

# TORAY

Innovation by Chemistry

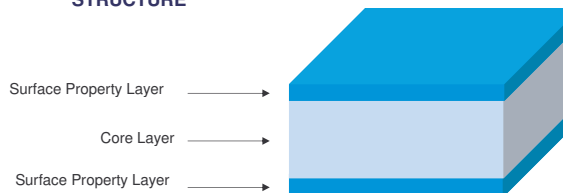
## Lumirror® F7R

### Technical Data Sheet

F7R is an economy grade solar film with heat shrinkage properties designed to satisfy the needs of specific release applications.

F7R surface and optical properties are strictly controlled by co-extrusion technology.

#### STRUCTURE



#### KEY FEATURES

- Co-extruded three layer structure provides low haze and friction.

#### SIMILAR PRODUCTS

- U65

#### APPLICATIONS

- Solar  
- Release Film

#### TECHNICAL DATA

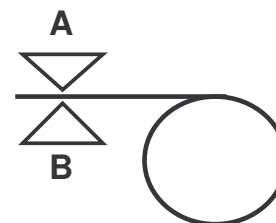
PROPERTIES		METHOD	UNITS	TYPICAL VALUES	
Thickness		-	0.00001"	92	142
Nominal Yield		-	in <sup>2</sup> /lb	21,500	13,900
F-5	MD	ASTM D882	lb/in <sup>2</sup>	14,900	14,900
	TD			14,200	13,800
Tensile Strength at Break	MD	ASTM D882	lb/in <sup>2</sup>	31,300	25,200
	TD			35,600	25,600
Elongation at Break	MD	ASTM D882	%	160	155
	TD			130	130
Heat Shrinkage (150 °C for 30 minutes)	MD	ASTM D1204	%	1.4	1.3
	TD			0.2	0.1
Heat Shrinkage (190 °C for 5 minutes)	MD	ASTM D1204	%	2.7	2.0
	TD			0.7	0.5
Coefficient of Friction	A-side vs. B-side	ASTM D1894	μ <sub>s</sub>	0.4	0.4
				μ <sub>D</sub>	0.3
Haze (1 sheet)		ASTM 1003	%	2.0	2.2

#### CONTACT

Toray Plastics (America), Inc.  
50 Belver Avenue  
North Kingstown, RI 02852 USA  
Tel: (800) 453-6866  
Fax: (401) 294-3410  
e-mail: rimarketing@toraytpa.com  
Web: www.torayfilms.com

#### WINDING DIRECTION

**A** = Surface Property Layer □  
**B** = Surface Property Layer □



LUM PS-0015 Rev 8

WE ACCEPT NO RESPONSIBILITY FOR RESULTS OBTAINED BY THE APPLICATION OF THIS INFORMATION OR THE SAFETY OR SUITABILITY OF OUR PRODUCTS, EITHER ALONE OR IN COMBINATION WITH OTHER PRODUCTS. USERS ARE ADVISED TO MAKE THEIR OWN TESTS TO DETERMINE THE SAFETY AND SUITABILITY OF EACH PRODUCT OR PRODUCT COMBINATION FOR THEIR OWN PURPOSES.

Lumirror® is a registered trademark of Toray Industries, Inc. for its range of Polyester Films based on Polyethylene Terephthalate (PET).

© 2009 Toray Plastics (America), Inc.