



SIMONA

INDUSTRY

SIMONA[®] SEMICON

Tailored thermoplastic
solutions for every application
in a semiconductor fab

SIMONA® SEMICON

HIGHEST STANDARDS FOR HIGHTECH

When it comes to the technically and commercially demanding semiconductor industry, it is imperative that all materials deployed meet the highest standards of purity and reliability.

As one of the most comprehensive thermoplastic product portfolio available to semiconductor processors and fabricators, SIMONA® SEMICON has proved effective for all application steps. Among the compelling benefits are exceptional chemical resistance and high impact resistance, combined with features such transparent materials for high visibility.

Thus, all SIMONA® SEMICON products meet the exacting global standards of the semiconductor industry while being produced locally, resulting in perfect, customized solutions at your location, such as FM PVC being produced in three continents.

Our teams have a profound knowledge from A to Z which entables us to fully understand your requirements in materials, applications and logistics.

YOUR BENEFITS AT A GLANCE

+ FULL-SERVICE PROVIDER

wide range of sheets, pipes, rods and welding rods designed to satisfy semiconductor process applications without compromise

+ MAXIMUM SAFETY FOR YOUR APPLICATION

due to low-flammability plastics, withstanding temperatures from 140 to 425°F (60 to 218°C) and an excellent chemical resistance

+ CUSTOMIZED SOLUTIONS WORLDWIDE

meets high global standards such as FM4910 and UL 94 V-0 flame test criteria

SATISFYING SEMICONDUCTOR PROCESS APPLICATIONS WITHOUT COMPROMISE



Process tanks, vessels,
and components



Water Treatment



Equipment, cabinetry
and view windows



Fume hoods, ducting

THE RIGHT SOLUTION FOR EVERY APPLICATION IN A SEMICONDUCTOR FAB



Ventilation Equipment

Fume hood, fume exhaust, gas and chemical blending/distribution systems:

- Sheets: PPs (EL), PVC Type II, PVDF, ECTFE, PFA
- Pipes and fittings: PPs (EL), PVDF

Production Equipment

Wet benches (cleanroom ambient):

- Sheets: FM4910 PVC (CRP-1), FM4910 PP (FRP-3), FM4910 CPVC Transparent, FM4910 PVDF, FM4910 ECTFE, FM4910 PFA
- Pipes and fittings: PVC GLAS, PFA hoses, PP-H AlphaPlus®, PVDF

Transportation and Dosing

Dosing cabinets/dosing pumps/ hook-up/piping:

- Sheets: FM4910 PVC (CRP-1), FM4910 PP (FRP-3), FM4910 CPVC Transparent, PP-H AlphaPlus®, PP White
- Pipes and fittings: PP-H AlphaPlus®, PVDF, PVC GLAS, PFA hoses

Distribution to Production Level

VMB and Chemical Distribution units:

- Sheets: FM4910 PVC (CRP-1), FM4910 PP (FRP-3), FM4910 CPVC Transparent, PP-H AlphaPlus®, PP White
- Pipes and fittings: PP-H AlphaPlus®, PVDF, PVC GLAS, PFA hoses

Storage/Utility

Storage and process tanks for process chemicals and contaminated wastewater (FRP tanks with backed fluoroplastics/thermoplastics):

- Sheets with backing: PVDF, ECTFE, PFA, PP-C
- Solid sheets: PP-H AlphaPlus®, PP-C, PE 100

Components of Water Treatment

Process Water Treatment and Wastewater Treatment:

- Sheets: PE 100, PP-H AlphaPlus®, PP-C
- Pipes and fittings: PP-H AlphaPlus®, PVDF, PE 100, PVC GLAS, PFA hoses

SELECT FROM THE INDUSTRY'S WIDEST RANGE OF SHEETS, RODS, WELDING RODS, PIPES AND FITTINGS, INCLUDING THE FM4910 PORTFOLIO

