



**INTERNATIONAL STANDARD GUIDE**  
**Standard for Preservation Glazing Materials**

GLZ-2001  
Adopted-2000  
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### **1.00 Purpose**

- 1.01 To establish a standard quality guide for those non-visual glazing characteristics not easily recognized by the end user.
- 1.02 To establish the minimum percentage for any glazing glass or acrylic to be recognized as having increased UV blocking.
- 1.03 To establish a minimum percentage for any glazing glass or acrylic to be recognized as having increased anti-reflective qualities.

### **2.00 Scope**

- 2.01 This guide covers only those qualities of Anti-reflectivity and UV blocking not easily determined when selecting a glazing material. No other glass qualities such as thickness, clarity or composition are addressed as they are considered to be easily recognized.
- 2.02 This guide addresses the minimum percentages for UV Blocking and Anti-reflective.

### **3.00 Terminology**

- 3.01 FACTS Standard Terminology, (latest chapter or revision) and Random House Webster's Dictionary 1999.
- 4.02 Terminology Format—The following words are defined to clarify the importance of the articles, sections or formats, and to identify those that are mandatory.

"Shall" is used to indicate that a provision is mandatory.

"Should" is used to indicate that a provision is not mandatory, but recommended as good practice.

"May" is used to indicate that a provision is optional.

- 4.03 "Consensus" majority of opinion.
- 4.04 "Glazing" includes both glass plastic.
- 4.05 Acrylic Sheet A solid (monolithic), thermoplastic sheet made from acrylic polymer for the picture framing and museum industries.
- 4.06 Anti-reflection The phenomena of reducing light reflection on the surface of a material and increasing its transmission at the same time.
- 4.08 UV Blocking Glass and Acrylic Also called UV Absorbing, UV Filtering, UV Protective The ability of a material to block or not transmit UV light.

### **5.00 Normal Glazing Materials**

- 5.01 UV Blocking qualities normal glazing (glass or acrylic) glass (soda-lime float glass), in thicknesses normally used for picture framing (2.0 – 3.0 mm) blocks about 40 percent of the UV light in the 300 to 400 nm range. Acrylic, in the same thicknesses, blocks about 66 percent of the UV. To be considered to have UV blocking qualities the percentage must be increased above these base amounts.
- 5.02 Anti-reflective qualities normal glazing (glass or acrylic) glass (soda-lime float glass), in thicknesses normally used for picture framing (2.0 – 3.0 mm) reflects about 8% of visible light and, transmit from 89 to 92%. To be considered to have Anti-reflective qualities the percentage must be reduced below these base amounts.

### **6.00 Requirements for UV Blocking**

6.01 For any glass or acrylic product to meet the requirements for the definition of a UV Blocking Glazing, it must be treated or modified in such a way that it blocks or absorbs more UV light than the untreated substrate material. This increased UV Blocking must be greater than collective glass, acrylic base of 70 percent UV blocking. The greater the percentage of UV blocking, the more effective the product will be.

6.02 The requirement for any glazing to be recognized as having significant **UV Blocking Qualities** shall be no less than 70 percent of all light in the 300 to 400 nanometer range.

### **7.00 Requirements for UV Anti-reflective**

7.01 For any glass or acrylic product to meet the requirements of the definition of Anti-reflective glazing, the reflection must be reduced to a value less than the base value and the transmission must be increased to a value higher than that for the untreated substrate material. This reduction must be less than the collective glass, acrylic base value of 8 percent, The lower the percentage of reflection and the higher the percent transmission, the more effective the product will be.

7.02 The requirement for any glazing to be recognized as having significant **Anti-reflective Qualities** shall be no greater than 7 percent.

### **8.00 Test Methods**

8.01 UV Blocking Glass or Acrylic 300 to 400 nanometer range. (ASTM standard to be included)

8.02 Anti-reflective Glass or Acrylic  $\frac{3}{4}$ Reduced reflection, increased transmission (ASTM standard to be included))

### **9.00 Packaging & Identification Marking**

9.01 General Labeling $\frac{3}{4}$ Each package of glass or acrylic should bear a label, affixed by the manufacturer, giving the manufacturer's name or trademark, the type of glass, nominal thickness, and place of manufacture.

9.02 Standard Labeling  $\frac{3}{4}$ Each package of glass or acrylic representing increased UV Blocking or Anti-reflective qualities should state that it meets or exceeds this standard and include the UV blocking percentage number and/or anti-reflective index number.

### **10.00 Inspection**

10.01 It is the responsibility of the purchaser to examine all shipments of glazing, and determine whether it complies with the purchase order and/or the above-suggested requirements.

### **11.00 Referenced Documents**

11.01 Facts Glazing Terminology 2000

### **12.00 Patent Rights and Standards Review**

12.01 FACTS takes no position respecting the validity of any patent rights asserted in connection with any item mentioned in this standard. Users of this standard are expressly advised that determination of the validity of any such patent rights, and the risk of Infringement of such rights, are entirely their own responsibility.

12.02 All FACTS standards are subject to revision at anytime by their responsible technical committee and must be reviewed every five years.