

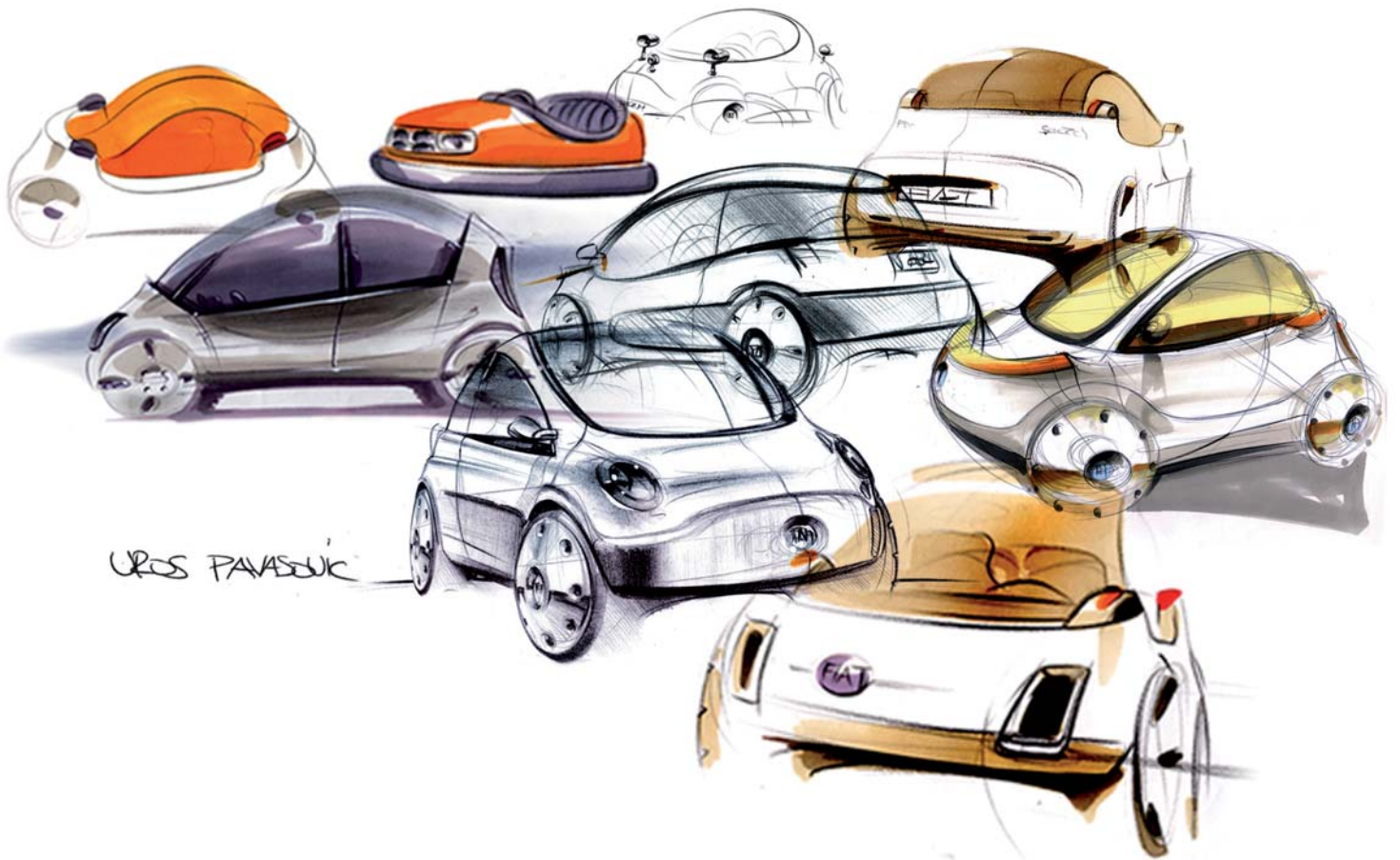
RAKU-TOOL® Boards

There is a solution for every challenge: RAKU-TOOL.

