

ACRYLITE® Heatstop Extruded Sheet

ACRYLITE® Heatstop acrylic sheet reduces heat build-up indoors

ACRYLITE® Heatstop acrylic sheet is an IR-reflecting sheet that reflects a large portion of incident solar radiation to limit the amount of heat entering a building while allowing an abundance of natural sunlight. This characteristic helps reduce energy consumption and makes ACRYLITE® Heatstop acrylic sheet product that is well suited for “green” buildings.

By using ACRYLITE® Heatstop acrylic sheet in place of traditional acrylic glazing materials, average annual air conditioning costs can be lowered by as much as 33%. At the same time, ACRYLITE® Heatstop acrylic sheet allows natural sunlight to illuminate interiors, reducing dependence on electrical lighting. This makes it ideal for rooftop glazing applications in warehouses, grocery stores, and other large commercial spaces, particularly in the warmer southern climates.

Features and Benefits

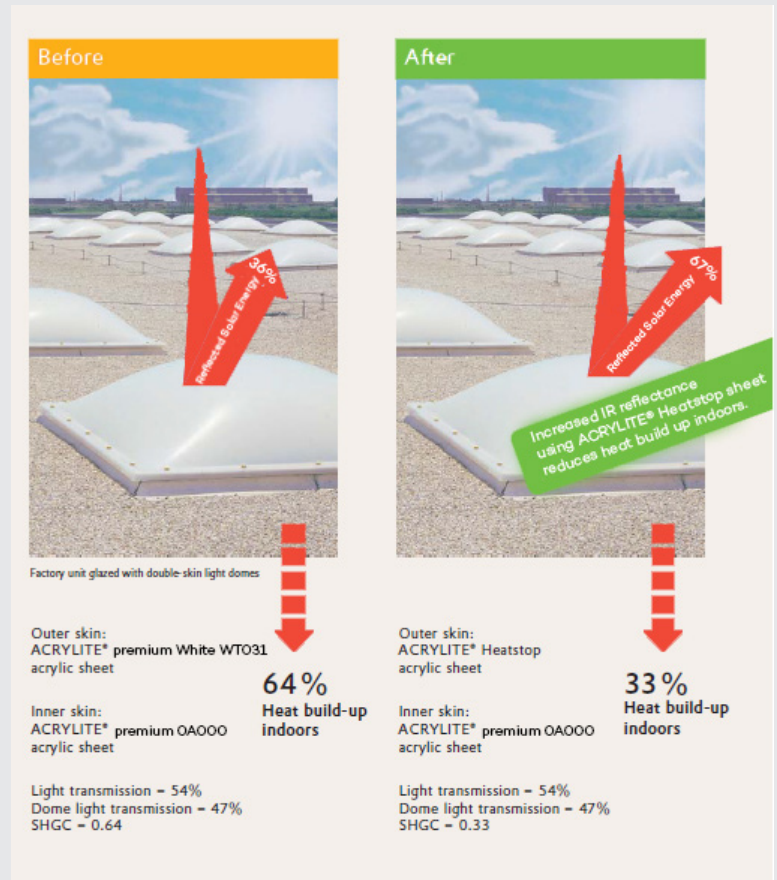
- Proprietary performance formulation provides strong and uniform natural lighting
- IR-reflecting properties help reduce energy costs and lower internal ambient room temperatures
- Forming and cold-curving attributes of traditional acrylic sheet products

