± 1.5 mm <sup>1)</sup>	Dimension ± 0.5 mm
Length	as per technical drawing based on DIN 438-2	2800 mm ± 5 mm	2800 mm ± 5 mm	2800 mm ± 5 mm <sup>1)</sup>	Dimension ± 0.5 mm
Angle deviation	as per technical drawing based on DIN 438-2	± 0.3°	± 0.3°	± 0.3°	max. 0.5 mm / 1000 mm
Edge defects	as per technical drawing based on DIN 438-2	15 mm	15 mm	15 mm	
Surface weight	–	Laminate: ~ 2.38 kg/m <sup>2</sup> Balancing sheet: 2.31 kg/m <sup>2</sup> ~ 4.75 kg/m <sup>2</sup>		16 mm: ~ 13.8 kg/m <sup>2</sup> 19 mm: ~ 16.1 kg/m <sup>2</sup>	16 mm: ~ 13.8 kg/m <sup>2</sup> 19 mm: ~ 16.1 kg/m <sup>2</sup>
Surface tension laminate rear side	Check with test ink	≥ 44 mN/m (upon delivery) ≥ 38 mN/m (upon adhesion)			

<sup>1)</sup> The projection in the MDF substrate can be up to 10 mm (standard size 2805 mm x 1305 mm)

### An overview of the specific data of RAUVISIO crystal mirror:

Product data	Test standard	Laminate mirror	mirror slim	mirror composite	mirror complete
Thickness	as per technical drawing based on DIN 438-2	2.0 mm ± 0.1 mm	4.0 mm ± 0.2 mm	19.0 mm ± 0.4 mm	19.0 mm ± 0.4 mm
Width	as per technical drawing based on DIN 438-2	1220 mm ± 1.5 mm	1220 mm ± 1.5 mm	1220 mm ± 1.5 mm	<sup>1)</sup> Dimension ± 0.5 mm
Length	as per technical drawing based on DIN 438-2	2440 mm ± 5 mm	2440 mm ± 5 mm	2440 mm ± 5 mm	<sup>1)</sup> Dimension ± 0.5 mm
Angle deviation	as per technical drawing based on DIN 438-2	± 0.3°	± 0.3°	± 0.3°	max. 0.5 mm / 1000 mm
Edge defects	as per technical drawing based on DIN 438-2	15 mm	15 mm	15 mm	15 mm
Surface weight	–	~ 2.38 kg/m <sup>2</sup>	~ 4.75 kg/m <sup>2</sup>	~ 16.1 kg/m <sup>2</sup>	~ 16.1 kg/m <sup>2</sup>

<sup>1)</sup> The projection in the MDF substrate can be up to 10 mm (standard size 2445 mm x 1255 mm)

### An overview of the specific data for RAUVISIO crystal vario:

Product data	Test standard	Laminate vario	vario slim	vario composite
Thickness	as per technical drawing based on DIN 438-2	2.0 mm ± 0.1 mm	4.0 mm ± 0.2 mm	19 mm ± 0.4 mm
Width	as per technical drawing based on DIN 438-2	1010 mm ± 1.5 mm	1010 mm ± 1.5 mm	1010 mm ± 1.5 mm <sup>1)</sup>
Length	as per technical drawing based on DIN 438-2	2800 mm ± 5 mm	2800 mm ± 5 mm	2800 mm ± 5 mm <sup>1)</sup>
Angle deviation	as per technical drawing based on DIN 438-2	± 0.3°	± 0.3°	± 0.3°
Edge defects	as per technical drawing based on DIN 438-2	15 mm	15 mm	15 mm
Surface weight	–	~ 2.38 kg/m <sup>2</sup>	~ 4.75 kg/m <sup>2</sup>	~ 16.1 kg/m <sup>2</sup>

<sup>1)</sup> The projection in the MDF substrate can be up to 10 mm (standard size 2805 mm x 1015 mm)

### An overview of the specific data of RAUVISIO crystal decor:

Product data	Test standard	Laminate decor	decor slim	decor composite
Thickness	as per technical drawing based on DIN 438-2	High gloss: 2.2 mm ± 0.2 mm Matt: 1.7 mm ± 0.2 mm	High gloss: 4.2 mm ± 0.3 mm Matt: 3.7 mm ± 0.3 mm	19 mm ± 0.4 mm
Width	as per technical drawing based on DIN 438-2	1300 mm ± 1.5 mm	1300 mm ± 1.5 mm	1300 mm ± 1.5 mm <sup>1)</sup>
Length	as per technical drawing based on DIN 438-2	2800 mm ± 5 mm	2800 mm ± 5 mm	2800 mm ± 5 mm <sup>1)</sup>
Angle deviation	as per technical drawing based on DIN 438-2	± 0.3°	± 0.3°	± 0.3°
Edge defects	as per technical drawing based on DIN 438-2	15 mm	15 mm	15 mm
Surface weight	–	High gloss: 2.68 kg/m <sup>2</sup> Matt: 2.1 kg/m <sup>2</sup>	High gloss: 5.2 kg/m <sup>2</sup> Matt: 4.7 kg/m <sup>2</sup>	High gloss: 16.1 kg/m <sup>2</sup> Matt: 15.1 kg/m <sup>2</sup>

<sup>1)</sup> The projection in the MDF substrate can be up to 10 mm (standard size 2805 mm x 1305 mm)