safety glazing certification council
P.O. BOX 730
SACKETS HARBOR, N. Y. 13685
PHONE 315-646-2234
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MINUTES OF EIGHTY-FIFTH MEETING OF THE CERTIFICATION COMMITTEE OCTOBER 10 and 11, 2012 NAPLES BAY RESORT NAPLES, FL

			Date and Votes Present 10/10/12	10/11/12
Members and Alternates Present				
AGC Fab.	Mark Cody		1	1
AGC Industries	Mark Cody		1	1
Cardinal Glass	Bernie Herron		1	1
Consolidated Glass	Carl Carmen		1	1
Consolidated Glass	Shane Merryman		Present	Present
Guardian Fabrication Inc.	Kevin Olah		1	1
Guardian Industries Corp.	Kevin Olah		1	1
Oldcastle Building Envelope	Cliff Monroe		1	1
Oldcastle Building Envelope	Rick Wright		Present	Present
Viracon	Brian Louks		1	1
Members by Virtue of Being a Director				
Public Interest	Bill Nugent		1	1
Public Interest	Elaine Rodman		1	1
Public Interest	Peter Weismantle		1	1
Public Interest	June Willcott		1	1
		Votes	12	12
Guests				
Architectural Testing, Inc.	Shawn Collins		Present	Absent
Legal Counsel				
Schiff, Hardin LLP	William M. Hannay		Present	Present
Administrative Staff				
AMS, Inc.	John Kent		Present	Present
		Persons Present	15	14

10.10.12.1 The meeting was called to order at 1:45pm by Chairman Mark Cody and a quorum declared. All present introduced themselves.

10.10.12.2 A presentation was provided by Shawn Collins of Architectural Testing, Inc. entitled "Architectural Glass Testing". Upon completion, time was allowed for questions. All thanked Mr. Collins.

10.10.12.3 The minutes of the October 25 and 26th, 2011 meeting were reviewed. A motion was made by Nugent/Wright to approve the minutes as submitted.

Vote: Unanimous Affirmative
Motion Passed

10.10.12.4 **Legal Counsel's Report – W. Hannay - (See attachment #1).**

A. SGCC Anti-Trust Guidelines were distributed to the group and read out loud
B. SGCC, a corporation incorporated under the Illinois General Not for Profit Corporation Act, is in good legal standing in the State of Illinois with no pending or threatened litigation.

10.10.12.5 **Committee Structure - (See Attachment #2)**

10.10.12.6 **Board of Directors' Report – P. Weismantle**

A. The purpose of SGCC as stated in the SGCC By-Laws shall be included in the CPD Program Concept.
B. The financial report including a report of credit card activity was reviewed. SGCC agreed in 2011 to accept credit card payments but would charge a convenience fee. After review of the credit card activity, it was agreed to raise the convenience fee to 3.5%
C. The Board has directed the Administrator to pursue membership in GICC (Glazing Industry Code Committee) with John Kent as primary representative and Peter Weismantle as alternate.
D. The Board reviewed the matter of cost reductions and agreed to reduce the business account fee by 50% resulting in an annual savings of approximately $100 per plant. It was noted that test fee's and Administrative fee's have remained nearly constant for over 5 years. The current fee structure was viewed as necessary to maintain the current integrity of the SGCC Program.
E. SGCC shall move toward website and electronic distribution of the CPD. $7500 was approved to aide in production and distribution, expansion of the mailing list and to archive old copied of the CPD.
F. $5,000 was approved annually for website upgrades and improvements.

10.10.12.7 **Financial Report – E. Rodman - (See Attachment #3)**

10.10.12.8 **Administrator's Report – J. Kent - (See Attachment #4)**

10.10.12.9 **Quick Action Sub-committee Report (QAC) – (See Attachment #5)**

In January 2012 the SGCC Quick Action Sub-committee addressed an issue dealing with certification of a laminated product, for indoor use only, per attachment #5. After review a motion was made by Rodman/Herron to accept the actions of the SGCC QAC.

Vote: Unanimous Affirmative
Motion Passed

10.10.12.10 **Testing Laboratory Status - (See Attachment #6)**

The status of SGCC Approved Testing Laboratories was reviewed. There was no specific action to be taken at this time.

10.10.12.11 **Program Testing Results Review - (See Attachment #7)**

Although no specific conclusions were drawn, the data was reviewed and its value recognized for consideration in future discussion.

