MASTER PROFIL
precision quality performance

PETAR MIHAYLOV & Co ®

ACRYLIC MIRROR BOARDS

TECHNICAL DATA SHEET

PRODUCT DESCRIPTION

MDF board laminated with mirrorized transparent PMMA sheet on the front side, and ABS/PMMA sheet on the back side.

SURFACE PROPERTIES - mirrorized transparent PMMA sheet

Characteristics		Value	Test Method
MECHANICAL PROPERTIES			
Tensile strength		675 MPa	DIN EN ISO 527
Modulus of elasticity		3450 MPa	DIN EN ISO 527
Charpy impact strength		10 kj/m^2	DIN EN ISO 527
OPTICAL PROPERTIES			
Light transmission		92 %	DIN 5036
Yellowing		< 0.5 %	DIN 5036
THERMAL PROPERTIES			
Vicat softening point		106 °C	ISO 306, Methode B50
Building material class		B2[1]	DIN 4102
Toxicity		Requirements satisfied	AITM 3.0005
Building material class		Requirements satisfied	AITM 2.0007 / FAR 25.853
ABRASION RESISTANCE			
Abrasion resistance[2]	100 cycles, 4.9 N, CS-10F	< 3 % Haze	ISO 9352
Falling sand test		2.3 cd/(lx.m^2)	DIN 52348
Pencil hardness		5H	DIN EN 13523-4
Micro-scratch resistance		Class 1	IHD-W-466
Adhesion		GT 0	DIN EN ISO 2409
CHEMICAL PROPERTIES			
Chemical resistance	> 24 hours	no change	DIN EN 12720

[1] Corresponds to Class E according to DIN EN 13501
[2] Abrasive wheel method

BASE BOARD PROPERTIES - MDF

Characteristics		Value	Test Method
PHYSICAL PROPERTIES FOR MDF WITH NOMINAL THICKNESS OF 12 - 19 mm[1,2]			
Internal bond		0.60 N/mm²	EN 319
Bending strength		20 N/mm²	EN 310
Modulus of elasticity		2200 N/mm²	EN 310
Thickness swelling 24 hours		12%	EN 317
Screwholding[3]	face	1000 N	EN 320
Screwholding[3]	edge	800 N	EN 320
Surface soundness		1.2 N/mm²	EN 311
Surface absorption		150 mm	EN 382-1
Fire classification		D-s2, d0[4]	EN 13986
CONTENT AND TOLERANCES			
Density		760 ± 5% kg/m³	EN 323
Thickness tolerance		± 0.2 mm	EN 324-1
Length and width tolerance[5]		± 2.0 mm/m	EN 324-1
Squareness		± 2.0 mm/m	EN 324-2
Moisture content		4-11%	EN 322
Sand content		≤ 0.05%	ISO 3340
Formaldehyde[6]	Class E1	≤ 8 mg/100g	EN 120
Formaldehyde[7]	Class E5 / CARB P2	≤ 0.11 ppm	ASTM D-6007

[1] For general purposes in dry conditions
[2] Min values. Minimum values indicate minimum required performance (these are maximum values in the case of thickness swelling and minimum values in all other cases), according to EN 622-5
[3] Not applicable for thickness less than 15 mm
[4] For board with thickness ≥ 9 mm. For board with thickness ≥ 3 mm < 9mm, fire classification is Class E.
[5] Absolute maximum ± 5.0 mm
[6] The formaldehyde values indicate the formaldehyde content determined using the perforation method and relate to a panel moisture content of 6.5%. Formaldehyde class E1
[7] The formaldehyde values indicate the formaldehyde content determined using the perforation method and relate to a panel moisture content of 6.5%. Formaldehyde class E5 / CARB P2

BACKING SURFACE PROPERTIES - ABS/PMMA sheet

Characteristics		Value	Test Method
PHYSICAL PROPERTIES			
Density	23 °C	≥ 1.07 ≤ 1.11 g/cm³	ISO 1183-1
OPTICAL PROPERTIES			
Top surface gloss	(60° gloss master)	5.5 GLE	DIN 67530
MECHANICAL PROPERTIES			
Tensile E-Modulus	23 °C	2100 MPa	ISO 527
Yield stress	23 °C	35 MPa	ISO 527
Elongation at break	23 °C	20%	ISO 527
THERMAL PROPERTIES			
Max. application temperature	rating group 7 D	80 °C	DIN 68861/T7
BURNING BEHAVIOUR			
Flammability classification		E	EN 13501-1
MISCELLANEOUS PROPERTIES			
Moulding shrinkage		≥ 0.2 ≤ 0.8%	GENERAL TEST METHOD
Thermoforming temperature range		≥ 130 °C ≤ 180 °C	GENERAL TEST METHOD