

SIMONA® PVC Type I CRP-1



Exceptional impact strength in an FM 4910 listed material compared to PVC-C and other PVC Type I sheet. High quality appearance enhances cleanroom aesthetics.



Extruded from a proprietary formulation, SIMONA® CRP-1 sheet provides higher impact strength and improved weldability over PVC-C and other semicon grade PVCs. FM 4910 listed, it also resists typical wet bench cabinetry operating temperatures. Its uniform white color and surface gloss also affords exceptional cleanroom aesthetics compared to PVC-C materials.

In side-by-side production welding trials, SIMONA CRP-1 has proven to weld faster and easier than PVC-C and other FM 4910 listed PVC grades. For weld integrity and compatibility, SIMONA offers weld rod made from the same resin grade used in the production of each of its FM 4910 sheet products, including CRP-1.

SIMONA also offers a proprietary hybrid weld rod that allows welding of CRP-1 to PVDF sheet and components.

From PVC and polypropylene to PVDF, E-CTFE and PFA fluoropolymers, SIMONA offers the most complete range of sheet products for semicon and other chemical processing environments from 160°F to over 425°F (70° to 218°C).

Advantages

- Higher impact strength; rigidity
- Meets FM 4910 and UL 94 V-0
- Uniform gloss, color consistency
- Resists strong acids & alkaline; UPW contact
 - not recommended for solvents
- Improves welding productivity
- Welds to PVDF with proprietary Versarod® hybrid welding rod

Applications

- Wet process tool cabinetry
- Chemical distribution equipment & valve boxes
- semicon process enclosures
- Cleanroom cabinetry
- Rinse modules
- Wafer transfer interfaces
- Dry tool enclosures
- Electrical cabinets

Configurations

- Sheet sizes
 - 48 x 96 (1,220 x 2,440 mm)
- Gauges
 - Extruded 0.125 to 1.0 in. (3.17 to 25.4 mm)
 - Press laminated 1.5, 2.0 in. (38.0, 50.8 mm)
- Colors
 - White, high gloss surface
- Weld rod: CRP-1 and hybrid weld rod
 - Round rod 0.118, 0.156 in. (3.0, 4.0 mm)
 - Some triangular, MWK and MW configurations
- Custom colors and sizes on request



PROPERTIES SIMONA® PVC Type I CRP-1

PROPERTY, Units of Measure ¹	Test Method	TYPICAL VALUES	
		SIMONA® PVC Type I CRP-1	
Specific Gravity	ASTM D792	1.415 g.cm ³	
Water Absorption, %	ASTM D570	< 0.01	
MECHANICAL			
Tensile Strength @ Yield	ASTM D638	7,500 psi	51.71 MPa
Elongation @ Break, %	ASTM D638	-	
Flexural Modulus	ASTM D790	485,000 psi	3,343.96 MPa
Notched Izod Impact	ASTM D256	3.0 ft-lb / in.	
Hardness, Shore D	ASTM D2240	84	
THERMAL			
Cold Limit Temperature	Maximum	32° F	0° C
Coefficient of Expansion x 10 ⁻⁵	ASTM D696	5.8 in./in., °F	10.44 mm/mm, C°
Heat Deflection Temp. @ 66 psi	ASTM D648	-	
Heat Deflection Temp. @ 264 psi	ASTM D648	162° F	72° C
FLAMMABILITY			
UL 94	UL 94	V-0	
FM 4910	FM 4910	Yes	
ELECTRICAL			
Surface Resistivity, Ohm	DIN EN ISO 60093	≥ 10 ¹³	
Dielectric Strength, kV/mm	DIN EN ISO 179-1eA	30	

¹All tests at 73°F (22.8°C) in dry conditions unless otherwise noted.

CHEMICAL RESISTANT FM 4910 AND UL 94 V-0 COMPLIANT SHEET PRODUCTS

Fluoropolymers

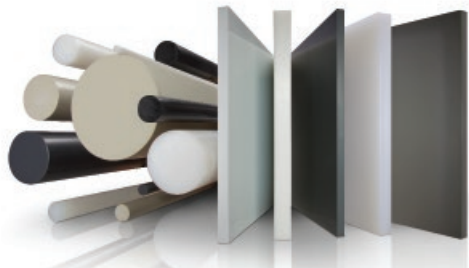
- SIMONA® PVDF 740 homopolymer
- SIMONA® PVDF-C 2850 copolymer¹
- SIMONA® E-CTFE 901
- SIMONA® PFA-M 1523²

Type I PVC, CPVC and Polypropylene

- SIMONA® PVC Type I CRP-1
- SIMONA® Polypropylene FRP-3
- SIMONA® Polypropylene FRP-5¹
- SIMONA® CPVC 2000 - clear blue
- SIMONA® CPVC 4325 - clear blue
- SIMONA® CPVC 4225 - white

¹ UL94 VO only. Not FM 4910 listed

² Accepted by FM as fully fluorinated material meeting FM 4910: no listing required.



SIMONA AMERICA Industries offers the widest product range of PVC sheet and rod – FM 4910 rated sheet – chemical resistant materials from PVC, PP and PE to fluoropolymers – orthotics and prosthetics sheet – SIMONA Boltaron® aircraft sheet – plus proven products for boat building, outdoor furniture and many other industries.

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