

# Product Selector Guide

## RenShape® Board Materials

Product	Applications	Colour	Density (g/cm³)	Coefficient of Thermal Expansion ISO 11359 (10 <sup>-6</sup> K <sup>-1</sup> )	Heat Distortion (°C) ISO 75	Flexural Strength ISO 178 (MPa)	Compressive Strength ISO 604 (MPa)	Compressive Modulus ISO 604 (MPa)	Shore-D-Hardness ISO 868
<b>Styling and Modeling Boards</b>									
BM 5108	Styling	White	0.08	-	-	-	-	-	-
BM 5025		Apricot	0.24	60 - 70	60	5.5	3.7	140	-
BM 5185	Modeling	Apricot	0.50	50 - 55	60 - 70	10 - 15	10 - 15	500 - 600	-
BM 5440	Master and Data Control Models	Brown	0.55	60 - 65	55 - 65	10 - 15	10 - 15	650 - 750	55 - 60
BM 70		Brown	0.70	65 - 70	60 - 70	20 - 25	15 - 20	950 - 1150	60 - 65
BM 5460		Brown	0.70 - 0.73	55 - 60	60 - 70	25 - 30	20 - 25	1250 - 1350	60 - 65
<b>Tooling Boards</b>									
BM 5055	High Tg Epoxy	Green	0.72 - 0.75	35 - 40	135 - 140	30 - 40	50 - 55	2300 - 2400	75
BM 5066	Jigs and Fixtures	Beige	1.10	55 - 60	75 - 80	55 - 60	55 - 60	2600 - 2800	75 - 80
BM 5172	Foundry	Green	1.20	60 - 65	75 - 85	80 - 90	75 - 80	3200 - 3400	80
BM 5112	Hammer Forming	Grey	1.50	80 - 90	85 - 90	70 - 80	50 - 60	2400 - 2800	80 - 85
BM 5166	Jigs and Metalforming	Ivory	1.70	45 - 50	75 - 80	55 - 65	90 - 100	7000 - 7500	85 - 90
BM 5266	Metal Sheet Forming	Dark grey	1.70	45 - 50	120 - 125	80 - 85	125 - 130	7000 - 7500	85 - 90

Product	Adhesives	Reparation system	Product	Adhesives	Reparation system
<b>RenShape® Board Bonding Adhesives and Repair</b>					
BM 5108	RenPaste® SV 36 / Ren® HY 5162	Repair with adhesive bonded insert	BM 5055	RenGel® SW18 / Ren® HY5159	Repair with adhesive bonded insert
BM 5025	RenCast® FC 52	XW 5184, XW 5130	BM 5066	Araldite® AW 106 / HV 953U	Repair with adhesive bonded insert
BM 5185	RenCast® FC 52	XW 5184, XW 5130	BM 5172	Araldite® AW 106 / HV 953U	Repair with adhesive bonded insert
BM 5440	RenPaste® SV 427-2 / HY 5162	XW 5184, XW 5130	BM 5112	Araldite® AW 106 / HV 953U	AW 2101, HW 2951
BM 70	RenPaste® SV 427-2 / HY 5162	XW 5184, XW 5130	BM 5166	Araldite® AW 106 / HV 953U	Araldite® AW 5308, HV 5309-1 RenPIM® 5219 A/B, 5217 B, DT 082
BM 5460	RenPaste® SV 427-2 / HY 5162	XW 5184, XW 5130	BM 5266	Araldite® AW 106 / HV 953U	Ureol® 5219 AB, 5217B, DT 078

## Seamless modeling pastes (machine applied)

Product	Colour	Mix ratio (pbw)	Minimum cure schedule	Density (g/cm³)	Shore-D-Hardness ISO 868	Coef. of thermal expansion ISO 11359 (10 <sup>-6</sup> K <sup>-1</sup> )*	Deflection Temp. ISO 75 (°C)*
XD 4601-1 / XD 4601	Light brown	100 : 100	Machinable in 1-2 days	0.52 - 0.57	40	100 - 105	45 - 55
RenPaste® SV 4503-1 / Ren® HV 4503-1	Brown	100 : 100	Machinable in 1-2 days	0.75 - 0.80	55 - 60	100 - 105	45 - 55
XD 4563-1 / Ren® HV 4503-1	Grey	100 : 100	Machinable in 1-2 days	0.75 - 0.80	55 - 60	100 - 105	45 - 55

\* Properties after 3 days at room temperature

## Net size casting

Product	Mix ratio (pbw)	Pot life (3kg) at 25°C (min)	Recommended Cure Schedule (°C)	Density (g/cm³)	Shore-D-Hardness ISO 868	Compress. strength ISO 604 (MPa)	Compress. Modulus ISO 604 (MPa)	Deflection Temp. ISO 75 (°C)
RenCast® 5146A / RenCast® 5146B	80 : 100	20 - 30	7 days @ 20 - 25 or 14 hr @ 40	1.20	80	85 - 90	3000	75 - 80
RenCast® 5146A / RenCast® 5146B / DT082	80 : 100 : 330	30 - 40	7 days @ 20 - 25 or 14 hr @ 40	1.60	85	90 - 95	9500	75 - 80

Product	Colour	Density (g/cm³)	Shore-D-Hardness ISO 868	Compress. strength ISO 604 (MPa)	Compress. Modulus ISO 604 (MPa)	Deflection Temp. ISO 75 (°C)	Notes
RenTool® 5148	Blue	1.80	85 - 90	90 - 95	9500	80	Galvanising process
RenTool® 5149	Ivory	1.90	90 - 95	100 - 105	10500	80	General metal sheet forming
RenTool® 5150	Brown	0.75 - 0.80	65 - 70	35 - 45	700 - 800	65 - 70	Style and models
RenTool® 5152	Grey	1.90	90 - 95	120 - 130	13000	115 - 120	High performance metal sheet forming

## Fastcast polyurethanes

Product	Colour	Mix ratio (pbw)	Pot life (1kg) (min)	Deflection Temp. ISO 75 (°C)	Notes
RenCast® FC 50	Off white	20 : 100	4 - 5	95	Filled, machinable, polishable
RenCast® FC 51	Grey	100 : 100	4 - 5	80	1:1 system for thick casting
RenCast® FC 52	Beige unfilled	100 : 100	6 - 8	80	Low viscosity, pigmentable
RenCast® FC 53	Beige unfilled	100 : 100	3 - 4	85 - 90	Low viscosity, fast demould
RenCast® FC 54	Blue	100 : 100	8	85 - 90	1:1 slower system for thick casting
RenCast® FC 55	Beige unfilled	100 : 100	4 - 6	85 - 90	Low viscosity, pigmentable

Recommended cure schedule : 7 days at room temperature

## Foundry applications

Product	Mix ratio (pbw)	Pot life (min)	Shore-D-Hardness ISO 868	Demoulding time at 23°C (hr)	Notes
<b>Casting Systems (1kg)</b>					
RenCast® 6414 A / RenCast® 5117-1	100 : 40	15 - 20	65 - 70	16 - 24	Good abrasion resistance
RenCast® 6414 A / XD 4609	100 : 70	15 - 20	50 - 55	36	Good abrasion resistance
<b>Gelcoats (50g)</b>					
RenCast® 6414 A / XD 4625-1	100 : 53	15 - 20	70 - 75	12	Good brushability and abrasion resistance
RenCast® 6414 A / XD 4627	100 : 75	15 - 20	55 - 60	12	Good brushability and abrasion resistance

