

orthoform®

Meet the Industry Standard in Orthopedic & Prosthetic Sheet

Orthoform® is a product line of Airlite Plastics Co.



Photo courtesy of Spinal Technology, Inc. © 2013

Over a million patients trust our
O&P sheets for strength and flexibility

Haven't heard of Orthoform® before?

Well, brace yourself...because this unassuming, mid-size company is taking over the industry with quality, competence, market knowledge, and customer satisfaction!

Orthoform® was developed with the fabricator and patient needs in mind. It is a superior product.

The polyolefin based extruded sheets are durable, have tremendous flexural strength, and can be formulated to any tensile strength or stiffness necessary.

Orthoform® has numerous applications, however, some of the more common uses are AFO, WHO, KAFO, LSO, TLSO, CTLSO or splints, body cast molds, braces, stiffeners, and air casts.

During production, we monitor manufacturing to assure processing specifications so whether you are die cutting, forming or compression molding, our product is consistent and, your process is repeatable. Stock is available in 48" x 96" sheets in thickness range from .060" to .250" , and on Orthoflex® we offer up to .625" thick.

Materials available are LDPE, HDPE, modified PE, polypropylene, copolymer, LLDPE and Orthoflex®—all extruded on site.

Extruded Thermoplastics

The industry of extruded thermoplastics for O&P is constantly evolving. Not only are there numerous polymers, but properties are enhanced for strength, flexibility, and decreased weight.

Staying on top of the industry as the leading manufacturer means we have our team of experts study new extrusion processes and additives. This keeps us on the cutting-edge of research and development.

Because of this expertise, our team can assist in determining the best sheet plastic for your job whether it's drape, blister, or vacuum forming.

How are we better?

That's a very good question. You see, at Airlite Plastics, we're not just sheet extruders...we are industry and customer experts. That's what sets us apart from the competition.

We understand the medical device market. Educated on the O&P industry, our team is uniquely qualified to assist clients in reaching desired results.

In fact, over 60% of our new business is market specific— proof that product and client knowledge are key. Here are a few more reasons we stand out as leaders:

- Our "batch control" is also an attractive feature. We can track materials from start to finish taking "worry" out of the equation.
- Since we run weekly orthopedic schedules, Airlite can "run to size" and customize orders. We also have quantities in stock as a result of these weekly extrusion schedules.
- Our capable staff can tackle any custom project regarding pigments, textures, or corona treating.
- Oh, and it doesn't hurt that we are certified ISO 9001: 2008. Recertified in June 2012; Certified since 2000.
- All Orthoform® materials have FDA certification.

Orthoflex®

Our new product is just what the O&P industry needed. Orthoflex® is strong, transparent, and flexible.

Orthoflex® can also be formed through all standard forming processes and is easily seamed. Consider this product for AK and BK sock liners, AFO cushioning and shock absorption, plus various orthotic and prosthetic uses.

Contact our team for more information on this revolutionary product.

"Prototypes were produced as a rush job, and Denise pulled 10 sheets off line for our customer to have on hand while the remainder of the order was extruded. She really helped us." Felisa Howie, Senior Inside Sales, Curbell Plastics



Product Type	Description	Typical Applications	Flex. Mod. (PSI per ASTM D790)
LDPE	Soft, flexible and lightweight	Spine orthoses requiring some support and comfort, upper extremity orthoses, flexible prosthetic sockets	35,000
HDPE	High durability, high strength, resists cracks	Spinal orthoses and body jackets, areas requiring good flexural fatigue properties	225,000
Modified Polyethylene	Softness of LDPE with added rigidity for support	Spinal orthoses requiring moderate to slight rigidity, upper extremity orthoses, prosthetic sockets	52,000
Polypropylene homopolymer	Good formability, economical, rigid, high impact resistance	Lower & upper extremity orthoses (AFO, DAFO, cro walkers, etc.), spinal orthoses required added support and stiffness, die-cut components requiring good memory or "living hinge" characteristics	200,000
Copolymer	Very good formability, improved impact properties - good stiffness with a bit of flex	Lower extremity orthoses requiring a bit of flexibility, spinal braces, upper extremity orthoses	162,000
LLDPE	Formability comparable to LDPE, soft, lightweight	AFO applications requiring flexibility and resilience & flexible prosthetic sockets	40,000
Orthoflex®	Ethylene based copolymer with elastomeric softness and flexibility	Lower extremity orthotics, booties, cushion areas and AK+BK prosthetic liners	Varies with grade



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Technical information

Material	SI Unit	ASTM	LDPE	LLDPE	MOD PE	HDPE	PPH	PPC	Orthoflex®
Melt Flow Rate	g/10 min	D 1238	2.0	.80	1.00	0.29	0.50	0.45	3.0
Density	g/cm ³	D4883 D792B D1505	.919	.920	.930	.962		.90	.952
Tensile Strength @ Yield	PSI	D 638	1500	2170	2500	4600	4900	4060	3580
Elongation @ Yield	%	D 638					13	11	
Elongation @ Break	%	D 638	650	700	600	>600			770
Flexural Modulus (1% sec)	PSI	D 790	35,000	40,000	52,000	225,000	200,000	162,000	2470
Deflection Temp. @ 66 psi	F	D 648		118				190	
Tensile Impact Notched Impact Dart Impact 1.5 mil Method A	ft-bs/in ² ft-lb/in ² G	D 256A					1.3	No Break	
Brittleness Temp	F	D 746		< -43.6	-130	< -105			-121
DTLU	F	D 648		118					
Vicat Softening Point	F	D 1525	85	190	222	268			111
Flame Rating								HB	

The information on this data table was furnished by the producers of the raw material. Your independent determination should be used to make sure the product is suitable for the intended use. The above does not constitute a warranty for a particular product use.



**For more information, please contact
Denise Yonney, Sales Manager**

2860 Bath Pike,
Nazareth, PA 18064
Tel: 610.759.0280
Fax: 610.759.6050

E-mail: dyonney@airliteplastics.com or orthoform@airliteplastics.com

www.orthoformsheet.com