10.10.12.12 **CPSC – (See Attachment #8)**

A. The CPSC has imposed new requirements on a number of consumer products including Safety Glazing. Since February of 2010, CPSC has required all shipments of safety glazing to include, or reference, certain information regarding product compliance. Portions of this information were to be based on a "reasonable testing program" but definition of a "reasonable testing program" was not provided until late spring of 2010 when CPSC released a federal register entry providing proposed language. SGCC (and others in the glass industry) provided comments on this language to CPSC in August 2010. One comment was if the language proposed in the federal register applied to safety glazing at all. On November 8th, 2011 CPSC published a Federal Register notice addressing its proposed change to the testing, certification, and labeling requirements for consumer products. It announced elaborate new rules governing children's products; however with respect to non-children's products such as architectural glass, it decided to postpone making any changes at this time, claiming it needed more time to study the issue. SGCC does not expect any further action on this issue in the near term.

B. In an effort to assist SGCC Participants in compliance with CPSC glass shipment requirements, SGCC has automated a "Record of SGCC Compliance Testing" which is available on line at www.sgcc.org. It is believed that this document will satisfy some, but not all, of the CPSC requirements. SGCC only makes the "Record of SGCC Compliance Testing" publically available if the company authorizes SGCC to do so.

C. **(See Attachment #8)** In concert with the ANSI Z97.1 committee, SGCC had earlier agreed to move forward to petition CPSC to accept the ANSI Z97.1 test method in lieu of the test method contained in CPSC 16 CFR 1201. Bill Hannay provided an update of the petition submittal. CPSC's initial request for comment is due by the end of October 2012. Individuals present volunteered to submit favorable comments.

D. The question was asked, upon acceptance of the SGCC petition to CPSC how will SGCC labeling requirements change? The consensus of the group was that nothing will change since many specifications still reference ANSI Z97.1 and/or CPSC 16CFR 1201. In effect CPSC will be the specification and ANSI the test method.

10.10.12.13 **ANSI Z97.1 (See Attachment #9)**

A. **(See Attachment #9)** Kevin Olah provided an update on the ANSI Z97.1 standard revision process; Current version is ANSI Z97.1-2009.

B. A sub-committee within the ANSI Z97.1 main committee is working on a re-design of the Z97.1 impactor. The ANSI Sub-committee has developed a new design which was shared with the group at the meeting. Comments were requested with work continuing within the ANSI Committee.

10.10.12.14 The meeting was adjourned for the day at 5:00pm by Chairman Mark Cody.

10.11.12.1 The meeting was called to order at 8:10am by Chairman Mark Cody and a quorum declared.

10.11.12.2 **Report of Expert Panel on Glass Panels in Balcony Guards**

A report dated March 30, 2012 was prepared for the City of Toronto and Province of Ontario to address media coverage of glass breaking and falling from balconies in high rise buildings in Toronto. SGCC was made aware of this report. Among other conclusions, one comment in the report was that the primary cause of failure was NiS inclusions. This report also brought attention to Canadian requirements for safety glass to comply with CAN/CGSB 12.1-M90.

10.11.12.3 **Canadian Certification – (See Attachment #10)**

Due to an increased interest in Certification to the Canadian Standard CAN/CGSB 12.1, SGCC has been asked to consider expanding it's current certification program to include the Canadian standard. This issue has been raised in the past. After discussion a motion was made by Cody/Wright to proceed and implement SGCC certification to Canadian standard CAN/CGSB 12.1-M90 Tempered or Laminated Safety Glass, with an implementation date of 1/1/13. Certification shall be for composite plus CAN/CGSB 12.1 (COMP+CAN).

Vote: Unanimous Affirmative
Motion Passed

With this motion, SGCC shall allow laboratories located in Canada to apply for SGCC Approval. All SGCC information shall be reviewed and modified to accommodate this direction.

10.11.12.4 **List of Accepted Interlayer's - (See Attachment #11)**

SGCC has maintained a "List of Accepted Interlayer's" since approval of ranges of thickness certification for laminated glass. In order for an interlayer to be on the list, SGCC must have current weathering data and impact report data. New weathering requirements were established with the publication of ANSI Z97.1-2009 version. SGCC earlier established a sunset date of 10/1/12 for all weathering data on the list to be updated. The attached shows the results of efforts to update.

10.11.12.5 **List of Patterned Glass - (See Attachment #12)**

A list of "Classified Tempered Glass Patterns" has been maintained in the SGCC CPD since the programs inception. The accuracy and use of the list was discussed. The administrator was directed to contact pattern glass suppliers and ask for updates to the list. There was some confusion as to the information to be updated. K. Olah, M. Cody and J. Kent will arrange a conference call to move this topic forward.

