ACRYLITE®

ACRYLITE[®] Alltop High Impact Multi-Skin Acrylic Sheet

Dimensions in mm



Product

ACRYLITE® Alltop high impact is a light transmitting, heat-insulating and highly weather-resistant sheet made of impact-modified acrylic (polymethyl methacrylate, PMMA) polymer with particularly wide rib spacing. It was designed for commercial, research & institutional greenhouses.

Features and Benefits

- Highest light transmission amongst rigid lightweight glazing materials
- Extraordinary clear sheet is UV-resistant and will therefore not yellow or degrade over time.
- The patented NO DRIP coating is applied on every surface, including inside the channels. The coating allows for maximum light transmission virtually eliminating all condensation droplets on interior and exterior surfaces of the sheet.
- ACRYLITE® Alltop is available in UV absorbing or UV transmitting grades, allowing for optimized plant growth for specific crops.
- Provides up to 40% energy savings and minimizes $\ensuremath{\text{CO}_2}$ emissions
- High impact resistance prevents damage during transportation and installation.

Warranties

Non-prorated, full replacement 30 year non-yellowing (colorless products only), 10 year light transmission and 10 year hail warranties. For details see published warranty.

Applications

- Commercial Greenhouses
- Research & Institutional Greenhouses
- Retail Greenhouses & Garden Centers
- Commercial Enclosures (Zoo, Botanical Garden, Conservatory)

Fabrication and Installation

Please refer to ACRYLITE® Multi-Skin Installation Guidelines for further details.



Product Specifications

ACRYLITE[®] Alltop high impact multi-skin is available to ship from our US warehouse and from our production facility in Germany.

Color	Length	Width	Thickness	Rib Spacing
Clear UV absorbing Clear UV transmitting	up to 36'	47.25" 1200 mm	16 mm	64 mm



ACRYLITE[®] Alltop High Impact

Multi-Skin Acrylic Sheet

Properties

Light transmission (TD65)				
Clear · ORS15 · UV absorbina · 16 mm				
	up to 89 % PAR			
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$Clear \cdot 0RS01 \cdot UV transmitting \cdot 16 mm$	up to 60 % UVA			
	up to 85 % UVB			
Other technical data				
Expansion due to heat and moisture	6 mm/m (1/16"/ft)			
Max. service temperature without load	70°C (160°F)			
Weighted sound reduction index	22 dB			
Approximate Area weight	~ 1 lb/ft2			
ASTM D-365 (Rate of Burn)	C2/CC2			
ASTM D-1929 (Self Ignition Temp)	830° F			
ASTM D-2843 (Smoke Density Rating)	2.0 %			
CAN/ULC S102.2	< 150 Flame Spread Classification			
DIN 4102	B2			

ACRYLITE® Alltop high impact products are available as UV-blocking or UV-transmitting sheet which allow for optimized growing conditions in a controlled greenhouse environment. The UV-blocking versions are suitable for many growing operations not benefitting from UV light. UV-transmitting ACRYLITE® products enable the full natural light spectrum to reach plants resulting in increased plant growth and enhanced plant quality. It also reduces the need for supplemental UV light.



For more technical details please refer to ACRYLITE® Multi-Skin Product Overview.

Enviromental Sustainability

ACRYLITE® Alltop high impact sheet's natural heat insulating qualities can translate into significant energy savings, making them an ideal choice for eco-lighting and building green. ACRYLITE® Alltop is built to last using environmentally sound manufacturing processes in facilities that have received ISO-14001 environmental certification. ACRYLITE® Alltop high impact products naturally hold heat in, reduce shadows, hot spots and burning. Less initial capital investment in heating systems, lights and curtains as well as costly maintenance are required. The sheet has been proven to perform consistently over decades of use in all types of climates throughout the world. ACRYLITE® Alltop's long service life means less replacement costs when compared to inferior glazing materials that must be replaced more frequently, often after just a few years of use. In addition, if the time does come for replacement, ACRYLITE® Alltop's can be recycled in an environmentally friendly manner.

NO DRIP

Compared to other ACRYLITE[®] multi-skin sheets, which have the proven water-dispersing coating on one side only, the ACRYLITE® Alltop sheet is coated on all surfaces, including inside the channels. Therefore, on the outside of the sheet the coating can support the natural cleaning of the roof by rainwater. The NO DRIP coating on the sheet side facing the inside contributes toward preventing any condensed water from forming drops and thus averts the damage caused by condensation. The NO DRIP coating is covered with a protective layer applied during the manufacturing process. This protective layer can be washed off with water and a sponge, or by hosing down the sheet. This activates the NO DRIP coating

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Fire Behavior

The fire behavior of ACRYLITE® is rated as C2 or CC2 according to ASTM D-635. ACRYLITE® burns almost entirely without smoke according to DIN4102 and ASTMD-2843 and is easily extinguished. The smoke gases produced by ACRYLITE® are neither acutely toxic according to DIN 53436, nor corrosive according to DIN VDE 0482-267.

Load Bearing Capacity

Due to its excellent rigidity, large areas can be glazed quickly and efficiently. Few intermediate supports are required to carry substantial uniformly distributed loads (refer to support spacing chart). Reduction of structural members means less shading thus increasing light levels.

16 mm Support Spacing

As a flat glazing supported on all sides, 1200 mm wide 16 mm double-skin sheet requires no additional cross members for uniformly distributed loads up to 15.7 lb/ft² (750 N/m²). For greater loads, please refer to the support spacing chart listed in *ACRYLITE® Multi-Skin Product Overview.*

Maximum allowable spacing is in the direction parallel to the sheet's ribs. Refer to local building codes to determine the applicability of these values to specific applications. Building codes will indicate the design loads to be used to determine the maximum span lengths or support spacing.

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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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