

Flexible. Sealed. Resistant.

Sealing, casting, and bonding systems for household appliances



RAMPF – your innovative partner for household appliances

Sealing

Liquid to highly thixotropic sealing systems and compact polyurethane-/silicone-based gaskets

Casting

Casting solutions for electrical and electronic components

Bonding

Reactive bonding systems and hot-melt adhesives

Demands such as large quantities, fully automated production processes, ultrafast cycle times, low costs, and top quality make the household appliances (white goods) industry a fiercely competitive global business.

Our high-performance, end-to-end sealing, bonding, and casting solutions ensure your products always have the edge.

We tailor our high-quality

- > one/two-component (1C/2C) systems based on polyurethane, epoxy, and silicone
- > thermoplastic and reactive hot-melt systems

to your specific requirements and processes.

We support you – from the idea and product development all the way through to use in your production operations.

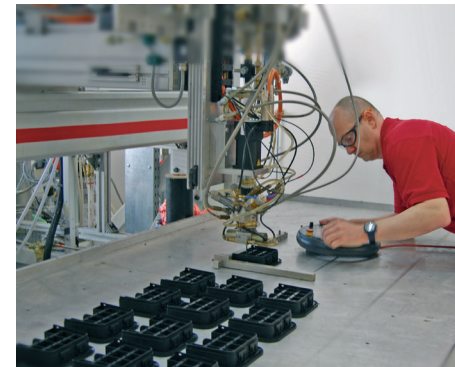
Rely on RAMPF for innovative solutions made in Germany.

Your advantage – our expertise



Laboratory and application technology

- > Dedicated research department
- > Customer-specific material development
- > Advice on designing components and producing samples
- > Over 1,000 m² of ultramodern laboratories



Processing expertise

- > Technology center serves as an interface between development and production
- > Advice on applications and process development / optimization
- > Mixing and dispensing systems for near-series process development



After-sales service and training

- > Technical field representatives, experienced application engineers, and product developers
- > Customer-specific training at RAMPF Academy



Global presence

- > State-of-the art production operations on three continents
- > Global network of sales partners
- > On-site advice

Innovative sealing, casting, and bonding systems

Reliable, efficient, and from a single source

Refrigeration & freezing

Product requirements

- > Low-temperature resistance
- > Universal adhesive spectrum
- > Automation enabled
- > Short process times
- > EU 10/2010 & FDA for internal use

Applications

- > Bonding decorative panels
- > Sealing refrigerator housings
- > Sealing electrical enclosures
- > Sealing door inlays
- > Bonding vacuum insulation panels



Washing & drying

Product requirements

- > Universal adhesive spectrum
- > Resistant to moisture and chemicals
- > High mechanical strength
- > Automation enabled
- > Short process times

Applications

- > Bonding panels/trims
- > Bonding inspection windows and supports
- > Sealing filter mats
- > Sealing air ventilation systems
- > Sealing drum adapters
- > Sealing condensation pumps
- > Sealing heat exchangers
- > Casting aquastop sensors



Cooking & baking



Product requirements

- > High temperature resistance
- > Hydrolytic resistance
- > Universal adhesive spectrum
- > Automation enabled
- > EU 10/2010 & FDA for internal use

Applications

- > Bonding switch panels
- > Sealing hobs
- > Bonding oven doors
- > Bonding control panels

Rinsing & cleaning



Product requirements

- > High chemical resistance
- > Hydrolytic resistance
- > Easy cleaning of components
- > Automation enabled
- > High mechanical strength

Applications

- > Sealing sinks
- > Sealing dust boxes
- > Sealing dishwashers

Product overview – sealing, casting, and bonding systems

Sealing	RAKU® PUR			
	32-3207-6	32-3230-6	32-3250-8	32-3250-11
Type	2C PU thixotropic	2C PU semi-thixotropic	2C PU thixotropic	2C PU thixotropic
Color	dark gray	white	dark gray	dark gray
Mixing ratio [per weight]	100 : 14.2	100 : 16.6	100 : 13.3	100 : 18.2
Viscosity A-Component [mPa*s]	30,000 – 60,000	40,000 – 60,000	80,000 – 110,000	50,000 – 80,000
Density (foamed in 30 ml beaker) [g/l]	300 – 350	180 – 220	280 – 320	220 – 260
Tack-free time [min]	3 – 7	4 – 7	7 – 9	6 – 10
Hardness (foamed in 30 ml beaker) [Shore 00]	35 – 45	10 – 20	40 – 50	45 – 55
Characteristics	Short curing time, good price/performance ratio, watertight skin	Very low hardness, good compression recovery, very high level of sealing possible	Good compression set at high temperatures, good adhesion to coated metals	Good adhesion to coated surfaces, low compressive strength
Approvals			UL 50 + UL 50E	UL 50 + UL 50E
Applications	Sealing sinks	Sealing refrigerator housings	Sealing electrical enclosures, door inlays	Sealing sinks