10.11.12.6 **SGCC Website**

The SGCC website was reviewed and the group was asked for comments and improvements. As mentioned earlier, The Board has approved $5,000 annually to upgrade and improve the website at www.sgcc.org.

10.11.12.7 **Heat Soak Certification – (See Attachment #13)**

SGCC has been requested to consider some form of certification for Heat Soaked tempered glass. The attachment is a 1st DRAFT of such a program and is intended to 1) validate acceptable

heat soak processes are adhered to, and 2) verify the safety characteristics of heat soaked glass. The attachment reflects the results of comments and revisions at the meeting. There was a general concern that SGCC should not be certifying a process but rather certifying safety glass. After discussion a motion was made by Carmen/Monroe to revise the proposal to accomplish goal 2) "verify the safety characteristics of heat soaked glass", with a quality assurance component, to be determined. A sub-committee shall be formed to finalize a DRAFT #2 to be forwarded to the Board for vote to implement.

Vote:	7 Affirmative
	5 Negative
	0 Abstain
	Motion Passed

The sub-committee shall be comprised of the following individuals and company's believed to heat soak:

Rick Wright	Carl Carmen	Peter Weismantle
Brian Loukes	Prelco	Oldcastle
Viracon	JE Berkowitz	Consolidated Glass
Contour		

10.11.12.8 **Testing Range of Thickness For Tempered – (see Attachment #14)**

With the acceptance of the concept of testing range of thickness for laminated glass, SGCC has been asked to review the possibility of a similar concept for tempered glass. The data presented in the attachment was reviewed. After discussion the administrator was requested to calculate rate of failure = failures per thickness/plants X samples X years X 2 test per year.

10.11.12.9 **Old Business**

NONE

10.11.12.10 **New Business**

NONE

10.11.12.11 **Next Meeting**

The next SGCC Certification Committee meeting is tentatively scheduled for October 15 and 16, 2013 in conjunction with the ANSI Z97.1 committee meeting October 16 and 17th in Charlotte, NC.

Tues Oct 15	AM	Board Mtg
	PM	Cert Comm Mtg
Wed Oct 16	AM	Cert Comm Mtg
	PM	ANSI Z97.1
Thurs Oct 17	AM	ANSI Z97.1

10.11.12.12 The meeting was adjourned by the chair at 11:55 am.

Attachment #1

SGCC ANTITRUST COMPLIANCE GUIDELINES

A. It is the policy of SGCC to comply fully with the antitrust laws applicable to trade association activities.

B. In furtherance of this policy, all SGCC meetings are attended by SGCC legal counsel, and the SGCC's officers, directors, and Administrator periodically consult with SGCC legal counsel.

C. Each participant in SGCC activities has a responsibility to avoid any improper conduct from an antitrust standpoint. The following guidelines will assist in meeting this responsibility.

1. SGCC meetings are held solely to manage and operate SGCC and its certification program, in accordance with SGCC's corporate purposes, the SGCC Bylaws, and the Certified Products Directory.

2. No participant in SGCC activities, including the certification program and standards development efforts (such as ANSI Z97.1), should attempt to misuse his or her position within SGCC to gain an unfair competitive advantage on behalf of his or her company.

3. To avoid antitrust problems (either civil or criminal), the following legally-sensitive subjects should not be discussed by competitors at or during SGCC meetings:

a. Future marketing plans of specific competitors;

b. Any complaints or business plans relating to specific customers, suppliers, geographic markets or products;

c. Agreements between competitors to allocate markets, customers or products;

d. Agreements between competitors to refuse to deal with a supplier or a customer;

e. Purchasing plans or bidding plans (except privately between two parties with a vertical commercial relationship such as supplier and customer); or

f. Current or future price information and pricing plans, bidding plans, refund or rebate plans, discount plans, credit plans, specific product costs, profit margin information or terms of sale.

Any question regarding the legality of a discussion topic or business practice should be brought to the attention of SGCC legal counsel* or your company's individual legal counsel.

April 2010

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* William M. Hannay, Schiff Hardin LLP, 7200 Sears Tower, Chicago, IL 60606; (312) 258-5617; (312) 258-5700 (fax); e-mail: whannay@schiffhardin.com.

Attachment #2

safety glazing certification council
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SGCC Committee Structure (as of 10/03/12)

SGCC Board of Directors	**President:** Peter Weismantle
Scope: The overall affairs of the Council shall be managed by its Board of Directors.	
Members	
Public Interest	**Business Community**
Peter Weismantle – President	Brian Louks – Vice President
June Willcott - Secretary	Richard Paschel
Elaine Rodman - Treasurer	Kevin Olah
William Nugent	Bernie Herron
Patrick Loughran	Cliff Monroe

Sub Committee: Nominating	**Chair:** Richard Paschel	**Public Interest Member:** Peter Weismantle
Scope: The Nominating sub committee is a subcommittee of the Board and appointed by the President to research and present a slate of SGCC Board nominees and officers for the annual SGCC participants meeting.		

