

**Short Form Specifications**  
**Twinfix® Insulated Glazing Systems**  
**226 Rafter Bar System**  
**Multilink & 280 Aluminum Structural Glazing Bar System**

**PART 1 GENERAL**

**1.01 Summary**

A. Section Includes:

1. **Multiwall Polycarbonate Sheet** (design professional choice) ® U.V. resistant, insulating, impact resistant type multi wall polycarbonate plastic glazing.
2. Compact Polycarbonate Sheet U.V resistant (1 side, 2 sides), impact resistant, single walled polycarbonate plastic glazing.

B. Related Sections:

1. Section 07820 - Metal Framed skylights.
2. Section 07900 -Joint sealers: sealant and backup materials.
3. Section 08841 - Plastic glazing.
4. Section (\_\_\_\_\_ - \_\_\_\_\_).

**1.02 References:**

- \* American Society for testing and materials (ASTM)
- \* Glazing Standards: National Greenhouse Manufacturers Association (NGMA).  
Design loads in greenhouse structures.
- \* Multiwall Polycarbonate Sheet (Design Professional Choice) Technical Data
  1. D792: Physical Specifications for specific gravity.
  2. D1003: Physical Specifications for light transmission.
  3. D638: Mechanical specifications for tensile modulus.
  4. D372: Mechanical specifications for shear modulus.

5. D696: Thermal specifications for coefficient of thermal expansion.
6. D648: Thermal specifications for heat deflection temperature.
7. D236: Thermal specifications for energy efficiency (desired U Value).
8. D1925-77 Yellowness index over time.
9. D1003-77 Light transmission over time.

### **1.03 Submittals:**

A. Submit product data and samples under provisions of section 01300 / 01340.

B. Product data:

1. Submit catalogs cuts and charts showing properties, recommended installation details, instructions, and glazing procedures.
2. Charts shall include data such as wind load, weights, shading coefficients, thermal expansion, U Values, and U.V. Light transmission.

C. Samples:

1. Submit MJK Glazing System glazing in profile, and in color as selected; approximately 8x8 in.
2. One frame corner, schematic details or Cad drawing if applicable, showing glazing method.

D. Warranty

- 1.) Ten year written limited warranty against yellowing (clear sheet only) loss of light transmission (Hazing) and five year warranty against hail breakage. ASTM 364 EMMAQUA for U.V testing basis or equivalent is acceptable

### **1.04 Quality Assurance:**

A. Qualifications - Installer glazing contractor, carpentry contractor - specializing in vertical and sloped glazing; greenhouse structures; pool enclosures with the commensurate skill and experience - recommended (5 years) and approved by manufacturer.

B. Submittal of contractor / detailers shop drawings for review indicating: pitch, location, ridge, eave, edge, flashing, taping, and "point fastening" details where

necessary -identifying sealing and “weeping\* details and expansion allowances as indicated by the glazing system manufacturer.

C. Submittal of Loading charts indicating in Lbs/sq. ft. or in Newton's / sq. m positive and negative loading details, for the gauge width and length to be used.

D. Regulatory requirements:

1. Under the Uniform Building Code (UBC).

ASTM D 2643 - Smoke Density - Less than 75

ASTM D 635 - Rate of Burn - CC-1 or CC-2

Above tests must be submitted as written by qualified test labs showing actual data.

ASTM D 1929: - Self Ignition - 650°F or greater.

2. Independent testing for weathering under QUV accelerated weathering and or Xenon testing, by an independent lab, to the equivalent of 10 years outdoor weathering; as a confirmation of warranty.

3. Hail damage test/ and or warranty - shall remain unbroken in accord with hail at 3/4 inch with surface impact @ 68 ft./ sec.

### **1.05 Delivery, storage, handling.**

A. Deliver, store and handle under provisions of sections O1600/01610 or Manufacturers printed instructions. All provisions MUST be in writing.

B. Store sheets flat in packaging, on pallets or boxed: or on edge: out of sunlight, under opaque covering, in a designated location with low humidity and a temperature below 80°F.

### **1.06 Warranty:**

A.). Ten year written non-prorated warranty against yellowing, loss of light transmission and three years against hail damage.