Applications

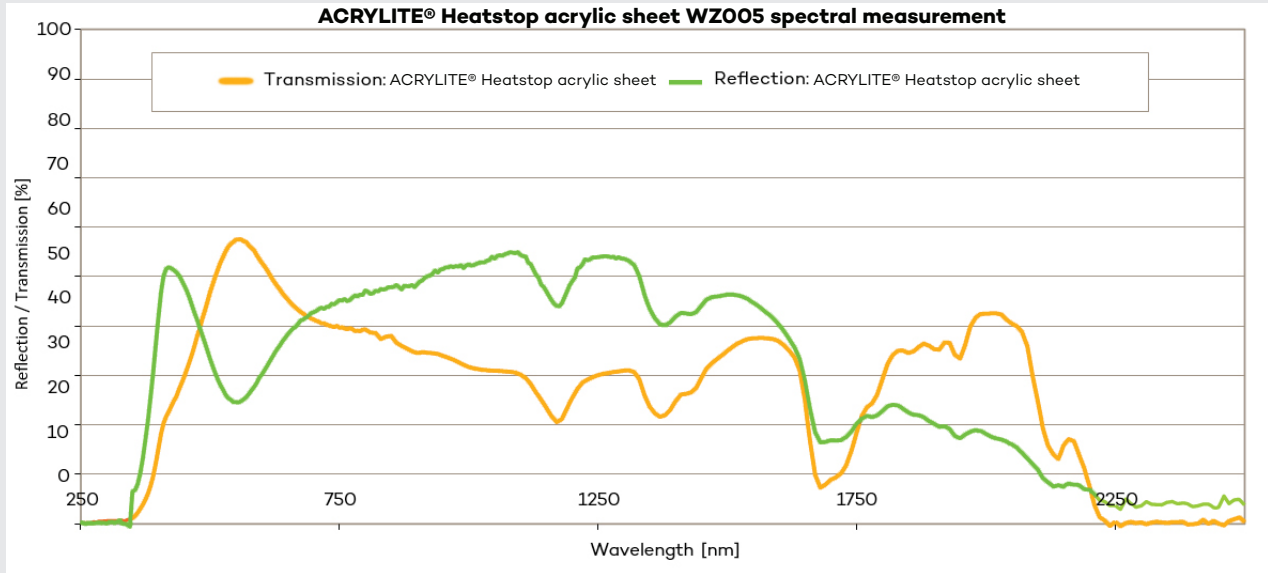
- Skylights
- Light domes
- Solariums
- Bus shelters

Product Offering

Color	Color Number	Size	Thickness
White	WZ005	52" x 100"	0.118" (3mm)



The graph below shows how ACRYLITE® Heatstop acrylic sheet reflects nearly twice the amount of solar energy in the IR range while continuing to transmit the same amount of visible light (about 54%). When replacing standard skylight white diffusing materials with ACRYLITE® Heatstop acrylic sheet, the heat build-up indoors is cut nearly in half, while light transmission stays the same. SHGC in this example is reduced to 33%.



For every square foot of skylight replaced with ACRYLITE® Heatstop acrylic sheet, the savings are as high as \$0.77/sq. ft. This figure can be used for calculating payback periods. As you can see the payback period is very favorable for ACRYLITE® Heatstop acrylic sheet. In applications where air conditioning is not used and there are no savings on air-conditioning energy costs, the number of high-temperature days indoors is reduced by 30%.

Cooling saving per sq-ft of skylight

Location	Warehouse	Grocery Store
Florida	\$0.77	\$0.75
Los Angeles	\$0.43	\$0.48
Detroit	\$0.30	\$0.33
Oakland	\$0.29	\$0.33
Seattle	\$0.19	\$0.21

*72 skylights, 4' x 8' size
Electricity @ \$0.12/kwh; fuel @ \$1.151/therm
3 levels of lighting control
Building size: 29,768 sq. ft.
Grocery store @ 50' candles; warehouse @ 10' candles

ACRYLITE® Heatstop acrylic sheet FAQ's

Are the IR reflecting properties a result of a coating?

No, the performance is not produced with a coating or laminate.

What are its forming properties?

ACRYLITE® Heatstop acrylic sheet is a continuously manufactured acrylic sheet thereby forming at conditions very similar to traditional acrylic glazing materials. In fact, some users have noted reduced cycle times at the same conditions.

What is the light transmission of ACRYLITE® Heatstop acrylic sheet?

The material itself has a 54% light transmission at 3.0 mm thickness, which is the same as the current WTO31 white for skylights. However, the SHGC is cut in half, providing the light while reducing the heat.

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Röhm GmbH and its affiliates are a worldwide manufacturer of PMMA products sold under the PLEXIGLAS® trademark on the European, Asian, African and Australian continents and under the ACRYLITE® trademark in the Americas.

Fire Precautions

ACRYLITE® sheet is a combustible thermoplastic. Precautions should be taken to protect this material from flames and high heat sources. ACRYLITE® sheet usually burns rapidly to completion if not extinguished. The products of combustion, if sufficient air is present, are carbon dioxide and water. However, in many fires sufficient air will not be available and toxic carbon monoxide will be formed, as it will when other common combustible materials are burned. We urge good judgement in the use of this versatile material and recommend that building codes be followed carefully to assure it is used properly.

Compatibility

Like other plastic materials, ACRYLITE® sheet is subject to crazing, cracking or discoloration if brought into contact with incompatible materials. These materials may include cleaners, polishes, adhesives, sealants, gasketing or packaging materials, cutting emulsions, etc. See the Tech Briefs in this series for more information, or contact your ACRYLITE® sheet Distributor for information on a specific product.

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