Sub Committee: Quick Action	**Chair:** Mark Cody
Scope: Between meetings resolution of any issue, appeal or request for review that can not be dealt with by the administrator, or is beyond the guidance provided to the Administrator or for which the Administrator has rendered a decision that is not acceptable by the applicant.	
Members	
SGCC President	Peter Weismantle
Certification Committee Chair	Mark Cody
Public Interest	June Willcott

Sub Committee: Time, Place and Marketing	**Chair:** Elaine Rodman
Scope: Canvas for scheduled meetings of glass and associated industry meetings; develop a list of possible locations and specific dates for future meetings for submittal to participants for vote. Maintain SGCC marketing plan.	
Members	
Rick Wright	

Sub Committee: Laboratory and QA Inspection	**Chair:** Kevin Olah
Scope: Address and resolve concerns related to the interrelationship between the laboratories, the administrator, and SGCC participants. Development and maintenance of the laboratory testing manual and program quality assurance requirements.	
Members	
Bernie Herron	Rick Wright
Mark Cody	

safety glazing certification council

Annual Financial Comparison Summary

Revenues	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011	2011/2012
Administrative	$300,770	$306,298	$478,848	$491,427	$534,680	$526,949	$537,804	$573,698
Testing	$429,682	$317,424	$576,784	$794,936	$819,085	$673,050	$849,675	$989,037
Business Acct. income	$32,585	$38,700	$46,659	$52,875	$55,435	$30,165	$0	$15,905
Impactor Bags	N/A	$1,100	$1,430	$990	$1,540	$1,980	$1,395	$75
Test Labs Under Five	N/A	$2,000	$2,000	$1,000	$1,000	$0	$0	$0
Interest Income	$9,057	$18,093	$18,629	$28,077	$26,591	$15,440	$14,685	$5490
Total Revenues	**$772,094**	**$683,615**	**$1,124,350**	**$1,369,305**	**$1,438,331**	**$1,247,584**	**$1,403,559**	**$1,584,205**

Expenses	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011	2011/2012
Administrative	$300,770	$306,298	$478,848	$491,427	$534,680	$526,949	$537,804	$573,698
Testing	$429,682	$317,424	$540,072	$794,935	$751,085	$673,050	$849,675	$989,037
Accounting	$3000	$3,000	$3,000	$3,000	$3,000	$3,165	$3,100	$3100
Legal	$20,160	$17,538	$19,771	$24,050	$21,066	$25,783	$20,781	$27,541
Meetings Exp	$9,877	$9,927	$9,289	$20,098	$14,487	$12,434	$12,310	$12,389
Miscellaneous	($163)	$2,826	$1000	$0	$0	$3,913	$4,424	$167
Insurance	$5,607	$5,607	$5,607	$5,607	$6,837	$4,640	$4,458	$4,907
Web Page	$3,689	$1,925	$1,400	$1,400	$1,639	$1,250	$5,512	$0
Bank Charges	N/A	$1,558	$1,895	$2,722	$2,171	$2,249	$1,584	$1,711
Marketing	$6,783	$0	$10,000	$10,000	$12,430	$149	$0	$0
Total Expenses	**$779,405**	**$666,103**	**$1,070,882**	**$1,353,240**	**$1,347,395**	**1,253,582**	**$1,439,648**	**$1,612,550**
Change in Net Assets	**($7,311)**	**$17,512**	**$53,468**	**$16,065**	**$90,936**	**($5,998)**	**($36,089)**	**($28,345)**
Net Assets	**$149,898**	**$167,410**	**$220,878**	**$236,943**	**$327,879**	**$321,881**	**$285,792**	**$257,447**

