

SIMONA
AMERICA
INDUSTRIES



SIMOLIFE

Product Range for Orthotics and Prosthetics

GLOBAL THERMOPLASTIC SOLUTIONS

Key

Application areas



Trunk orthoses



Orthotics for upper
extremities



Orthotics for lower
extremities



Foot/leg prosthetics



Hand/arm prosthetics

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SIMONA – A Trusted Partner in Plastics for the Health Care Industry



The SIMONA Group

Acknowledged for the consistently high quality of its products, SIMONA has been a trusted partner to the orthopedic technology sector for more than 35 years. The SIMOLIFE line of sheet materials represents the most extensive range of products tailored to the specific requirements of the orthopedics industry. Using certified orthotic grade raw materials and rigid manufacturing controls, we manufacture premium-quality products that meet the highest standards applicable within the health care sector.

SIMONA AMERICA Industries

From our state of the art manufacturing and logistics operations in Pennsylvania, SIMONA AMERICA Industries has become a major supplier of PVC and olefin-based sheets and rods to the North American market.

Recent acquisitions, coupled with new product development, have added new high performance sheet products for more demanding applications in aerospace, chemical and semiconductor processing equipment as well as orthopedic and prosthetic devices.

SIMOLIFE

Your Benefits at a Glance



More than 35 years' commitment to product quality and integrity

Acknowledged for the consistently high quality of its products, SIMONA has been a trusted partner to the orthopedic industry for many years.

Frequent product audits and endurance testing provide essential data for our R&D engineers to make targeted improvements to the SIMONA products on a continual basis.

Rigid controls: certified purity and fabrication consistency

SIMONA uses only certified orthotic grade raw materials for the manufacture of SIMOLIFE products. Stringent incoming goods inspections safeguard purity.

Continuous production monitoring ensures a controlled, consistent range of low stress in our O&P grade materials.

This strict control of raw materials and production conditions provides high purity and consistent dimensional stability in fabrication from lot to lot.

Skin compatibility for safety and long-term reliability

All SIMOLIFE products are physiologically safe per FDA. This feature, coupled with resistance to sweat, cosmetics, skin creams, detergents and disinfectants, provides users with longterm safety and reliability.


SIMOLIFE

Product Range and Material Specifications

Product Range

	SIMOLIFE HDPE	SIMOLIFE LDPE	SIMOLIFE PP-Homo- polymer	SIMOLIFE PP-Copolymer	SIMOLIFE EVA flex	SIMOLIFE EVA superflex	SIMOLIFE PETG
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Sheets (sizes/thicknesses)

	16 x 16 inch 406 x 406 mm					10, 12, 15 mm	10, 12, 15 mm	12, 15, 20 mm
	33 x 49 inch 840 x 1250 mm					10, 12, 15 mm	10, 12, 15 mm	
	96 x 48 inch 2440 x 1220 mm	1/16, 1/8, 5/32, 3/16, 1/4, 1/2 inch	1/16, 1/8, 3/16, 1/4 inch	1/16, 3/32, 1/8, 3/16, 1/4, 3/8 inch	1/16, 3/32, 1/8, 3/16, 1/4 inch			
	98 x 49 inch 2490 x 1250 mm							12, 15, 20 mm
	Colors	natural, flesh, black	natural	natural, flesh, black	natural, black	natural	natural	transparent
	Antimicrobial properties on request	✓	-	✓	-	✓	-	✓

Bold type = available immediately (color: natural or transparent); light-faced type = available on request
The sizes specified are standard sizes. Other sizes, thicknesses and colors available on request.

