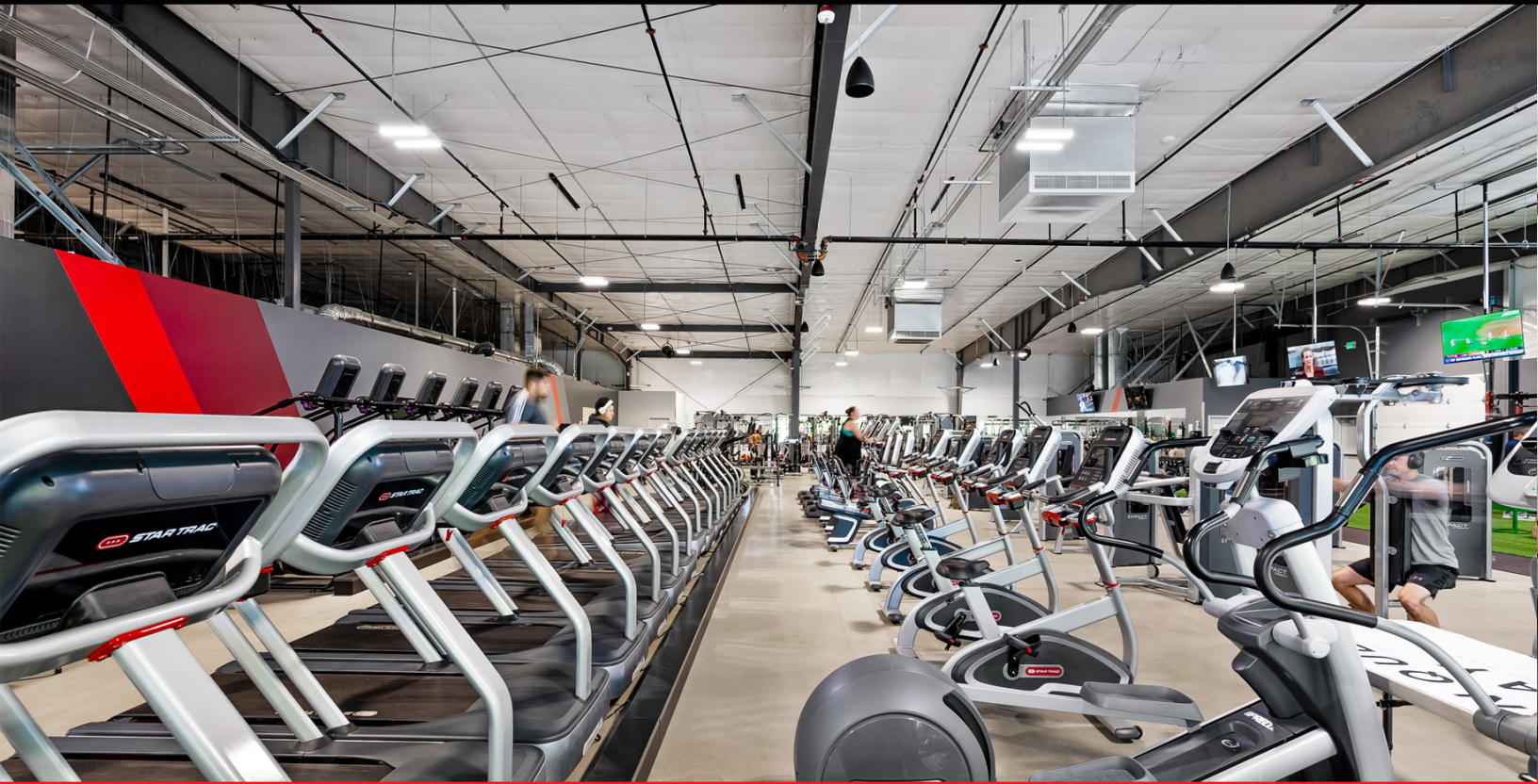




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## ProLiner™ Banded Liner System (Ls)

Provides OSHA-Compliant  
Fall Protection and Meets  
Energy Code Requirements



- **Fall Protection:** Provides leading-edge fall protection<sup>1</sup>
- **Thermal Performance:** Full range of R-values to meet energy code requirements in ALL climate zones<sup>2</sup>
- **Noise control:** Reduces noise transfer from inside and outside of the building, providing superior sound abatement
- **Durable finished appearance:** A low-permeance fabric serves as the vapor retarder, preventing condensation, contributing to air barrier integrity, and providing a brighter, resilient finish
- Meets fire code ratings
- GREENGUARD Certified



For more information about **ProLiner™**,  
contact your local Therm-All  
representative, visit [therm-all.com](http://therm-all.com) or  
call **888-2-INSUL-8**.