Attachment #3

Investments	Initial Date of Purchase and Interest Rate	Initial Purchase Value	Current Interest Rate	Date of Maturity	Comments	Balance as of 10/3/12	Plan of Action
#1 Key Bank	5/2007 4.65%	$80,000	.25%	5/9/13	18 month CD	$88,887	Max at 230K
#2 Alliance	5/2007 4.65%	$80,000	.15%	5/18/13	12 month CD	$88,779	Max at 220K
#3 Carthage Savings and Loan	3/2008 2.92%	$100,000	.49%	3/24/13	12 month CD	$106,914	Max at 220K
#4 First National Bank of Dryden	5/1997 5.05%	$45,000	1.39%	5/28/14	24 month CD interest added every 3 months	$230,407	Maintain
#6 Watertown Savings Bank (Formerly Redwood)	11/23/04 2.65%	$93,972	2.65%	11/23/12	48 month CD	$117,472	Close 11/23/12
#7 **PNC Bank** (**formerly** National City Bank)	8/2000 7.15%	$90,000	.25%	12/17/12	12 month CD	$95,172	Close 12/17/12
#8 Bank of America **(formerly** MBNA Invest Serv)	12/2000 6.63%	$45,000	.1%	12/11/12	12 month CD	$61,521	Close 12/11/12
					Total of all Certificates of Deposits	**$789,152**	
					Target	**$900,000**	

SGCC Banking Accounts

Account	Balance as of 10/4/12
HSBC Checking Account CLOSED (Merged to 1st Niagara then Closed out Account)	$0
HSBC Savings Account CLOSED (Merged to 1st Niagara then Closed out Account)	$0
M&T Bank - **Checking**	$182,564
Watertown Savings Bank - **Savings**	$155,623

ADMINISTRATIVE REPORT

SGCC Fall Meeting
October 10-11, 2012

July 1, 2012 Certified Products Directory (CPD)

Cut-off Date	*Copies*	*Subscription List Mailing*
July 1, 2012	**1800**	**1644**

Certification **Removed** Since Publishing July 1, 2012 CPD

ANSI Program

None

CPSC Program

None

Composite Program

Guardian Milbury, OH SGCC#2616 (product removal)
Cardinal IG Hood River, OR #4565 (product removal)
Guardian Richburg, SC #2382 (product removal)

Certification **Added** Since Publishing July 1, 2012 CPD

ANSI Program

None

CPSC Program

None

Composite Program

New Plants Added to program

Thermal Seal - Uxbridge, MA (7 products)
Gulf Glass - Sharjah United Arab Emirates (4 products)
Glasswerks Los Angeles, CA (3 products)

New Products Added to existing plants

AGC Knoxville, TN SGCC# 4827
Guardian Galax, VA SGCC# 4829
Spec-Temp Antwerp, OH SGCC# 4811
AGP Mirimar, FL SGCC# 4810
PGT Nokomis, FL SGCC# 4812 & 4801
Cardinal Chehalis, WA SGCC# 4808 & 4809

Notification of Manufacturer's Name Changes

None

Administrative Activity

January 2012	Quick Action Committee for "Indoor Use Only"
January 2012	Mailing of January 2012 Certified Products Directory
April 2012	Mailing of F12 Invoices
May 2012	Addition of ATI Lithia Springs, GA Laboratory
August 2012	Mailing of July 2012 Certified Products Directory
October 2012	Mailing of SGCC L12 Invoices - included 1/2 charges for Business Account Fee

	F08 As of April	**L08** As of Oct	**F09** As of April	**L09** As of Oct	**F10** As of April	**2010** As of Oct	**2011** As of Oct	**2012** As of Oct
No. of Participating Plants	221	245	242	252	241	245	256	262
% of increase or decrease in Plants	-5.55%	+10.86 %	-1.22%	+4.13%	-4.37%	+1.66%	+4.49%	+2.34%
No. of Offshore Plants (Non US & Canada)	33	44	46	50	43	50	50	57
% of increase or decrease in Offshore Plants	-13.8%	33.33%	4.45%	8.70%	-14.0%	+16.28%	+/- 0%	+14%
No. of Licensees	123	147	145	154	150	152	160	168
Total Certified Products	1433	1513	1507	1598	1531	1573	1651	1726
% of increase in Certified Products	-5.7%	5.6%	-0.4%	6.04%	-4.19%	+2.74%	+4.96%	+4.54%
ANSI Only	88	23	26	34	37	22	18	13
CPSC Only	39	25	18	20	7	18	18	18
COMPOSITE	1306	1465	1463	1544	1487	1533	1615	1695