## **PART II PRODUCTS**

### **2.01 Manufacturer/s:**

**A.** Polycarbonate Multiwall Manufacturer (Design Professional Choice). - (Polygal®, Lexan Thermoclear®, Macrolux®, Macrolon®, Sunlite®). Sheet must be either manufactured in or manufactured offshore and stocked in North America.

**B.** Twinfix® Multi-Link, 280 Bar, 226 Bar, Starlight Glazing System  
MJK Multiwall Systems, LLC  
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Drexel Hill Pa. 19026  
[sales@multiwallsystems.com](mailto:sales@multiwallsystems.com)  
[www.multiwallsystems.com](http://www.multiwallsystems.com)

## **2.02 Materials:**

**A.** Sheet: U.V. Resistant, insulating type, double / triple / Quad / wall polycarbonate plastic glazing: Colors: Clear Bronze, Opal (white) Gauge: 6mm, 8mm, 8mm Triple, 10mm, 16mm, 25mm

- High performance Premium glazing: 16mm (Titan, RFX, Primalite, Polyshade, Triple Clip) or 25mm (Thermogal, Primalite).

**B.** Sheet UV resistant, single ply, corrugated type glazing: Colors: Clear, Bronze, Opal (white) Gauge: .031 thick 49.5 inches by 96, 144, 192 inches.

**C.** Glazing accessories: as recommended by the glazing manufacturer for dry and wet glazing installations.

**D.** TWINFIX Multi-Link Friction fit, 226, Starlight Glazing System or 280 Gasketed Glazing System

## **PART III EXECUTION**

### **3.01 Examination**

**A.** Verify that prepared openings are in accordance with recommendations of the plastic glazing manufacturer. If a skylight - verify ridge and eave/ sill details, flashing, weeping, fastening, pitch and water flow.

1. Verify that all openings are correctly sized and within tolerances.
2. Verify that storage, fabrication, installation, cold bending; fastening; thermal expansion; load resistance; and cleaning specifications are being followed.

3. ALL recommendations/ exceptions are to be in writing or drawing format.

**B. BEGINNING** of installation means acceptance of substrate and above...

### **3.02 Preparation**

**A.** Clean contact surfaces with solvent compatible with Glazing sheet and system and wipe dry.

**B.** Measure opening, determine recommended edge engagement and expansion allowance; determine compatibility of gaskets/sealants: Cut to required size: Clear flutes of wasted dust; seal bottom edge with authorized "vent tape" (porous) and top edge with authorized solid foil tape - with acrylic based adhesive.

**C.** Installation:

1. When installing, allow for expansion and contraction.
2. Install sheet with ribs running vertically for exterior applications.
3. Multiwall has an exterior UV protected side - identified with masking.
4. Moisture should be allowed to drain from bottom of sheet. Drill weep holes in horizontal support extrusions per approved shop drawings (see fabrication and installation guides)
5. Tape sheet according to instructions: Using Solid & Vented variety

### **3.20 Cleaning Instructions**

**A.** To maintain sheet performance, use proper cleaning and maintenance procedures and chemically compatible cleaners.

**B.** Cleaning and Maintenance instructions:

1. Rinse sheet with lukewarm water or,
2. Wash sheet with a mild soap and lukewarm water or,
3. Use a wet soft cloth, sponge and gently wash to loosen dirt and grime - DO NOT SCRUB. .
4. Repeat if necessary and rinse.
5. Manufacturers phone 610-659-1647

Systems illustrated are compatible with the following Polycarbonate Sheet manufacturers. The same fabrication techniques are common to all:

**Polygal®** is a registered Trademark of Polygal Inc.

**Macrolux®** is a registered trademark of Co-Ex Corp

**Lexan®** is a Registered Trademark of General Electric Co.

**Flexlite®** is a registered Trademark of General Electric Co

**Thermoclear®** is a registered Trademark of General Electric Co

**Marlon®** is a Registered Trademark of Brett Martin LTD.

**Twinfix®** is a registered Trademark of Twinfix UK

**Multilink®** is a registered Trademark of Twinfix UK

**Sunlite®** is a registered Trademark of Palram Inc.

MJK Multiwall Systems, LLC

[www.multiwallsystems.com](http://www.multiwallsystems.com)

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