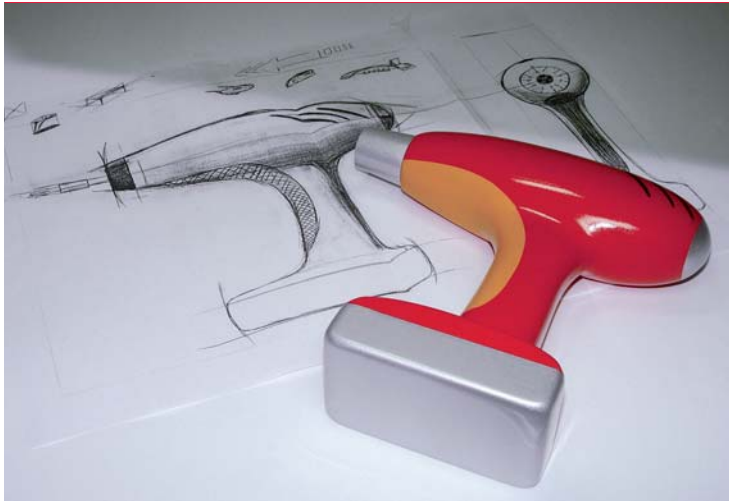


RAMPF®
discover the future

We find solutions for your applications –
Performance proven solutions with RAKU-TOOL®.



Modeling and Working Boards. RAKU-TOOL styling (SB), modeling (MB) and working boards (WB) stand for high mechanical properties and continuous quality. The materials are shaped manually or machined easily using the correct tools.

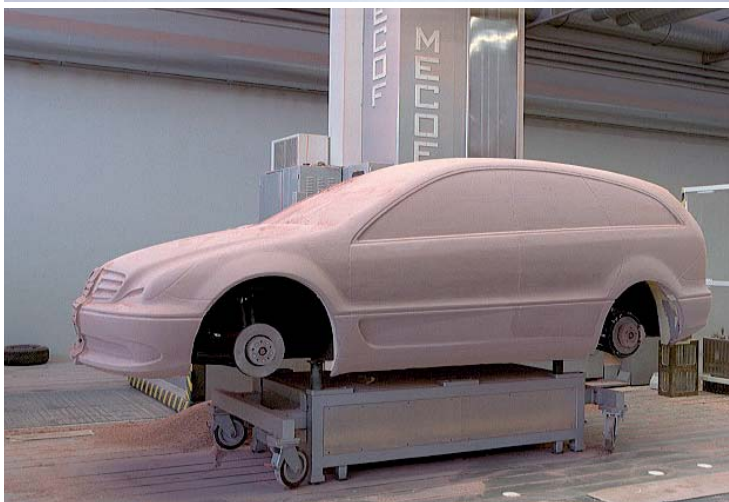


Styling (SB)

- » Styling & Design Models
- » Program proving

Key Properties:

- » Fine surface structure
- » Easily shaped and machined



Modeling (MB)

- » Master Models
- » Cubing Models
- » Patterns

Key Properties:

- » Very fine surface structure
- » Good dimensional stability



Tools (WB)

- » Metalforming Tools
- » Foundry Patterns
- » Core Boxes
- » Jigs and Fixtures
- » Prepreg Lay Up Tools

Key Properties:

- » Excellent mechanical properties

RAKU-TOOL®

Styling & Modeling Boards



» RAKU-TOOL
SB-0160

» RAKU-TOOL
SB-0240

» RAKU-TOOL
SB-0320

» RAKU-TOOL
SB-0470

Design & Styling with RAKU-TOOL

	» RAKU-TOOL SB-0160	» RAKU-TOOL SB-0240	» RAKU-TOOL SB-0320	» RAKU-TOOL SB-0470
Color	Light gray	Light green	Apricot	Apricot
Density (ISO 1183) g/cm ³ lb/ft ³	0.16 10.0	0.24 15.0	0.32 20.0	0.47 29.0
Applications	Styling & design models Data control models Supporting structures for Close Contour Paste	Styling & design models Data control models	Styling & design models Data control models	Styling & master models
Key properties	» Light weight and smooth surface » Easily shaped, low dust » Resistant to organic solvents	» Good surface structure » Easily shaped and machined » Resistant to organic solvents	» Very good surface structure » Easily shaped and machined	» Very good surface structure » Easily machined
Hardness (ISO 868) Shore D	–	–	–	–
Coefficient of thermal expansion (ISO 11359) 10 ⁻⁶ K ⁻¹ in/in/°F x 10 ⁻⁶	25 – 35 14 – 19	60 – 70 33 – 39	60 – 65 33 – 36	60 – 65 33 – 36
Deflection temperature (ISO 75) °C °F	–	55 – 65 130 – 150	60 – 70 140 – 158	60 – 70 140 – 158
Compressive strength (ISO 604) MPa psi	2 – 3 280 – 430	2 – 4 290 – 570	5 – 7 720 – 1,000	10 – 15 1,400 – 2,100
Flexural strength (ISO 178) MPa psi	2 – 3 280 – 430	5 – 6 720 – 850	6 – 8 850 – 1,100	10 – 15 1,400 – 2,100
Dimensions mm in	4 x 24 x 96 6 x 24 x 96 8 x 24 x 96 2 x 48 x 96 6 x 48 x 96	4 x 24 x 96 8 x 24 x 96 2 x 48 x 96 4 x 48 x 96 6 x 48 x 96	4 x 24 x 96 6 x 24 x 96 8 x 24 x 96 2 x 48 x 96 4 x 48 x 96 6 x 48 x 96	50 x 500 x 1500 2.0 x 19.7 x 59.1 100 x 500 x 1500 3.9 x 19.7 x 59.1 150 x 500 x 1500 5.9 x 19.7 x 59.1 200 x 500 x 1500 7.9 x 19.7 x 59.1

» EP-2305/EH-2904

» EP-2305/EH-2904

» EP-2305/EH-2904

Bonding with RAKU-TOOL

	» EP-2305/EH-2904	» EP-2305/EH-2904	» EP-2305/EH-2904
Mixing ratio (pbw)	100 : 30	100 : 30	100 : 30
Color	Apricot	Apricot	Apricot
Pot life (min.)	25	25	25
Minimum curing time (h)	16	16	16

» UP-4300/UH-4900

» UP-4300/UH-4900

» UP-4300/UH-4900

Repair with RAKU-TOOL

	» UP-4300/UH-4900	» UP-4300/UH-4900	» UP-4300/UH-4900
Mixing ratio (pbw)	100 : 1 – 3	100 : 1 – 3	100 : 1 – 3
Color	Light brown	Light brown	Light brown
Pot life (min.)	4 – 6	4 – 6	4 – 6
Minimum curing time (h)	25 – 30	25 – 30	25 – 30



Modeling boards are used for master models, cubing models, presentation models, design and shape studies.

» RAKU-TOOL MB-0600	» RAKU-TOOL MB-0670	» RAKU-TOOL MB-0720
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Modeling with RAKU-TOOL

Color	Brown	Brown	Brown
Density (ISO 1183) g/cm ³ lb/ft³	0.60 37.5	0.67 41.8	0.72 45.0
Applications	Master & cubing models Patterns	Master & cubing models Patterns	Master & cubing models Patterns
Key properties	<ul style="list-style-type: none"> » Fine surface structure » Easily shaped and machined » Low coefficient of thermal expansion » Good dimensional stability 	<ul style="list-style-type: none"> » Fine surface structure » Easily shaped and machined » Low coefficient of thermal expansion » Good dimensional stability 	<ul style="list-style-type: none"> » Excellent surface structure » Low coefficient of thermal exp. » Good dimensional stability » Good compressive and flexural strength
Hardness (ISO 868) Shore D	50 – 55	60 – 65	60 – 65
Coefficient of thermal expansion (ISO 11359) 10 ⁻⁶ K ⁻¹ in/in/°Fx10⁻⁶	50 – 55 28 – 31	50 – 55 28 – 31	50 – 55 28 – 31
Deflection temperature (ISO 75) °C °F	70 – 75 158 – 167	75 – 80 167 – 176	75 – 80 167 – 176
Compressive strength (ISO 604) MPa psi	15 – 20 2,100 – 2,800	20 2,900	20 – 25 2,800 – 3,500
Flexural strength (ISO 178) MPa psi	15 – 20 2,100 – 2,800	20 – 25 2,900 – 3,600	25 – 30 3,500 – 4,200
Dimensions mm in	25x500x1500 1.0x19.7x59.1 50x500x1500 2.0x19.7x59.1 75x500x1500 3.0x19.7x59.1 100x500x1500 3.9x19.7x59.1 150x500x1500 5.9x19.7x59.1	25x500x1500 1.0x19.7x59.1 50x500x1500 2.0x19.7x59.1 75x500x1500 3.0x19.7x59.1 100x500x1500 3.9x19.7x59.1	25x500x1500 1.0x19.7x59.1 50x500x1500 2.0x19.7x59.1 75x500x1500 3.0x19.7x59.1 100x500x1500 3.9x19.7x59.1 150x500x1500 5.9x19.7x59.1 200x500x1500 7.9x19.7x59.1