Website Report

SGCC 2011-2012	**Total Visits (% change from prior yr)**	**Most Visited Section**	**2nd Most Visited**	**3rd Most Visited**	**Down loads of CPD**	**Other Top Downloads**	**Top Visiting Countries**
Oct 2011	**16,343 ***	**Certified Product Search**	**Certified Plants**	**Information**	**210**	**ANSI Memo Laminated Guidelines**	**US China Russia Germany**
Nov 2011	**10,188 ***	**Certified Product Search**	**Certified Plants**	**Record of Compliance Testing**	**209**	**ANSI Memo Laminated Guidelines**	**US Russia China Ukraine**
Dec 2011	**6,999 ***	**Certified Product Search**	**Certified Plants**	**Information**	**165**	**ANSI Memo Laminated Guidelines**	**US China Russia Ukraine**
Jan 2012	**9,783 ***	**Certified Product Search**	**Certified Plants**	**Record of Compliance Testing**	**269**	**ANSI Memo Laminated Guidelines**	**US China Ukraine Germany**
Feb 2012	**15,437 ***	**Certified Product Search**	**Record of Compliance Testing**	**Information**	**316**	**ANSI Memo Laminated Guidelines**	**US China Ukraine Canada**
March 2012	**14,084 ***	**Certified Product Search**	**Certified Plants**	**Record of Compliance Testing**	**387**	**ANSI Memo Laminated Guidelines**	**US China Ukraine UAE**

April 2012	**12,633 ***	**Certified Product Search**	**Record of Compliance Testing**	**Information**	**548**	**Laminated Guidelines ANSI Memo**	**US China Canada Germany**
May 2012	**12,820 +16.74%**	**Certified Product Search**	**Information**	**Certified Plants**	**432**	**Laminated Guidelines List of Accepted Interlayers**	**US China Ukraine Mexico**
June 2012	**16,391 +37.62%**	**Certified Product Search**	**Certified Plants**	**Information**	**381**	**Laminated Guidelines ANSI Memo**	**US, China Ukraine Canada**
July 2012	**13,275 -3.00%**	**Certified Product Search**	**Certified Plants**	**Record of Compliance Testing**	**471**	**Laminated Guidelines ANSI Memo**	**US China Ukraine Mexico**
Aug 2012	**14,453 +16.75%**	**Certified Product Search**	**Record of Compliance Testing**	**Certified Plants**	**522**	**Laminated Guidelines ANSI Memo**	**US China Ukraine Germany**
Sept 2012	**17,863 +57.95%**	**Certified Product Search**	**Certified Plants**	**Record of Compliance Testing**	**445**	**Laminated Guidelines Certified Labs List**	**US China Ukraine Germany**

The majority of visits to the SGCC website are from a bookmarked 'favorite' or by typing www.sgcc.org directly into a browser's address bar. The second most visits are by users that type "SGCC" into a search engine such as Google, Bing, etc.

*** Data not available due to restructure of website in May 2011**

Sub Committee: Quick Action	**Chair:** Mark Cody
Scope: Between meetings resolution of any issue, appeal or request for review that can not be dealt with by the administrator, or is beyond the guidance provided to the Administrator or for which the Administrator has rendered a decision that is not acceptable by the applicant.	
Members	
SGCC President	Peter Weismantle
Certification Committee Chair	Mark Cody
Public Interest	June Willcott

Summary

In January 2012, a participant requested certification for a laminated product containing an interlayer that did not have weathering data on file with SGCC, therefore it was not on the "Approved Interlayers List". Upon notification the participant inquired as to certifying the product for "Indoor Use Only" which would not require weathering data per the ANSI 2009 standard.

SGCC's position was that in order for an interlayer to be on the "approved interlayers list" for use by a manufacturer in the SGCC Program, ANSI Z97.1weathering data **must** be on file.

Information

- **Certified Products Directory -**

  "A list of **accepted** interlayer brands per generic category shall be maintained by SGCC (SGCC list of accepted interlayers can be found at www.sgcc.org)". To be on this list weathering data was required.

- **ANSI Z97.1-2009**

  Footnote "5" table 1

Table 1: Grouping of Tests for Safety Glazing Materials

Test	Glazing Type[1]				
	Laminated Glazings	Tempered Glass	Organic Coated Glass	Plastic Glazing	Fire Resistant Wired Glass
Impact Test 5.1	X	X	X	X	X
Center Punch Fragmentation Test 5.2		X[2]			
Boil Test 5.3	X[3]				
Weathering Test 5.4	X[4,5]		X[4,5]	X[5]	
Indoor aging Test 5.4.3			X	X	
Hardness Test 4.7, 5.1.4 (3)				X[6]	
Modulus Test 4.7, 5.1.4 (3)				X[6]	

1 Bent and mirror glazing shall be tested in accordance with requirements of the base-glazing product; see section 4.4
2 Center Punch Fragmentation test is used to evaluate the fracture pattern of tempered glass specimens that do not break during impact test of section 5.1.
3 Excludes glass/plastic laminates
4 Weathering tests on laminated and organic coated glasses shall be performed on the thinnest construction of all components in clear glass with clear plastics.
5 Products intended for indoor use only are not subject to weathering test.
6 Only required if breakage occurs under impact

Recommendation

A) SGCC adopts the position of ANSI Z97.1-2009 that for indoor only applications of laminated glass, weathering data is not required.

