Safety Glazing

The Consumer Product Safety Commission (CPSC) developed the guidelines for Testing and Certifying Safety Glazing Glass Products used in Architectural applications of glass products (Glass Products used in Windows for Residential and Commercial Applications). This Certification Process can be certified through an independent organization SGCC (Safety Glazing Certification Council) or by self-certifying the product. Cardinal has elected to use SGCC to conduct independent testing of our products to assure our customers and ourselves that we are supplying safety glazing materials that meet the requirements of CPSC and SGCC. Cardinal permanently logo's our glass products used in safety glazing applications to indicate that we meet the requirements of SGCC and CPSC.

The local and national building codes recognize the CPSC 16 CFR 1201 Cat I and Cat II (Category I and Category II) as the standard that must be met for glass products used in windows. Cat I is for products less than 9 square feet and Cat II is for products of unlimited size. The testing requirements for Cat I and Cat II are different with Cat II being more stringent.

For ANSI Z97.1 2015 (American National Standards Institute), the testing for certification is very similar to what is required to meet the CPSC standard requirements. The local and national building codes for safety glazing glass products recognizes the ANSI Z97.1, 2015 criteria for safety glazing products used in applications other than windows, i.e., aquariums, freezer doors, interior applications (i.e. malls), handrails, etc. All Cardinal plants supply safety glazing glass products for these applications and therefore are in the composite program of SGCC (CPSC and ANSI). To be in the composite program additional testing of safety glazing materials needs to be done and the CPSC 16 CFR 1201 Cat II, ANSI Z97.1, and SGCC identifier logo will be placed on the glass. In addition, most of Cardinal plants are certified to the Canadian Standard CAN/CGSB 12.1-M90.

Safety Glazing may be required to meet local and/or national building codes. The Safety Glazing Certification Council (SGCC) provides for the certification of safety glazing materials found to be in compliance with 16 CFR 1201, ANSI Z97.1, Canadian Standard CAN/CGSB 12.1-M90.

The information in this Technical Service Bulletin is subject to the disclaimers and other limitations appearing in the TERMS AND CONDITIONS that accompanies this Bulletin and at www.cardinalcorp.com.

	ANSI Z-97.1-2015	CPSC 16 CFR 1201 I	CPSC 16 CFR 1201 II
Use of Standard	To test and identify glasses as safety glazing materials which will be used in locations where required in building codes. Monolithic annealed glass in any thickness, is not considered a safety glazing material under this standard.	To test and identify glasses as safety glazing materials which will be used in any location that is subject to human impact resistance requirements (limited to products having an area not greater than 9 sq. ft.)	To test and identify glasses as safety glazing materials which will be used in any location that is subject to human impact resistance requirements (unlimited size)
Impact Test Requirements	Class A: 100# bag dropped from height of 48 inches Class B: 100# bag dropped from height of 18 inches	100# bag dropped from height of 18 inches	100# bag dropped from height of 48 inches
Evaluation Criteria for Tempered Glass to Pass Standard	a. No fracture at specified Class drop height or, b. If fracture occurs at the specified Class drop height, the ten largest crack free particles shall not weigh more than 10 square inches of the glass tested	a. The ten largest crack free particles shall not weigh more than 10 square inches of the glass tested b. If no fracture occurs from impact test, the glass is to be broken using center punch test.	a.The ten largest crack free particles shall not weigh more than 10 square inches of the glass tested. b.If no fracture occurs from impact test, the glass is to be broken using center punch test.
Evaluation Criteria for Laminated Glass to Pass Standard	a. No fracture at specified Class drop height or, b. If fracture occurs at the specified Class height, no hole through which a 3 inch diameter sphere will freely pass is allowed	a. No fracture at 18 inches or, b. If fracture occurs at specified Category height, no hole through which a 3 inch diameter sphere will freely pass is allowed. c. If particles are detached from the test specimen, they cannot weight more that the equivalent mass for 15.5 in^2. d. The single largest detached particle cannot weigh more than the equivalent mass for 6.82 in^2.	a. No fracture at 48 inches or, b. If fracture occurs at specified Category height, no hole through which a 3 inch diameter sphere will freely pass is allowed. c. If particles are detached from the test specimen, they cannot weight more that the equivalent mass for 15.5 in^2. d. The single largest detached particle cannot weigh more than the equivalent mass for 6.82 in^2.