

## ACRYLITE® Alltop High Impact Multi-Skin Sheet

North American Limited Warranty - 10 Year Light Transmission, 10 Year Hail, 30 year non-yellowing

Roehm America LLC warrants that the above product meets the following specifications:

Properties	16 MM
<b>YELLOWNESS</b>	
<b>Yellowness Index</b>	
on delivery	maximum 1
up to 10 years	maximum 5
up to 30 years	maximum 8
<b>LIGHT TRANSMISSION</b>	
<b>Transmittance (TD65)</b>	
on delivery	minimum 86%
up to 10 years	minimum 83%
up to 30 years	minimum 80%
<b>RIGIDITY</b>	
<b>Modulus of Elasticity (E<sub>1</sub>)</b>	
on delivery	minimum 1,800 MPa
up to 10 years	minimum 1,620 MPa
<b>STRENGTH</b>	
<b>Tensile Strength Value (<math>\sigma_M</math>)</b>	
on delivery	minimum 40MPa
up to 10 years	minimum 36 MPa
<b>HAIL RESISTANCE</b>	
up to 10 years	ACRYLITE® hail simulation test, see details on page 2

## EXPLANATIONS

### YELLOWNESS

The yellowness index, YI, is measured per DIN 5036 on cleaned and polished specimens conditioned in a standardized climate at 23°C and 50% relative humidity. Specimens are single-skin only, cut from the top (sun-facing) skin.

### LIGHT TRANSMISSION

The transmittance, TD65, is measured per DIN 5036 on cleaned and polished specimens conditioned to 23°C and 50% relative humidity. Transmittance is measured through all skins, centered between ribs.

### RIGIDITY

The modulus of elasticity, Et, is determined by a tensile test according to ISO 527-2/1B/1 at 23°C. The modulus is the average measurement on five type 1B specimens machined from solid plates of the material according to ISO 2818. Specimens are conditioned to 23°C and 50% relative humidity.

### STRENGTH

The local maximum tensile strength,  $\sigma_M$ , is determined by a tensile test according to ISO 527-2/1B/50. The strength is the average measurement on five type 1B specimens machined from solid plates of the material according to ISO 2818. Specimens are conditioned to 23°C and 50% relative humidity.

## HAIL RESISTANCE

Roehm America only shall be liable for breaks as a direct and exclusive result of impact of hail measuring up to 1 inch in diameter in size (as determined by [www.stormersite.com](http://www.stormersite.com)). Except for this warranty, the Product is not warranted against breaks due to impact of any other type.

Passing the ACRYLITE® hail simulation test means 4 or less breaks produced by 10 hail simulation shots fired at the multi-skin test specimen. A shot is a sphere of PA 66 polyamide with a diameter of 20 mm and an approximate weight of 4.5 g propelled at 21 m/s, impacting with a kinetic energy of approximately 1 Joule. Tests are performed at 23°C on cleaned specimens with a size of at least 610 x 610 mm (24 x 24 inches). According to an expert, a 1 Joule impact is produced by a typical natural hailstone with a diameter of 23 mm (0.91 inches) dropping at 17 m/s (38 mph).

**Hail Simulation Test:** Pellets of polyamide PA 66 with a diameter of 20 mm (weight approx. 4.5 g) are propelled against the weathered surface at speed of 21 m/s, corresponding to a kinetic energy of 1 joule, at room temperature. According to an expert, a natural hailstone of 23 mm (~0.9") in diameter has an average impact velocity of 17 m/s (~56ft/s), corresponding to a kinetic energy of 1 joule. Furthermore, hailstone study has established that the average frequency of hailstones of more than 10 mm in diameter is only 2.9%. Hailstones of a greater diameter are less frequent.

## TERMS OF LIMITED WARRANTY

### TERMS OF LIMITED WARRANTY, EXCLUSIONS

The products must have been stored, transported, processed, installed and used in accordance with the requirements of the subject materials. They must not have been thermally formed or exposed to the detrimental effects of harmful chemicals.

## DURATION OF LIMITED WARRANTY

This warranty begins with the day of delivery to the purchaser and expires upon deinstallation of the first application, negligent, intentional or willful destruction, or 10 or 30 years, depending on the specifications shown above.

THE FOREGOING IS THE SOLE WARRANTY APPLICABLE TO THE ACRYLITE SHEET DESCRIBED HEREIN, EXPRESS OR IMPLIED. ALL OTHER WARRANTIES, INCLUDING BUT NOT LIMITED TO THE WARRANTY OF MECHANICALITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY EXPRESSLY EXCLUDED.

The sole liability of Roehm America in respect of ACRYLITE sheet shall be the replacement of any sheet found by Roehm America not to meet this warranty or, at the option of Roehm America, the refund of the purchase price therefor. Roehm America shall have no liability under any circumstances for the cost of removal of non-conforming product or the installation of replacement product, or for damage to property, or for indirect, incidental, or consequential damages.

Any claims shall exclusively be determined and governed by the version of this warranty statement valid on the date of purchase of the material in question.

## IN CASE OF A LIMITED WARRANTY CLAIM

Any rights or claims raised hereunder shall be subject to the following:

- The purchaser must present Roehm America LLC with a bill from the seller showing the name and address of the purchaser, date of purchase, full product type/name and the product quantity so purchased.
- Roehm America LLC will be permitted access without delay to inspect the product and its potential non-conformance on site, or to have another party do so on our behalf.

## CONSUMER RIGHTS, APPLICABLE LAW & JURISDICTION

This warranty does not affect or restrict any rights or claims specifically available to consumers under applicable law. This warranty shall exclusively be governed by and construed under the laws of the State of New Jersey, as applicable on the date of purchase of the goods in question, without giving effect to conflict of laws principles. The exclusive place of jurisdiction for any rights or claims from this warranty shall be New Jersey.

**Roehm America LLC**  
Acrylic Products

1796 Main Street  
Sanford, ME 04073  
USA

[www.acrylite.co](http://www.acrylite.co)  
[www.roehm.com](http://www.roehm.com)

**1-855-202-7467**  
[info@acrylite.co](mailto:info@acrylite.co)

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