B) Guideline L10 to be amended to read as follows:

Guideline L.10

For certification to ANSI Z97.1, weathering tests on laminated glasses (unless for indoor use only) shall be performed on the thinnest construction of all components in clear glass with clear interlayer. Weathering tests shall only be required initially. Weathering data will be accepted from the glass fabricator, or a supplier, i.e. interlayer manufacturer. Since SGCC's acceptance of weathering data is a one-time even, no formal weathering lab approval will be required. However, at time of weathering data submittal, the weathering test facility shall submit an explanation why they are competent to perform such tests. Justification of competence shall be judged on any facility's history and experience (Revised 10/26/10)

C) SGCC format the "Approved interlayers list" with an asterisk, footnote, etc. that a particular interlayer is approved for "indoor use only" therefore not needing weathering data to be included on the list.

D) Products specified to SGCC as "Indoor use only" shall have an identifier in the SGCC Certified Products Directory as such?

Conclusion

On February 8th, 2012 The SGCC Quick Action Committee unanimously agreed with these recommendations. The SGCC participant was notified and the recommendations have been implemented.

SGCC Testing Laboratory Status (as of Sept, 2012)

7. Laboratory Agrees that initial approval by the SGCC Certification Committee is contingent upon an initial survey of Laboratory's test facilities by the SGCC. Laboratory agrees to pay the cost of the initial survey and inspection of the testing facilities. In order for a test facility to be considered for initial approval, a letter of interest or intent to use must be provided from 5 certified fabrication facilities. Ongoing laboratory approval is subject to approval by the SGCC Certification Committee and shall be for a period of two (2) years. During this period the laboratories facilities shall be re-surveyed and all issues arising from this survey resolved. A non-refundable fee of $3000 annually for each facility shall be charged for SGCC Laboratory approval and surveys. This fee shall be waived under the following conditions:

    1. During the first 2 calendar years of initial SGCC Lab approval
    2. When 5 or more SGCC participating plants have selected the facility as their designated testing laboratory for that year.

Company	Location	Date of Initial Approval	Date of Last Inspection	Approved by SGCC	Signed Agmt	# Plts	Lab fee
Architectural Testing Inc.	St. Paul, MN	10/6/92	2/10/12	10/25/11	10/14/09	17	
	York, PA	6/30/85	5/18/11	10/25/11	10/15/09	51	
	Fresno, CA	11/18/97	11/09/10 Tent w/o 10/25	10/25/11	10/08/09	22	
	Southlake, TX	7/1/04	10/26/11	10/25/11	10/14/09	12	
	Tampa, FL	4/25/07	10/17/11	10/25/11	10/15/09	5	
	Lithia Springs, GA	5/17/12	3/28/12	5/17/12	5/17/12	2	
	Kent, WA	10/29/09	1//4/12	10/25/11	10/06/09	5	
Bowser-Morner, Inc.	Dayton, OH	1991	6/6/11	10/25/11	10/01/09	16	
Construction Consulting Laboratory West	Ontario, CA	11/19/97	11/14/11	10/25/11	9/29/09	15	
Fenestration Testing Laboratories	Medley, FL	10/2/97	10/24/11	10/25/11	10/1/09	45	
Intertek	Cortland, NY	1981	10/20/11	10/25/11	10/12/09	16	
NCTL	Everett, WA	10/14/97	1/13/12	10/25/11	10/15/09	19	
	York, PA	5/19/11	5/19/11	10/25/11	5/19/11	-	
Rone Engineers, Ltd.	Dallas, TX	3/31/00	10/26/11	10/25/11	10/01/09	8	
Element Materials Technology	Des Moines, IA	6/11/99	11/15/11	10/25/11	10/15/09	13	
Element Materials Technology	Houston, TX	1/15/90	3/14/11	10/25/11	10/06/09	14	
Element Materials Technology	Wausau, WI	11/29/11	11/29/11	10/25/11	10/27/11	3	

