



DIAMOND
COATINGS



Diamond Coatings – DIA.HC-MAKAB Hard-Coat

INTRODUCTION

The DIA.HC-MAKAB Hard-Coat is an abrasion and enhanced UV resistant polycarbonate sheet that offers glasslike hardness with the same impact strength of standard polycarbonate. DIA.HC-MAKAB also offers enhanced resistance against yellowing and hazing.

Key Points

- Extreme impact strength
- Good abrasion resistance
- Excellent weathering resistance
- High clarity

Impact Resistance

Country	Standard	Rating	thickness
Europe	EN 356	P5A P8B	>4mm 10 x 12mm

DIAMOND COATINGS LTD.

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Coating Capabilities

	Test conditions	Typical values	Unit	Standard
Physical				
Density		1200	Kg/m ³	ISO 1183-1
Water absorption saturation	Water at 23c	0.30	%	ISO 62
Water absorption equilibrium	23c, 50% relative humidity	0.12	%	ISO62
Refractive index	Procedure A	1.587	-	ISO 489
Mechanical				
Tensile modulus	1mm/min	2350	MPa	ISO 527-1,-2
Yeild stress	50mm/min	> 60	MPa	ISO 527-1,-2
Yeild strain	50mm/min	6	%	ISO 527-1,-2
Nominal starin at break	50mm/min	> 50	%	ISO 527-1,-2
Flexural modulus	2mm/min	2350	MPa	ISO 178
Flexural strength	2mm/min	90	MPa	ISO 178
Taber abrasion resistance	△ Haze after 100 cycles (500g CS 10F)	1-4	%	ASTM D1044 & ANSI Z26.1
	After 500 cycles	4-9		
Thermal				
Vicat softening temperature	50 N, 50°C /h	148	°C	ISO 306
Thermal conductivity	23°C	0.20	W/(m.k)	ISO 8302
Coefficient of linear thermal expansion	23 to 55°C	0.65	10 ⁻⁴ /K	ISO 11359-1,-2
Temperature of deflection under load	1.80 Mpa	128	°C	ISO 75-1,-2
Temperature of deflection under load	0.45 Mpa	140	°C	ISO 75-1,-2

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Light transmission

Test method according to DIN EN ISO 13468

The stated thicknesses are not all available as standard. Please check with us for more information

The stated values are typical values only

	3	4	5	6	8	10	12	15
Light Trans (%)	88	87	87	86	85	83	82	80

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