



RenShape[®]

Board Materials

RenShape® Board Materials | Physical properties

		Application	Colour	Density (g/cm ³)	Heat distortion ISO 75 (°C)	Coefficient of thermal expansion ISO 11359 (10 ⁻⁶ K ⁻¹)
BM 5108		Styling	White	0.08	—	—
BM 5025	Apricot		0.24	60	60 - 70	
BM 5030	Sienna		0.3	60 - 70	60 - 65	
BM 5185		Modelling	Apricot	0.47	60 - 70	60 - 65
BM 5440		Data Control Models and master models	Brown	0.5	75 - 80	50 - 55
BM 5460	Brown		0.7	75 - 80	50 - 55	
BM 5470	Brown		0.75	60 - 70	55 - 60	
BM 5055		For lay-up-tools at elevated temperatures (LT - prepreg)	Green	0.72 - 0.75	135 - 140	35 - 45
BM 5172		Foundry	Green	1.2	80 - 90	80 - 85
BM 5272	Olive		1.4	80 - 90	65 - 70	
BM 5273	Red		1.5	85 - 90	80 - 90	
BM 5112		Hammer forms and flanging tools	Grey	1.5	85 - 90	95 - 105
BM 5166		Jigs and metalforming	Ivory	1.7	75 - 80	45 - 50
RS 470	Grey/brown		1.6 - 1.7	85 - 90	40 - 45	
BM 5266		Metalforming and thermoforming	Dark grey	1.7	120 - 125	45 - 50

RenShape® Board Materials | Mechanical properties

Flexural strength ISO 178 (MPa)	Compressive strength ISO 604 (MPa)	Compressive modulus ISO 604 (MPa)	Shore-D-Hardness ISO 868	Barcol-Hardness		
—	—	—	—	—		BM 5108
—	3,7	140	—	—		BM 5025
6 - 8	6 - 8	250 - 300	—	—		BM 5030
10 - 15	10 - 15	500 - 600	—	—		BM 5185
15 - 20	15 - 20	600 - 700	55 - 60	—		BM 5440
25 - 30	20 - 25	910 - 960	60 - 65	—		BM 5460
35 - 40	33 - 38	600 - 700	60 - 65	—		BM 5470
30 - 40	50 - 55	2300 - 2400	75	—		BM 5055
70 - 80	60 - 70	1900 - 2000	80	—		BM 5172
80 - 90	70 - 80	3300 - 3500	80 - 85	10 - 15		BM 5272
70 - 80	50 - 60	2400 - 2800	80 - 85	—		BM 5273
70 - 80	50 - 60	2400 - 2800	80 - 85	—		BM 5112
55 - 65	90 - 100	7000 - 7500	85 - 90	30 - 35		BM 5166
55 - 65	95 - 100	7000 - 7500	85 - 90	35 - 40		RS 470
80 - 85	125 - 130	7000 - 7500	85 - 90	40 - 45		BM 5266

RenShape® Board Materials | Dimensions/Packaging

	Dimensions (mm)	Volume (l)	Weight (kg)	Number of boards (per pack)	Number of boards (per pallet)
BM 5108	2500 x 1200 x 100	300	24 - 27	1	12
	2500 x 1200 x 200	600	48 - 54	1	6
	2500 x 1200 x 400	1200	96 - 108	1	3
BM 5025	2000 x 1000 x 100	200	45 - 51	1	10
	2000 x 1000 x 200	400	91 - 101	1	5
BM 5030	1500 x 500 x 100	75	22.5	1	16
	1500 x 500 x 200	150	45	1	8
	2000 x 500 x 100	100	30	1	16
BM 5185	1500 x 500 x 50	37.5	17 - 18	2	40
	1500 x 500 x 100	75	35 - 36	1	16
BM 5440	1500 x 500 x 25	18.75	9 - 10	4	64
	1500 x 500 x 50	37.5	18 - 19	2	32
	1500 x 500 x 75	56.25	28 - 29	1	16
	1500 x 500 x 100	75	37 - 38	1	16
BM 5460	1500 x 500 x 25	18.75	13 - 14	4	64
	1500 x 500 x 50	37.5	26 - 27	2	32
	1500 x 500 x 75	56.25	39 - 40	1	16
	1500 x 500 x 100	75	52 - 53	1	16
	1500 x 500 x 150	112.5	78 - 79	1	8
	1500 x 500 x 200	150	104 - 105	1	8
BM 5470	1500 x 500 x 50	37.5	28 - 29	2	32
	1500 x 500 x 100	75	56 - 57	1	16
BM 5055	1500 x 500 x 50	37.5	28	2	5
	1500 x 500 x 100	75	56	1	5
BM 5172	1000 x 500 x 50	25	30 - 31	2	24
	1000 x 500 x 75	37.5	45 - 46.5	1	12
	1000 x 500 x 100	50	60 - 61	1	12
BM 5272	1000 x 500 x 50	25	35	2	24
	1000 x 500 x 75	37.5	52.5	1	12
	1000 x 500 x 100	50	70	1	12
BM 5273	1000 x 500 x 50	25	37.5	2	24
	1000 x 500 x 100	50	75	1	12
BM 5112	1000 x 400 x 50	20	30	2	24
	1000 x 400 x 100	40	60	1	12
BM 5166	750 x 500 x 50	18.75	31 - 32	2	24
	750 x 500 x 100	37.5	63 - 64	1	12
RS 470	750 x 500 x 50	18.75	30 - 32	2	24
	750 x 500 x 100	37.5	61 - 64	1	12
BM 5266	750 x 500 x 50	18.75	31 - 32	2	24
	750 x 500 x 100	37.5	63 - 64	1	12