Material specifications

	SIMOLIFE HDPE	SIMOLIFE LDPE	SIMOLIFE PP-Homo- polymer	SIMOLIFE PP-Copolymer	SIMOLIFE EVA flex	SIMOLIFE EVA superflex	SIMOLIFE PETG
Density, g/cc, ASTM D-792	0.963	0.920	0.905	0.910	0.934	0.955	1.270
Tensile modulus of elasticity, psi, ASTM D-638	230,000	36,000	210,000	195,000	10,900	2,800	275,000
Shore hardness, ISO 868	70	45	78	74	39	29	78
Izod impact, notched, ft-lbs/in, ASTM D-256	2.4	No break	0.8	14.0	No break	No break	1.8
Oven temperature for forming, °F *	330 - 360	250 - 270	360 - 420	360 - 420	300 - 320	300 - 320	320 - 340
Oven heating time for forming, minutes/mm sheet thickness *	2 - 3	2 - 3	2 - 3	2 - 3	1.5 - 2.5	1.5 - 2.5	3 - 4
Physiological safety in accordance with FDA	✓	✓	✓	✓	✓	✓	✓

* The actual parameters can vary depending on the type and condition of the oven as well as the sheet thickness.
Therefore, all figures presented here are for orientation purposes only. The exact parameters will have to be determined by the user.

SIMOLIFE

The Right Material for Each Application

	Diagnostic/test sockets	Final prosthetic sockets	Flexible interior prosthetic sockets
			
SIMOLIFE HDPE		✓	
SIMOLIFE LDPE			✓
SIMOLIFE PP-Homopolymer		✓	
SIMOLIFE PP-Copolymer		✓	
SIMOLIFE EVA			✓
SIMOLIFE PETG	✓		

Foot/leg orthotics	Functional foot orthotics	Hand/arm orthotics	Corsets
			
✓	✓	✓	✓
✓	✓	✓	✓
✓	✓		✓
✓	✓	✓	✓
	✓		

SIMOLIFE HDPE and LDPE



SIMOLIFE HDPE

Application areas	Description	Properties	Certifications
	High density polyethylene (HDPE)	Higher rigidity and strength than LDPE Low, consistent shrinkage in forming, optimized for O&P Resistant to sweat, cosmetics, skin creams, detergents and disinfectants	Physiological safety in accordance with FDA

SIMOLIFE LDPE

Application areas	Description	Properties	Certifications
	Low density polyethylene (LDPE)	Lower rigidity and strength than HDPE High flexibility Low, consistent shrinkage in forming, optimized for O&P Resistant to sweat, cosmetics, skin creams, detergents and disinfectants	Physiological safety in accordance with FDA

