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## Vacuum Insulating Glass (VIG) ANSI Interpretation and SGCC Frequently Asked Questions (FAQ)

VIG is a developing technology and these guidelines will be subject to future updates and revisions.

The ANSI Z97.1 committee has issued two TI's (Technical Interpretation(s)) on VIG (Vacuum Insulating Glass) testing. Please visit <https://www.ansiz97.com/ansi-z971-2015-r2020-interpretationmodification-requests> (TI-17.0223.001 and TI-16.06.001) for these and other ANSI Z97.1 Technical Interpretations (also attached as **Appendix A**). See below FAQs SGCC has assembled.

1. Q- Does SGCC certify vacuum insulating glass (VIG), and how is it tested?  
 A- SGCC provides certification to ANSI Z97.1-2015. There has been some question as to how vacuum insulating glass (VIG) would be tested. On July 14th, 2016 and February 23, 2017, the ANSI committee rendered the Technical Interpretations (TI 2016.0624.001 VIG and TI 2017.0223.001). In summary, a VIG must be tested in a "final product" condition as a unit after the complete VIG process. Special instruction is provided for handling what is referred to as "composite perimeter fragments". With passing test results in accordance with ANSI Z97.1-2015 and these TI's, SGCC would offer certification.
2. Q- How long is the testing?  
 A- VIG testing for SGCC certification should take no longer than normal (tempered, laminated) testing. If advanced arrangements are made with the test lab, we have seen testing complete in a matter of days from receipt at the lab.
3. Q- What are the requirements for samples?  
 A- See ANSI TI 2016.0624.001 and TI 2017.0223.001 VIG which requires testing in a "final product" condition. Other sample requirements (size and quantity) are the same as normal tempered and laminated glass. Each nominal thickness combination should be tested and certified separately and this will cover any nominal thickness combinations within the certified products. For example testing of 4+4mm and 5+5mm would certify any combination of 4 or 5 mm. Vacuum space width shall not be a factor in certification other than to determine overall nominal thickness to be certified.
4. Q- What is the cost?  
 A- The selected lab would need to be consulted for testing fees, but we would expect the fee to be at or near normal tempered or laminated glass testing. Certification fees would be the same as the SGCC published fees.
5. Q- Is low-E required in the test samples?  
 A- Application of SGCC guidelines would be the same as for non-VIG. See SGCC guideline "Certification of Tempered Coated Glass" .

6. Q- How would VIG be evaluated after impact?

A- Laminated glass in a VIG is evaluated as ANSI Type 1. Tempered glass in a VIG is evaluated as ANSI Type 2. All ANSI protocols are applicable (See ANSI TI 2016.0624.001 and TI 2017.0223.001)

7. Q- How is VIG Tempered and Laminated Certified

A- VIG Tempered (VIGT), VIG Laminated (VIGL) or VIG Tempered Laminated (VITL) are each tested and certified separately. One will not certify the other.

8. Q- What is the testing procedure for a VIG when only one lite/ply is broken during impact?

A- Similarly to Tempered monolithic glass, if no breakage has occurred following impact testing a center punch test is to be performed on the glass specimen. Therefore, if only one ply were to break upon impact during testing, the ply that did not break would then be center punched and results would be interpreted in accordance with ANSI Z97.1-2015 Section 2.

9. Q- What requirements does SGCC need on the label for VIG certified products?

A- SGCC Labeling Requirements, found in the Certified Products Directory, can be used for VIG specimens as well. The permanent Label must contain the correct SGCC® number, ANSI Z97.1-2015 and/or 16 CFR 1201, the nominal thickness, the letter U or L indicating Certified size and the ANSI impact class (A or B). Note VIG is not applicable to the Canadian standard (CAN/CGSB 12.1).

SGCC will update information as it becomes available. If you have any additional questions or input at this time, please feel free to contact SGCC ([SGCC@amscert.com](mailto:SGCC@amscert.com)).