Sealing	RAKU® PUR		
	32-3253-1	32-3261	32-3275-7
Type	2C PU thixotropic	2C PU thixotropic	2C PU thixotropic
Color	dark gray	dark gray	dark gray
Mixing ratio [per weight]	100 : 16.6	100 : 40	100 : 20
Viscosity A-Component [mPa*s]	80,000 – 120,000	80,000 – 100,000	60,000 – 90,000
Density (foamed in 30 ml beaker) [g/l]	500 – 600	200 – 250	250 – 300
Tack-free time [min]	6 – 10	5 – 10	5 – 10
Hardness (foamed in 30 ml beaker) [Shore 00]	30 – 40 (Shore A)	15 – 20 (Shore A)	40 – 50
Characteristics	Very low hardness, good compression recovery, very high level of sealing possible	Good price/performance ratio, high mechanical strength	For outdoor applications, robust skin, low compressive strength
Approvals	UL 50 + UL 50E	UL 94 HBF	UL 50 + UL 50E
Applications	Sealing ventilation systems, covers, condensation pumps	Sealing dust boxes	Sealing heat exchangers

Sealing	RAKU® SIL		
	37-1104	37-1201	37-1210
Type	2C SIL flüssig	2C SIL thixotropic	2C SIL thixotropic
Color	dark gray	dark gray	grey
Mixing ratio [per weight]	100 : 100	100 : 100	100 : 100
Viscosity A-Component [mPa*s]	9,000	60,000	75,000
Density (foamed in 30 ml beaker) [g/l]	320	300	270
Tack-free time [min]	6	6	8
Hardness (foamed in 30 ml beaker) [Shore 00]	53	55	30
Characteristics	Closed-cell structure, good UV resistance, excellent tightness in relation to aqueous media	Meets the requirements of VDI 6022, closed-cell structure, good UV resistance	Good UV resistance, closed-cell structure
Approvals	UL 50 + UL 50E, UL 157, UL 508	UL 50 + UL 50E, UL 157, UL 508	
Applications	Sealing hobs	Sealing hobs	Sealing hobs