SIMOLIFE PP-Homopolymer and PP-Copolymer



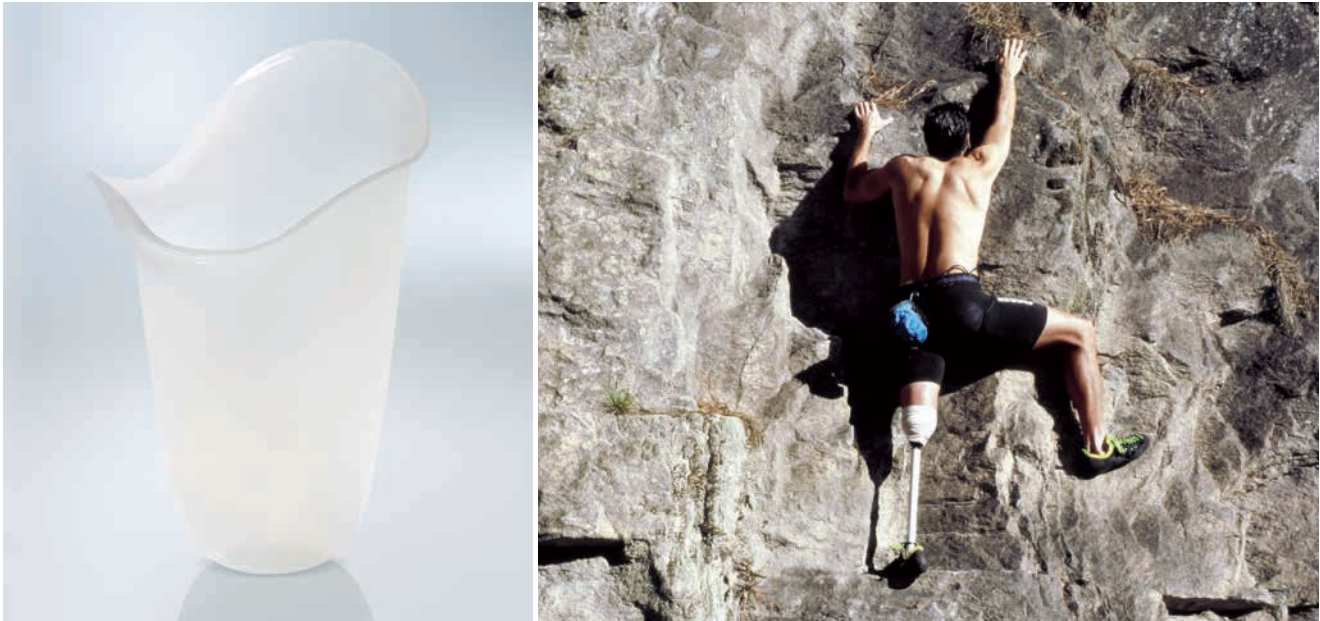
SIMOLIFE PP-Homopolymer

Application areas	Description	Properties	Certifications
	Polypropylene homopolymer	<ul style="list-style-type: none"> Higher rigidity and strength than PP-Copolymer High fatigue resistance Low, consistent shrinkage in forming, optimized for O&P Resistant to sweat, cosmetics, skin creams, detergents and disinfectants 	Physiological safety in accordance with FDA

SIMOLIFE PP-Copolymer

Application areas	Description	Properties	Certifications
	Polypropylene copolymer	<ul style="list-style-type: none"> Higher impact strength than PP-Homopolymer Lower susceptibility to stress cracks Low, consistent shrinkage in forming, optimized for O&P Resistant to sweat, cosmetics, skin creams, detergents and disinfectants 	Physiological safety in accordance with FDA

SIMOLIFE EVA flex and EVA superflex



SIMOLIFE EVA flex

Application areas	Description	Properties	Certifications
	Ethylene-vinyl acetate	High flexibility	Physiological safety in accordance with FDA
		Low, consistent shrinkage in forming, optimized for O&P	
		Excellent formability	

SIMOLIFE EVA superflex

Application areas	Description	Properties	Certifications
	Ethylene-vinyl acetate	Very high flexibility	Physiological safety in accordance with FDA
		Low, consistent shrinkage in forming, optimized for O&P	
		Excellent formability	

SIMOLIFE PETG



SIMOLIFE PETG

Application areas	Description	Properties	Certifications
	Thermoplastic copolyester	Highly transparent even after thermoforming Optically monitored for high purity Low, consistent shrinkage in forming, optimized for O&P Excellent thermoforming and postforming properties	Physiological safety in accordance with FDA

Advice and Information

Consulting Service

We are committed to offering our customers an extensive range of customised solutions so that they can compete successfully within the business arena. SIMONA AMERICA can draw on many years of experience in the manufacture of sheets, rods, pipes and fittings. Providing in-depth knowledge and significant technical expertise, we are acknowledged as a reliable and trustworthy partner. Our Technical Service Center team looks forward to assisting you:

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SIMONA Sales Academy

We organise seminars at our Technology Center and educational facilities in Kirn for the purpose of providing product training and information on the very latest processing and fabrication methods. On request, we can also provide training at your own premises. Contact details:

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Information Service

Further information is available in the form of catalogs, brochures, case studies and project reports. We also offer DVDs, technical data sheets and product samples. Please feel free to contact our Marketing department:

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Delivery Service

Our central warehouse supplies SIMONA standard products from stock, thus guaranteeing speedy and flexible delivery. Various sizes and thicknesses always available from stock. Please contact our sales department for further details concerning stock available product offer.

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