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SERVICE TEMPERATURE 500 °F / 260 °C	CHEMICALS	DESCRIPTION	PRODUCTS				REGULATORY			Select from the industry's widest range of sheets, rods, welding rods, pipes and fittings, including the FM4910 portfolio											
			STRONG ACIDS*	STRONG BASES*	SOLVENTS*	STRONG OXIDIZERS*	Sheet Gauge Range in. (mm)	Pipe Diameter Range (mm)	Rod Diameter Range mm x m	Welding rod	UL 94	DIN 4102	FM4910	Specific Gravity ASTM D792 / ISO 1183 g/m³	Tensile Strength ASTM D638 (ISO 527) psi (MPa)	Elongation at Break ASTM D638 (ISO 527) %	Flexural Modulus ASTM D790 (ISO 527) psi (MPa)	Izod Impact ASTM D256 (ISO 180) ft-lb/in. (J/m)	Hardness ASTM D2240 / ISO 868 Shore D	Coefficient of Expansion ASTM D696 in/in °F (mm/mm °C)	Heat Deflection Temp @ 66 psi ASTM D648 psi (MPa)
<div>← EXCELLENT TO POOR →</div> <div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>		SIMONA® PFA					Extruded 0.125–0.500 (3.2–12.7)			Yes	Yes		2.15	3,480 (24)	250	–	No break	55	–	–	
		SIMONA® ECTFE					Extruded 0.125–1.250 (in.) 3.2–31.75 (mm)	SDR21 20–160 (dia.)		Yes	Yes	Yes	1.68	4,500 (31)	250	245,000 (1,650)	No break	75 / 67	5.0 (9.0)	195 (9.0)	
		SIMONA® PVDF					Extruded 0.062–1.00 (1.5–25.4) Pressed 1.25–3.94 (32–100)	SDR21 16–225(dia.) SDR33 63–315 (dia.)	70–500 x 1 10–500 x 2	Yes	Yes	Yes	1.78	–	–	–	–	–	–		
	SIMONA® PVDF Kynar 740	–											7,250 (50)	>50	246,500 (1,700)	1.0 (53.4)	78	7.2 (13.0)	284 (140)		
	SIMONA® PVDF Kynar 1000	–											7,950 (55)	>50	283,000 (1,950)	No break	78	–	–		
		SIMONA® PP-H AlphaPlus®					Extruded 0.62–1.50 (1.5–38.1) Pressed 1.5–3.94 (40–100)	SDR11 10–500 (dia.) SDR17.6 25–800 (dia.) SDR33 50–1000 (dia.) SDR41 60–1000 (dia.)	100–800 x 1 8–500 x 2	Yes				0.91	4,800 (33.1)	>100	195,000 (1,350)	0.9 (48.06)	70	8.88 (15.8)	–
		SIMONA® FM-PP					Extruded 0.125–1.00 (3.2–25.4) Pressed 1.25–2.00 (31.75–50.8)			Yes			Yes	1.36	2,600 (17.9)	–	400,000 (2,760)	12.0 (640.8)	68	–	240 (115.6)
		SIMONA® CPVC					Pressed 0.250–1.00 (6.35–25.4)						Yes	1.46	7,360 (50.8)	–	380,000 (2,622)	>2 (>106.8)	TBD	6.3 (11.34)	240 (115.6)
		SIMONA® FM CPVC Transparent					0.118–0.500 (3–12.7)					Yes									
		Boltaron® 4325 (clear/blue CPVC)	1.47	9,000 (62)	–	450,000 (3,103)							0.5 (27)	TBD	–	–					
	SIMONA® 2000 (clear/blue CPVC)	1.55	8,700 (60)	–	435,000 (3,001)	1.4 (74.8)							96	–	–						
	SIMONA® FR-PP					Extruded 0.125–1.00 (3.2–25.4) Pressed 1.25–2.00 (31.75–50.8)			Yes	Yes			1.01	3,900 (26.9)	>100	160,000 (1,104)	7.0 (373.8)	67	–	–	
	SIMONA® FRP-5 (white UL94 V0)		Yes		0.95					4,600 (32)	–	232,000 (1,600)	No break	72	–	–					
	SIMONA® PPs (grey DIN 4102)																				
	SIMONA® FM-PVC					Extruded 0.125–1.00 (3.2–25.4) Pressed 1.25–2.00 (31.75–50.8)			Yes	Yes		Yes	1.41	7,500 (51.7)	–	485,000 (3,347)	3.0 (160.2)	84	3.2 (5.8)	–	
	SIMONA® CRP-1 (white and ivory PVC, US operations)																				
	SIMONA® FM-PVC (white and ivory PVC, Asia operations)																				
	SIMONA® FM-PVC (white and ivory PVC, EU operations)					Extruded 0.062–1.50 (1.5–38) Pressed 1.50–4.00 (38–100)		6–300 x 2	Yes												
	SIMONA® PVC									Yes											
	SIMONA® PVC Type I (US operations)										Yes										
	SIMONA® PVC-CAW (DE, Asia operations)					Extruded 0.118–4.75 (3.0–12.0)			Yes			Yes	1.42	9,000 (62.1)	–	486,000 (3,353)	–	82	–	–	
	SIMONA® PVC																				
	SIMONA® PVC-GLAS (clear/blue)																				

All tests at 73°F (22.8°C) in dry conditions unless otherwise noted. Approved for limited use in thick section machined parts and deep-draw thermoformed parts.

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FLEXIBILITY AND SUPPORT LIKE NOWHERE ELSE

Our service network goes above and beyond industry standards. For the efficient management of your project, we connect you with various SIMONA services.

Globalisation

SIMONA® SEMICON offers the most complete product portfolio in the Americas, Europe and Asia. Our products include semi-finished sheets, rods and welding rods, FM4910 materials including FM-PP, FM-PVC and fluoropolymers and PP and PVDF pipes and fittings.

Technical Service Center

A global consulting service provided by our Technical Service Center and our Customer Service unit. Includes project planning, the selection of products and materials and technical consulting during on-site planning.

SIMCHEM

Online database with details of the chemical resistance with over 4,000 results.

SIMONA Academy

A highly professional and trusted partner when it comes to imparting specialist knowledge in the field of plastics engineering.



Get connected with our **SIMONA Service Network Team!**

✉ semicon@simona-group.com



YOUR GLOBAL PARTNER FOR CUSTOMIZED SOLUTIONS – WORLDWIDE

Based on your specific requirements, we will work with you to design a tailored thermoplastic solution for every application step in the semiconductor fab which matches your highest safety standards. Our team of experts around the globe looks forward to assisting you as a trusted partner with decades of experience.

EXCELLENT ADVICE: FROM PLANNING TO COMMISSIONING AND TRAINING

Our global service and support network is available to you worldwide, covering every aspect from planning to commissioning – comprehensive support and exceptional service guaranteed. This is complemented by global training opportunities for the purpose of further enhancing operational safety at your sites.

GLOBAL THERMOPLASTIC SOLUTIONS

Please feel free to get in touch with your regional expert to assess the potential of SIMONA® SEMICON solutions at your semiconductor fab.

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