

# ACRYLITE® Alltop high impact acrylic double-skin sheet – clear

## North American Limited Warranty

10 Year Light Transmission, 10 Year Hail, 30 Year Non-Yellowing

Evonik Cyro LLC warrants that the above product meets the following specifications:

<b>16 mm UV transmitting and UV blocking</b>	
<b>Yellowness</b>	
<b>Yellowness Index</b>	
typical on delivery	max. 1
after 10 years	max. 2
after 30 years	max. 4
<b>Light Transmission</b>	
<b>Transmittance ( <math>\tau_{D65}</math> )</b>	
typical on delivery	89%
guaranteed on delivery	86%
after 10 years	83%
after 30 years	80%
<b>Rigidity</b>	
<b>Modulus of Elasticity ( <math>E_1</math> )</b>	
typical on delivery	min. 1,800 MPa
after 10 years	min. 1,800 MPa
<b>Strength</b>	
<b>Tensile Strength Value ( <math>\sigma_M</math> )</b>	
typical on delivery	min. 40 MPa
after 10 years	min. 35 MPa
<b>Hail Resistance</b>	
after 10 years	no break
<b>Combustion Behavior</b>	
Colorless ACRYLITE® burns nearly smoke-free and produces no acutely toxic flue gases. ACRYLITE® is considered harmless in this respect. All product types and designs do not change their combustion behavior within a 30-year period.	

## EXPLANATIONS

### YELLOWNESS

Colorless, transparent ACRYLITE® has a yellowing value of 0-1 when new. Depending on product type and design, the yellowing value is only 4-7 delta higher after 30 years. The yellowing value is measured as per DIN 5036 on cleaned and polished specimens conditioned in a standardized climate at 23°C/50% RH until equilibrium is reached.

(**Note:** Measurements of ACRYLITE® multi-skin sheets are made on the upper skin.)

### LIGHT TRANSMISSION

Colorless ACRYLITE® has a light transmission when new of up to 92% depending on product type and design. Depending on product type and design, light transmission is only 2-15% lower after 30 years. The transmission factor  $\tau_{D65}$  is measured as per DIN 5036 on cleaned and polished specimens conditioned in a standardized climate at 23°C/50% RH until equilibrium is reached.

### RIGIDITY

The modulus of elasticity  $E$ , is determined in the tensile test according to ISO 527-2/1B/1 at 23°C as the average value measured on five specimens with parallel faces, which have been conditioned to the equilibrium state in the standard climate of 23°C/50% RH.

### STRENGTH

The tensile strength  $\sigma_M$  is determined in the tensile test according to ISO 527-2/1B/50 at 23°C as the average value measured on five specimens with parallel faces, which have been conditioned to the equilibrium state in the standard climate of 23°C/50% RH.

### HAIL RESISTANCE

Breakage by hail within the meaning of this guarantee is defined as at least 5 holes at different points in the surface of multi-skin or corrugated sheets produced by 10 shots during the hail simulation test described below.

**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.

### COMBUSTION BEHAVIOR

Light absorption by smoke is measured according to DIN 4101-1 Annex B. ACRYLITE® burns nearly smoke-free, i.e. light absorption by the smoke is < 15%. The acute toxicity of flue gases is measured as per DIN 53436.

### CONTINENTAL NORTH AMERICA



## TERMS OF LIMITED WARRANTY

### TERMS OF LIMITED WARRANTY, EXCLUSIONS

All values shall be determined using cleaned specimens. In case of complex profiles, the measured values shall be determined on flat and plane-parallel specimen, since otherwise the material values cannot be determined with sufficient accuracy. Textured semi-finished goods – only on the more roughly textured side if both sides are textured – must be measured with the textured side facing the light source, at the original thickness. 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 moulded or exposed to detrimental effects of harmful chemicals. For information on proper use, care and deployment of our products, go to [www.acrylite.net](http://www.acrylite.net) on the internet and see the relevant print publications.

### 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 on page 1. 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 MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY EXPRESSLY EXCLUDED.

The sole liability of Evonik Cyro in respect of ACRYLITE sheet shall be the replacement of any sheet found by Evonik Cyro not to meet this warranty or, at the option of Evonik Cyro, the refund of the purchase price therefor. Evonik Cyro 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 Evonik Cyro 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.
- Evonik Cyro 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.

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