

# Makrolon AR Warranty



## SEVEN-YEAR LIMITED WARRANTY

If MAKROLON AR sheet breaks, incurs coating failure, exhibits excessive increased haze, or exhibits excessive yellowing or loss of light transmission, in each case within seven (7) years from the date of sale due to manufacturing defect and subject to the definitions and conditions set forth herein, then the purchaser will receive a free replacement sheet, provided the failed sheet, original sales receipt and this warranty are returned to the original dealer. If a replacement sheet cannot be provided within fourteen (14) days, A&C Plastics, Inc. may opt to refund the original sheet purchase price.

### CONDITIONS:

This warranty applies only when MAKROLON AR sheet is used in flat vertical architectural glazing, excluding specifically transportation, outdoor recreational, and off-road vehicle applications, cleaned and installed in sash according to Sheffield Plastics Inc. recommendations (see reverse side for cleaning recommendations). This warranty does not cover (re)installation expenses or any other direct or indirect loss(es) which may result from the sheet failure.

**Breakage:** The warranty against breakage applies only to sheet fabricated, installed, and cleaned according to A&C Plastics, Inc. recommendations. MAKROLON AR sheet is substantially stronger than acrylic and resists impact, abuse and vandalism. However, no material can be described as unbreakable, for it is impossible to account for all types of usage.

**Coating Failure:** The warranty against coating failure applies when the abrasion-resistant surface treatment exhibits flaking of the surface treatment or loss of adhesion between the surface treatment and the substrate sheet, either of which is visibly detectable without the aid of instruments.

**Abrasion Resistance:** The coated sheet will not exhibit an increase in haze of more than 15%. Criteria: The sample as manufactured shall be abraded according to Test ASTM D-1044 (Taber Abrader) for 100 cycles with a 500 gram load.

**Yellowing and Light Transmission:** The warranty against loss of light transmission applies only to clear transparent MAKROLON AR sheet with the abrasion resistant surface treatment. The Yellowness Index (YI) of MAKROLON AR sheet (clear only) cleaned according to the recommendations of A&C Plastics, Inc. shall be less than 5.0 during a five-year period from the date of sale, and shall be less than 10 during a seven-year period from the date of sale as determined according to ASTM D1925 (1977) modified by Sheffield Plastics Inc. as measured with a Hunter Ultrascan spectrophotometer. The light transmission characteristics of MAKROLON AR sheet, cleaned according to the recommendations of A&C Plastics, Inc., shall not decrease (from its initial manufactured value) by more than 5% during a five-year period from the date of sale nor by more than 7% during a seven-year period from the date of sale when tested by the procedure specified in ASTM D1003 modified by A&C Plastics, Inc.

This warranty is limited to excessive yellowing and light transmission losses due to the degradation of MAKROLON AR sheet and does not cover yellowing or light transmission losses due to dirt, atmospheric deposits, abrasion, or changes in the physical structure of the MAKROLON AR sheet. Nor does this warranty cover exposure to adverse or hazardous chemical or environmental substances or conditions as determined by the manufacturer (including but not limited to those identified in the manufacturer's fabrication guide). You should be aware that all glazing and outdoor sign materials are subject to irreversible depositions of atmospheric elements and can be expected to show signs of hazing eventually. Regular proper cleaning will significantly reduce, but not eliminate, that process (see reverse side for cleaning and maintenance instructions). This warranty does not cover hazing caused by physical abuse including failure to clean according to the instructions on the reverse side.

The warranties stated in this publication are the only warranties made by A&C Plastics, Inc. with respect to MAKROLON AR sheet and are in lieu of all warranties, written or oral, statutory, expressed or implied, including any warranty of merchantability or fitness for purpose.

A&C Plastics, Inc. shall not be liable for any special, consequential, or incidental damages arising out of the use or application of MAKROLON AR sheet whether a claim for damages is based upon warranty, contract, tort or any other legal theory. Under no circumstance shall A&C Plastics, Inc. be liable for any amount greater than the original price purchaser paid for the MAKROLON AR sheet.

The remedies provided herein are purchaser's sole and exclusive remedies.

**NOTICE:** This dealer is authorized to fulfill the above obligations of this warranty to the purchaser at the expense of

# Makrolon AR Warranty



This limited warranty must be completed by the dealer at the time of sale.

CUSTOMER NAME: \_\_\_\_\_

DEALER NAME: \_\_\_\_\_

DATE OF SALE: \_\_\_\_\_ A&C PLASTICS LOT NUMBER: \_\_\_\_\_

## **CLEANING PROCEDURES & CLEANING AGENTS**

The proprietary UV- and abrasion-resistant surface coating on MAKROLON HYZOD AR significantly improves long-term performance. Periodic cleaning using proper procedures and compatible cleaners is recommended to prolong service life.

For general cleaning, it is recommended that the following instructions and cleaning agents be used.

### **PROCEDURES:**

1. Wash with a mild solution of soap or detergent and lukewarm water.
2. Using a soft cloth or sponge, gently wash the sheet to loosen dirt and grime and rinse well with clean water.
3. To prevent water spotting, thoroughly dry with chamois or cellulose sponge.
4. Avoid the use of abrasive cleaners, squeegees and/or other cleaning implements that may mar or gouge the coating.

### **AGENTS: CLEANING AGENTS WHICH HAVE BEEN FOUND TO BE COMPATIBLE WITH MAKROLON HYZOD AR SHEET UNDER LABORATORY CONDITIONS**

#### Aqueous Solutions of Soaps and Detergents

Windex<sup>1</sup>      Joy<sup>2</sup>      Mr. Clean<sup>2</sup>      Fantastik<sup>3</sup>      Formula 409<sup>4</sup>

<sup>1</sup>Registered Trademark of the Drackett Products Company.

<sup>2</sup>Registered Trademarks of Procter & Gamble.

<sup>3</sup>Registered Trademark of Texize, Division of Norton Norwich Products Inc.

<sup>4</sup>Registered Trademark of the Clorox Company.

#### Organic Solvents

Butyl Cellosolve Hexcel, F.O. 554      Kerosene NelecoÜPlacer      Naptha (VM&P) grade Turco 5042  
Alcohols Methanol and Isopropyl Alcohol

All residual organic solvents should be removed with a secondary rinse.

### **GRAFFITI REMOVAL:**

- A. Butyl cellosolve (for removal of paints, marking pen inks, lipstick, etc.). The use of masking tape, adhesive tape or lint removal tools works well for lifting off old weathered paints.
- B. To remove labels, stickers, etc., the use of kerosene or VM&P naphtha are generally effective.

If the solvent will not penetrate sticker material, apply heat (hair dryer) to soften the adhesive and promote removal.

**IMPORTANT:** If a material is found to be incompatible in a short-term test, it will usually be found to be incompatible in the field. The converse, however, is not always true. Favorable performance is no guarantee that actual end-use conditions have been duplicated. Therefore, these results should be used as a guide only and it is recommended that the products be tested under actual end-use conditions by the user.



**Service. It's what we deliver.**

1.800.231.4175 www.acplasticsinc.com