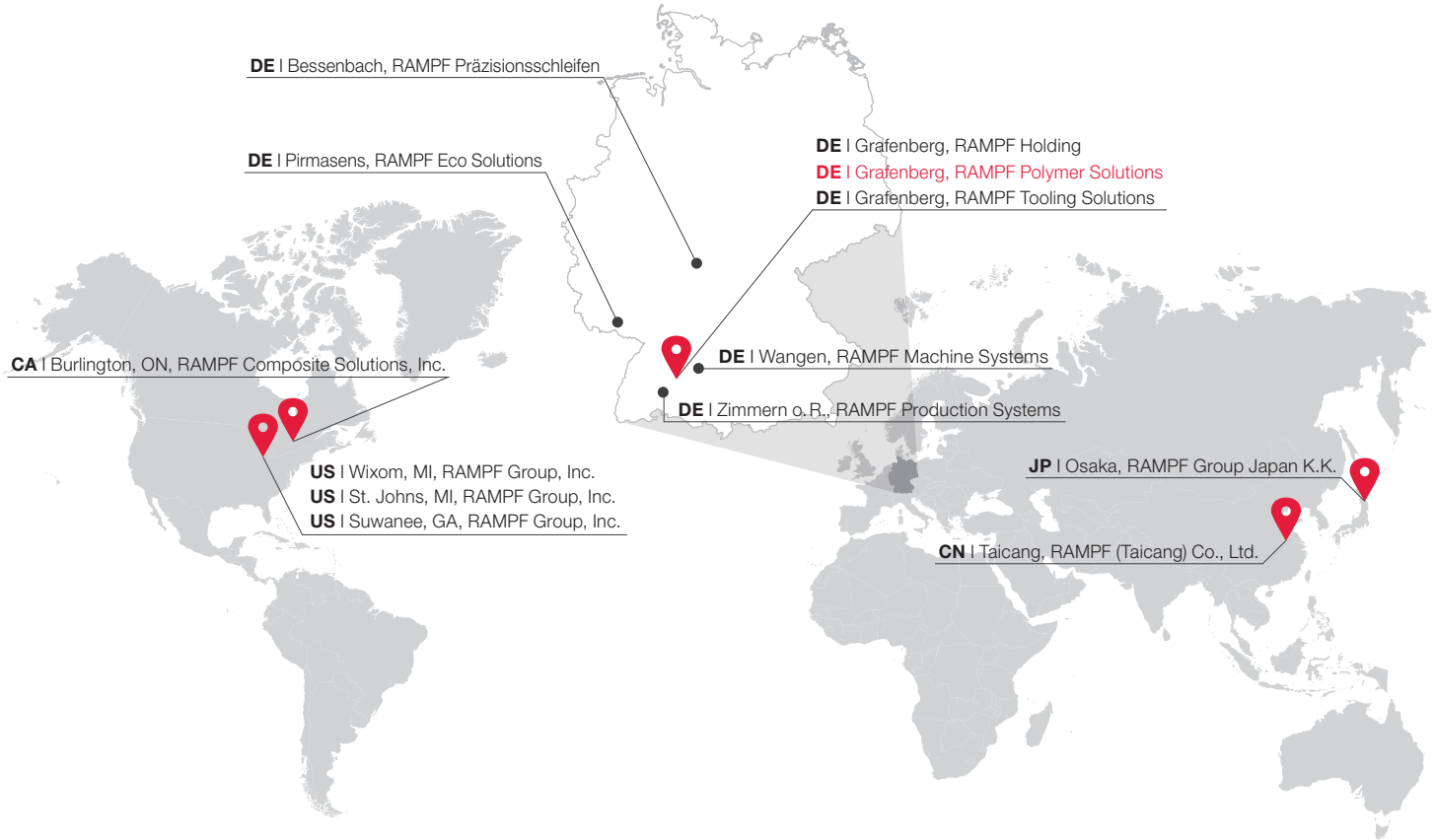
Bonding	RAKU® PUR		
	49-H 88/102-3	49-3041	49-3050
Type	2C PU	2C PU	2C PU
Color	beige	beige	beige
Zugscherfestigkeit AIMg1 [MPa]	6	6	11
Mixing ratio [per weight]	100 : 31	100 : 27	100 : 25
Viscosity A-Component [mPa*s]	110,000 – 160,000	110,000 – 160,000	350,000
Density [g/cm³]	1.50 – 1.52	1.50 – 1.52	1.53
Pot life / Open time [min]	5 – 7	2 – 3	30
Hardness [Shore D]	60 – 70	60 – 70	72
Characteristics	High strength, hydrolysis-resistant, energy-elastic	High strength, hydrolysis-resistant, energy-elastic	High strength, hydrolysis-resistant, energy-elastic
Approvals			
Applications	Bonding switch panels	Bonding cover plates, bonding inspection windows	Bonding cover plates, bonding inspection windows

Sealing & Casting	RAKU® PUR		
	21-2350	21-2360-1	21-2560-7
Type	2C PU	2C PU	2C PU
Color	black	black	black
Mixing ratio [per weight]	100 : 16	100 : 15	100 : 20
Viscosity A-Component [mPa*s]	4,000	9,000	7,000
Density [g/cm³]	1.58	1.72	1.67
Pot life [min]	45	38	50
Hardness [Shore D]	48	71	83
Thermal conductivity [W/(m*K)]	0.84	1.09	0.75
Operating temperature [°C]	-40 – +130	-40 – +130	-40 – +130
Characteristics	UL 94 V0 3 mm, good hydrolytic resistance, good resistance to fluctuations in temperature, low shrinkage and stress during curing	UL 94 V0 1.5 mm, high thermal conductivity, high long-term heat resistance, good hydrolytic resistance	UL 94 V0 6 mm (File 111148), good resistance to fluctuations in temperature, good long-term heat resistance, good hydrolytic resistance
Approvals	RTI listed at 130 °C (File E111148)		OBJ System Components, Electrical Insulation, (File OBJ.S2.E365009 130 °C class B.)
Applications	Multipurpose casting material	Multipurpose casting material	Casting aquastop sensors

Sealing & Casting	RAKU® MELT	
	46-4610	46-4615
Type	Reactive hotmelts	Reactive hotmelts
Color	colorless	translucent
Viscosity A-Component [mPa*s]	15,000	11,000
Density [g/cm³]	1.10	1.10
Processing temperature [°C]	120 – 150	120 – 150
Pot life / Open time [min]	5	4 – 5
Hardness [Shore D]	–	26
Characteristics	Laminating a highly diverse range of materials, fast setting, highly flexible	Certified for contact with food [E], high elongation, universal adhesive spectrum
Approvals		Contact with food in line with EU 10 / 2011 [E]
Applications	Multipurpose mounting adhesive, bonding decorative panels	Multipurpose mounting adhesive

Think global – Act local

We are always there for our customers – wherever they are



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