RenShape® Board Materials | Bonding

System Resin / Hardener	Mixing ratio (pbw)	Mixture appearance and characteristics	Pot life (mins)	Minimum clamping time (hours)		
RenPaste™ SV 36/ HY 5162	100 : 35	white	45	12		BM 5108
—	—	—	—	—		BM 5025
FC 52 A/B	100 : 100	light beige	5 - 7	3 - 5		BM 5030
FC 52 A/B	100 : 100	light beige	5 - 7	3 - 5		BM 5185
RenPaste SV 427-2/ HY 5162	100 : 35	brown, thin	20	12		BM 5440
						BM 5460
						BM 5470
RenGel™ SW 18/ HY 2404	100 : 20	green	10 -15	4 - 5		BM 5055
RenGel SW 18/ HY 5159	100 : 16	green	25	6 - 8		
Araldite® AW 106/ HV 953U	100 : 60	transparent	60 - 90	18		BM 5172
	100 : 100					BM 5272
						BM 5273
Araldite AW 106/ HV 953U	100 : 100	transparent	60 - 90	18		BM 5112
Araldite AW 106/ HV 953U	100 : 60	transparent	60 - 90	12		BM 5166
						RS 470
						BM 5266

RenShape® Board Materials | Repair

	Filler system options	Mixing ratio (pbw)	Mixture appearance and characteristics	Pot life (mins)	Minimum clamping time	Notes
BM 5108	Repair with adhesive bonded inserts					
BM 5025	—	—	—	—	—	—
BM 5030	XW 5184 XW 5130	100 : 1 - 3	brown, very fine	4 - 6	25 - 30 mins	Used as fine filler to achieve an extra smooth surface finish
BM 5185	XW 5184 XW 5130	100 : 1 - 3	brown, very fine	4 - 6	25 - 30 mins	Used as a repair filler which gives an extra smooth finish
BM 5440	XW 5184 XW 5130	100 : 1 - 3	brown, very fine	4 - 6	25 - 30 mins	Used as fine filler to achieve an extra smooth surface finish
BM 5460						
BM 5470						
BM 5055	XD 4586 A/B	100 : 19	green	20 - 30	60 mins	—
BM 5172	Repair with adhesives bonded inserts					
BM 5272						
BM 5273	AW 2101 HW 2951	100 : 100	grey, thixotropic	3 - 5	1 hour	Alternatively, repair with adhesive bonded inserts
BM 5112	AW 2101 HW 2951	100 : 100	grey, thixotropic	3 - 5	1 hour	Alternatively, repair with bonded inserts
BM 5166	Araldite® AW 5308 HV 5309-1	100 : 100	beige thixotropic	30 - 40	15 hours	Alternatively, repair with bonded inserts
	RenPIM™ 5219 A/B, 5217 B, DT 082			80 : 50 50 : 500	2 - 3	
RS 470	Special repair paste on request with adhesives bonded inserts					
BM 5266	RenPIM 5219 A/B, 5215 B/DT 078	80 : 50 50 : 400	dark grey thixotropic	2 - 3	2 - 3 hours	Alternatively, repair with bonded inserts

User Guide

		Key properties	Styling / Design	Models / Data Control Models	Prototypes / small series	Foundry Industry	Ceramics Industry	Various	
Colour	Density		Program proving, Design studies, supporting structures for paste etc	Exterior and Interior cubings, presentation models, wind turbine models	Job 1, Try-out, hammer tools, laminating tools, PIM casting moulds, metalforming, welding jigs, F-Cubing, thermoplast forming	Pattern plates, core boxes, models, negatives and support tools	Models, production and working moulds, negatives and support tools	Pre-preg lay up tools	
White	0.08	light, fine porous	○	●					BM 5108
Apricot	0.24	smooth surface	○	●	●				BM 5025
Sienna	0.3	surface structure and mechanical properties increase with density	○	●					BM 5030
Apricot	0.47		○	●				BM 5185	
Brown	0.5		●	○					BM 5440
Brown	0.7		●	○		●	●	●	BM 5460
Brown	0.75	excellent surface		○		●	●	●	BM 5470
Green	0.72 - 0.75	heat resistant						○	BM 5055
Green	1.2	abrasion resistant			○	○	○		BM 5172
Olive	1.4	abrasion resistant and low CTE			○	○	○		BM 5272
Red	1.5	abrasion resistant			○	○	○		BM 5273
Grey	1.5	high impact resistant			○				BM 5112
Ivory	1.7	excellent compressive strength		○	○				BM 5166
Grey/ brown	1.6 - 1.7	good compressive strength, low CTE		○	○	●			RS 470
Dark grey	1.7	excellent compressive strength, high heat deflection temperature			○	●		●	BM 5266

○ best choice ● possible choice

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