» EP-2306/EH-2904	» EP-2306/EH-2904	» EP-2306/EH-2904
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Bonding with RAKU-TOOL

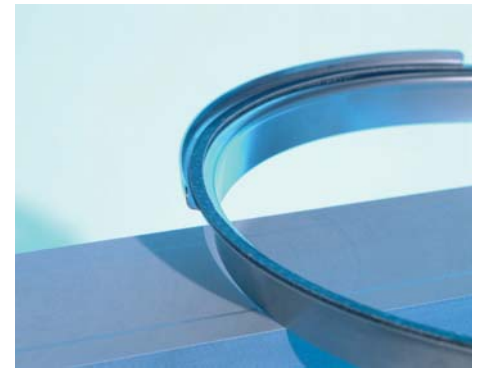
Mixing ratio (pbw)	100 : 30	100 : 30	100 : 30
Color	Brown	Brown	Brown
Pot life (min.)	35	35	35
Minimum curing time (h)	16	16	16

» UP-4310/UH-4900	» UP-4310/UH-4900	» UP-4310/UH-4900
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Repair with RAKU-TOOL

Mixing ratio (pbw)	100 : 1 – 3	100 : 1 – 3	100 : 1 – 3
Color	Brown	Brown	Brown
Pot life (min.)	4 – 6	4 – 6	4 – 6
Minimum curing time (h)	25 – 30	25 – 30	25 – 30

RAKU-TOOL® Working Boards



» RAKU-TOOL
WB-0700

» RAKU-TOOL
WB-0740

» RAKU-TOOL
WB-0801

Tool making with RAKU-TOOL

Color	Light green	Apricot	Gray
Density (ISO 1183) g/cm ³ lb/ft ³	0.70 43.8	0.74 46.2	0.80 50
Applications	Lay up tools for pre-preg High temperature applications Vacuum forming molds	Low temperature pre-preg applications	Master models Cubing models Tooling jigs and fixtures Vacuum forming tools
Key properties	» Very fine surface structure » Very easily machined » Good dimensional stability » Temperature resistance up to 135° C	» Very fine surface structure » Very easily machined » Good dimensional stability » Temperature resistance up to 85° C	» Fine surface structure » High HDT and very low CTE » Good dimensional stability » Good compressive and flexural strength
Hardness (ISO 868) Shore D	70 – 80	60 – 65	65 - 70
Coefficient of thermal expansion (ISO 11359) 10 ⁻⁶ K ⁻¹ in/in/°F x 10 ⁻⁶	35 – 45 19 – 25	45 – 50 25 – 28	45 – 50 25-28
Deflection temperature (ISO 75) °C °F	135 – 140 275 – 284	80 – 85 175 – 185	85 – 90 185 – 194
Compressive strength (ISO 604) MPa psi	50 – 55 7,100 – 7,800	25 – 30 3,625 – 4,350	40 – 45 5,800 – 6,500
Flexural strength (ISO 178) MPa psi	30 – 40 4,200 – 5,700	25 – 30 3,625 – 4,350	35 – 40 5,100 – 5,800
Dimensions mm in	50x500x1500 2.0x 19.7x 59.1 75x500x1500 3.0x 19.7x 59.1 100x500x1500 3.9x 19.7x 59.1 150x500x1500 5.9x 19.7x 59.1 200x500x1500 7.9x 19.7x 59.1	50x500x1500 2.0x 19.7x 59.1 75x500x1500 3.0x 19.7x 59.1 100x500x1500 3.9x 19.7x 59.1 100x500x2000 3.9x 19.7x 78.74	25x500x1500 1.0x 19.7x 59.1 50x500x1500 2.0x 19.7x 59.1 75x500x1500 3.0x 19.7x 59.1 100x500x1500 3.9x 19.7x 59.1 150x500x1500 5.9x 19.7x 59.1