**ASHRAE 90.1 Table A2.3.3:  
Assembly U-Factors for Metal Building Roofs**

Insulation System <sup>1</sup>	Rated R-Value of Insulation	Overall U-Factor for Entire Base Roof Assembly
<b>Standing Seam Roof with Thermal Spacer Blocks<sup>a,b</sup> (see below)</b>		
Liner System	R-19 + R-11	0.037
	R-25 + R-8	0.037
	R-25 + R-11	0.031
	R-30 + R-11	0.029
	R-25 + R-11 + R-11	0.026
<b>Standing Seam Roof without Thermal Spacer Blocks</b>		
Liner System	R-19 + R-11	0.040
<b>Through-Fastened Roofs without Thermal Spacer Blocks</b>		
Liner System	R-19 + R-11	0.044

- a. A standing seam roof clip that provides a minimum clip height of 1.5" from underside of roof and top of purlin.
- b. A minimum R-3 thermal spacer is required.

**ASHRAE 90.1 Table A3.2.3:  
Assembly U-Factors for Metal Building Walls**

Insulation System <sup>1</sup>	Rated R-Value of Insulation	Overall U-Factor for Entire Base Wall Assembly
Single Layer in Cavity	R-25 <sup>a</sup>	0.059
	R-30 <sup>b</sup>	0.052
Double Layer	R-25 + R-10	0.047
	R-25 + R-16	0.042
	R-25 + R-10 <sup>c</sup>	0.039
	R-30 + R-16	0.039

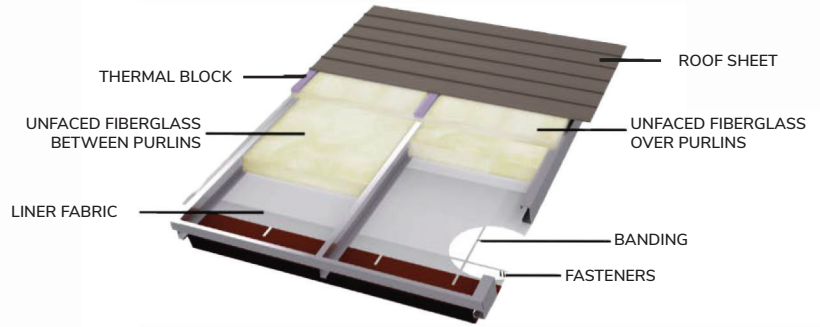
- (Multiple R-values are listed in order from inside to outside.)
- a. A minimum R-0.375 thermal spacer block or thermal break strip is required when installed without continuous insulation.
  - b. A minimum R-0.75 thermal spacer block or thermal break strip is required when installed without continuous insulation.
  - c. A minimum R-3 thermal spacer block is required.

<sup>1</sup> Meets the requirements of OSHA Standard 29 CFR 1926.502 (c){4}(i) and OSHA Standard 29 CFR 1926.760 (a) (1) for leading edge fall protection and OSHA Standard 29 CFR 1926.754 (e){3}(i) covers for roof and floor openings.

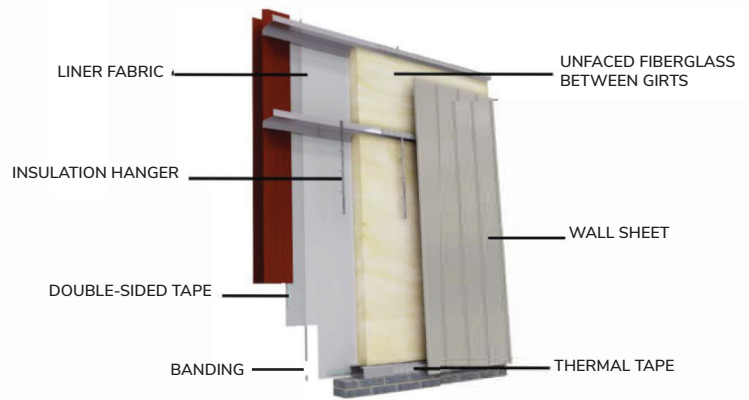
<sup>2</sup> ProLiner™ meets the definition of Liner System (Ls) as described in ASHRAE 90.1 and IECC requirements.

For more information about **ProLiner™**, contact your local Therm-All representative, visit [therm-all.com](http://therm-all.com) or call **888-2-INSUL-8**.

ProLiner™ Roof



ProLiner™ Wall



Learn more at [therm-all.com](http://therm-all.com).

Find more information about **ProLiner™**, including specification guidelines, install instructions, and more on our website.

