

SIMONA® LOW FRICTION PE

Low friction sheet provides a cost-effective solution to optimizing material flow and minimizing wear

With a proprietary slip formula integrated directly into the material, the sheet combines slick surface area with UV stability and inherent toughness for increased productivity and long product life.



SIMONA® Low Friction Sheet was developed to provide an exceptionally fast and smooth surface that requires minimal maintenance. Unlike sheet products that use spray-on additives for sliding properties, the sheet's low friction technology is integrated right into the material, resulting in great glide properties without the need for messy, short-lived surface coatings or lubricants. It is also UV stabilized and inherently impact resistant even at cold temperatures, for durability and long performing life inside and outdoors.

Bulk or messy items flow continuously and effortlessly over the sheet, leaving minimal residue or impact wear behind and requiring no downtime for maintenance and cleaning.

In addition, SIMONA's low stress manufacturing technology provides exceptional flatness in cutting, installation and in use.

Compare the material to any other surface and see for yourself why more and more facility managers and building owners prefer it. Contact us for samples and an authorized installer near you.

Advantages

- Exceptionally fast surface
- More cost-effective than other low friction sheet products
- Requires no messy surface coatings or spray-on lubricants
- Non-absorbent
- UV resistant
- Can withstand sub-zero temperatures
- FDA compliant
- Superior flatness for easy cutting and installation
- Weldable and formable
- Good chemical resistance

Applications

- Package chutes
- Truck bed linings
- Plow shovels
- Guides
- Bumper or dock fenders
- Conveyors
- Material handling equipment
- Agricultural and food processing components

Configurations

- Sheet size
 - 48 x 96 in.
- Thicknesses:
 - 0.125, 0.25, 0.50, 0.75, 1.0 in.
- Standard finish
 - Smooth
- Colors
 - Natural, black
- Custom sizes, colors, finishes
 - Available at required minimums



CASE STUDY A sustainable solution for replacing woden proof boards in bakeries for no more moldy proof boards is SIMONA® Low Friction PE with a slick, low-maintenance surface.

MATERIALS COMPARISON: GLIDE PROPERTIES

POLYETHYLENE-BASED (PE) MATERIALS TESTED	COEFFICIENT OF FRICTION* PER ASTM 1894 TEST	
	Static	Kinetic
UHMW-PE (Ultrahigh molecular weight PE)	0.185	0.126
UHMW-PE with additive	0.200	0.149
SIMONA® Low Friction PE	0.164	0.097

*Test conditions: Sled (7 oz/200 grams; speed 6 in. (150 mm)/minute. Plane: stainless steel. Temperature: 70 °F (20.6 °C) Test capability does not fully indicate slickness of the material.

TYPICAL PROPERTIES

PROPERTY	TEST METHOD	TYPICAL MINIMUM VALUES
Specific Gravity	ASTM D792	0.94
Water Absorption, %	ASTM D570	<0.01
MECHANICAL		
Tensile Strength @ yield	ASTM D638	3,500 psi (24.15 MPa)
Elongation @ break, %	ASTM D638	650
Flexural Modulus	ASTM D790	160,000 psi (1,104.0 MPa)
Izod Impact (notched) @ 73°F (23°C)	ASTM D256	No break
Low Temperature Brittleness	ASTM D747	-50 °F (-45.6 °C)
Hardness, Shore D	ASTM D2240	65
THERMAL		
Coeff. of Expansion in./in./°F x 10 ⁻⁵ (mm/mm, °C x 10 ⁻⁵)	ASTM D696	6.7 x 10 ⁻⁵ in./in., °F (12.06 x 10 ⁻⁵ mm, °C)
Heat Deflection Temp. @ 66 psi	ASTM D648	163 °F (72.8 °C)

*All tests at 73 °F (23 °C) in dry conditions unless otherwise noted.

FABRICATION

SIMONA® Low Friction PE sheet can be sawn, routed, drilled and machined using conventional tools. A detailed fabrication guide is available upon request.



SIMONA 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 – Boltaron® aircraft sheet – plus proven products for boat building, outdoor furniture and many other industries.

DISCLAIMER AND LIMITATION OF WARRANTY:

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CASE STUDY

Sustainable Solution for Replacing Wooden Proof Boards in Bakeries

A mid-sized bakery was looking for a better solution to their current wooden proof boards. They were running into issues with dough sticking to the wood, forcing them to use large amounts of corn starch as a release agent. The corn starch was an added expense, was extremely messy in the plant, and required additional maintenance to clean the boards and the plant. The company was introduced to SIMONA's Low Friction PE proof boards that require no additional release agent. The boards can also be cleaned and won't absorb moisture that can lead to mold build up.

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