» EP-2304/EH-2934

» EL-2210/EH-2910*

» EL-2210/EH-2910*

Bonding with RAKU-TOOL

Mixing ratio (pbw)	100 : 20	100 : 60	100 : 60
Color	Green	Transparent	Transparent
Pot life (min.)	90	60	60
Minimum curing time (h)	16	16	16

» UP-4320/UH-4920

Repair with RAKU-TOOL

Mixing ratio (pbw)	100 : 3 – 5		
Color	Green	Repair with adhesive	Repair with adhesive
Pot life (min.)	4 – 6	bonded inserts	bonded inserts
Minimum curing time (h)	25 – 30		

*Different mix ratios for special mixtures see technical data sheet.



Working boards are used for metal forming, hammer forms, foundry patterns, molds, jigs and lay up tools.

» RAKU-TOOL WB-1405	» RAKU-TOOL WB-1450	» RAKU-TOOL WB-1700
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Tool making with RAKU-TOOL

	Red	Brown	NEW! Eco-board	Dark gray
Density (ISO 1183) g/cm ³ lb/ft³	1.40 87.5	1.45 90.5		1.70 106
Applications	Pattern plates and core boxes Machined negatives and positives Models, molds and tools Hammer forms	Foundry patterns and core boxes		Metal forming tools Vacuum forming molds, jigs Foam molds, rapid prototyping molds
Key properties	» Dense surface structure » Very easily machined » Good dimensional stability » Good abrasion resistance and impact strength	» Very dense surface » Easily machined » High mechanical properties		» Very dense surface structure, can be polished » Easily machined » Good temperature resistance » Excellent compressive strength » High abrasion resistance
Hardness (ISO 868) Shore D	85 – 90	80 – 85		85 – 90
Coefficient of thermal expansion (ISO 11359) 10 ⁻⁶ K ⁻¹ in/in/°F x 10⁻⁶	50 – 55 28 – 31	65 – 75 36 – 42		45 – 50 25 – 28
Deflection temperature (ISO 75) °C °F	75 – 80 167 – 176	75 – 80 167 – 176		120 – 125 248 – 257
Compressive strength (ISO 604) MPa psi	85 – 95 12,300 – 13,800	70 – 75 10,200 – 10,900		125 – 130 17,800 – 18,600
Flexural strength (ISO 178) MPa psi	80 – 90 11,600 – 13,100	70 – 75 10,200 – 10,900		80 – 85 11,000 – 12,000
Dimensions mm in	30x500x1000 1.2x19.7x39.4 50x500x1000 2.0x19.7x39.4 75x500x1000 3.0x19.7x39.4 100x500x1000 3.9x19.7x39.4 150x500x1000 5.9x19.7x39.4	50 x 500 x 1000 2.0 x 19.7 x 39.4 100 x 500 x 1000 3.9 x 19.7 x 39.4		50x 500 x 750 2.0 x 19.7 x 29.5 100x 500 x 750 3.9 x 19.7 x 29.5

» EL-2210/EH-2910*	» EL-2210/EH-2910*	» EL-2210/EH-2910*
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Bonding with RAKU-TOOL

	100 : 60	100 : 60	100 : 60
Mixing ratio (pbw)	100 : 60	100 : 60	100 : 60
Color	Transparent	Transparent	Transparent
Pot life (min.)	60	60	60
Minimum curing time (h)	16	16	16

» PC-3451/PH-3952

Repair with RAKU-TOOL

	Repair with adhesive bonded inserts	100 : 60	Repair with adhesive bonded inserts
Mixing ratio (pbw)		100 : 60	
Color		Light beige	
Pot life (min.)		20 – 25	
Minimum curing time (h)		16	

RAMPF Tooling in the NAFTA region.



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