

## Technical data sheet

HI-MACS® is extremely repellent to dirt and wear and tear, so that you can enjoy many years peace of mind with the outstanding quality of your new product.

SPECIFICATION	UNIT	RESULT SOLIDS	RESULT GRANITE	TEST METHODS
Flexural-E-modulus	MPa	8900	7730	DIN EN ISO 178
Flexural strength	MPa	70.1	64.3	ASTM D638
Breaking elongation	%	1	1.1	DIN EN ISO 178
Tensile strength	MPa	69.5	56.3	DIN EN ISO 527
Density	g/cm <sup>3</sup> kg/m <sup>3</sup>	1.75 1750	1.65 1650	ISO 1183 ISO 1183
Ball indentation hardness	N/mm <sup>2</sup>	257	239	DIN EN ISO 2039-1
Mohs hardness		2 to 3	2 to 3	EN 101
Pencil hardness		>9H	>9H	ISO 15184
Water absorption weight strength/thickness		<0,1% <0,1%	<0,1% <0,1%	DIN EN 438 Part 12
Impact resistance impactor drop ball test (fall height)	N mm	≥25 ≥1500	≥25 ≥1500	E DIN EN 438, 02/02 Part 2/20 E DIN EN 438, 02/02 Part 2/21
Slip resistance		>0,32 – 0,9		GMG100 (replaces R9)
Slip resistance		angle of acceptance of more than 10° to 19° = R10		DIN 51130
Climate change resistance	°C	≥0,05	≥0,05	AMK
Dry heat (pan base)	°C	≥100 (7C)		DIN 68 861, Part 7, 04-'85
Damp heat (pan base)	°C	≥100 (7C)		DIN 68 861, Part 8, 04-'85
Temperature change resistance	°C	no change		UNI 9429
Resistance to cigarette burns		6C	6B	DIN 68 861, Part 6, 11-'82
Scratch resistance		4D	4B	DIN 68 861, Part 4, 11-'81
Electrostatics Conductivity	>1x10 <sup>12</sup> Ω	insulating non-conductive		DIN IEC 1340-4-1, 04-'92 EN 61340-5-1
Thermal conductivity	W/mK	0.636	0.55	DIN EN 12664
Thermal resistance	m <sup>2</sup> K/W	0.038	0.045	DIN EN 12664
Thermal expansion co-efficient	mm/mK m/m/°C	0.048 30.0 x 10 <sup>-6</sup>	0.055	DIN EN 14581
Water vapor transmission properties – diffusion resistance factor	μ	18607	16150	DIN EN ISO 12572
Dimensional change by change in relative humidity length thickness mass	% % %	-0.03 0.06 0.05	-0.02 0.03 0.05	DIN EN 318, edit. 5, 1998
Resistance to boiling water increase in weight increase in thickness	% %	<0,1 <0,1	>0,1 <0,1	E DIN EN 438, 02/02 Part 2/12
Light fastness (Xenon)	scale 0 – 10	better than 6	better than 6	DIN 53 387, 04-'89
Food tolerance		suitable for all colours		LMBG § 31
Hygiene		suitable	suitable	LGA Hygiene Certificate
Fire protection classification Flame-retardant properties MPA/NRW HI-MACS® MPA/NRW (BAM) 12 mm (BAM) 9 mm + back-up (Bodycote/Warrington) 12 mm		B1  non-dripping material B1 for all colours* B1 for all colours* B-s1 , d0 for all HI-MACS® colours* complies with BS 476 class 0		DIN 4102-1  DIN 5510  DIN 4102-1 BS EN ISO 11925-2 : 2002 BS EN 13823: 2002

\* not currently applicable to Marmo, Galaxy, Volcanics, Lucent and Eden