Program Testing Results

Attachment#7

		2003	2004	2005	2006	2007	2008	2009	2010	2011	F12 To Date
Selections (% of total products)	Total	1536	1620	1729	2089	2549	2743	2846	2986	3146	1636
	Participant	365 (24)	682 (42)	925 (54)	851 (41)	1188 (47)	1300 (47)	1356 (48)	1902 (64)	2263 (72)	1342 (82)
	Inspector	1171 (76)	938 (58)	804 (46)	1238 (59)	1361 (53)	1443 (53)	1490 (52)	1084 (36)	883 (28)	294 (18)
	Total Tempered Products			1643 (95)	1958 (94)	2349 (92)	2587 (94)	2705 (95)	2783 (93)	2876 (91)	1479 (90)
	Total Laminated Products			86 (5)	131 (6)	200 (8)	156 (6)	141 (5)	203 (7)	131 (9)	157 (10)
Product Failures (Calendar Year) % Total Failures/% Total Products	Total	31 (2)	36 (2.2)	31 (1.8)	65 (3.1)	71 (2.8)	66 (2.4)	66 (2.3)	72 (2.4)	98 (3.1)	41 (2.5)
	Participant Selected	17 (55/1.1)	24 (67/1.5)	20 (65/1.2)	54 (83/2.6)	44 (62/1.7)	35 (53/1.3)	47 (71/1.7)	65 (90/2.2)	76 (78/2.4)	36 (88/2.2)
	Inspector Selected	14 (45/.9)	12 (33/.7)	11 (35/.6)	11 (17/.5)	27 (38/1)	31 (47/1.1)	19 (29/.7)	7 (10/.2)	22 (22/.7)	5 (12/.3)
	34x76	16 (52/1)	25 (69/1.5)	30 (97/1.7)	61 (94/3)	50 (70/2)	47 (71/3.3)	54 (82/2)	70 (97/2.3)	98 (100/3.1)	41 (100/2.5)
	Odd Size	14 (45/.9)	6 (17/.4)	0	4 (6/.2)	4 6/.2)	2 (3/.1)	0	1 (1.4/.03)	0	0
	16x30 ('06) 24x42 ('07) **34x76 only starting L10**	1 (3/.1)	5 (14/.3)	1 (3/.1)	0 **(Now 24X42)**	17 (24/.7)	17 (26/.6)	12 (18/.4)	1 (1.4/.03)	0	0
Tempered Failures			24 (67/1.5)	25 (81/1.5)	48 (74/2.3)	48 (68/1.9)	51 (77/1.9)	43 (65/1.5)	59 (82/2)	82 (84/2.6)	34 (83/2.1)
Laminated Impact Failures			4 (11/.2)	5 (16/.2)	8 (12/.4)	20 (28/.8)	12 (18/.4)	17 (26/.6)	10 (14/.3)	9 (9/.3)	5 (12/.3)
Laminated Boil Failures			8 (22/.5)	1 (3.2/.1)	9 (14/.4)	3 (4/.1)	3 (4/.1)	6 (9/.2)	3 (4.2/.1)	7 (7/.2)	2 (5/.1)

Subject: Re: SGCC Petition to CPSC

The staff's recommendation to publish the proposal in the Federal Register simply indicates that, as a preliminary matter, our petition is a reasonable enough request to publicize it and to see what the public and others think of it. (I doubt that the staff has done any research or technical analysis as yet or reached any firm conclusion pro or con about the merits of our petition.)

Moreover, the Commission's vote this week is not one that approves the merits of the proposal but rather is just a procedural okay of the staff going forward to spend time to collect comments and investigate the proposal in greater depth.

When the comment period closes, even if nobody objects, the staff will still be obliged to conduct their own due diligence to make sure the change is safe and effective.

At the initial comment stage in response to the FR notice, we don't have to say or file anything more. However, we will want to ask GANA et al. to file supportive comments.

If people do object (or make negative comments or raise questions), we will then be expected by the staff to respond at a subsequent point, perhaps with expert testimony, studies, or other evidence to support the proposal.

The staff will then review all of the comments, our response, and their own independent evaluation and prepare a written report making a recommendation to the Commission either to approve (or disapprove) our petition. We will have a right to file a brief in support of our petition, responding to the staff's report (if negative) and to appear in person before the Commission at a formal hearing on the petition to argue why the staff is wrong.

If anyone strongly opposes the petition, he/she can seek leave to intervene in the proceeding, file their own brief, and appear at the hearing and present oral argument to the Commissioners.

The Commission will eventually issue a written opinion on our petition.

If the Commission denies the petition, we can appeal that decision to the US Court of Appeals for the DC Circuit. If the Commission grants our petition, the intervenors (if any) can likewise appeal to the appellate court.

If anyone appeals, there will be another round of briefs, maybe oral argument before the court, and finally issuance of a written decision by the appellate court.

While it is theoretically possible for any party subsequently to ask the US Supreme Court to grant discretionary review of the appellate court's decision, it is unlikely that the court would do so.

That would then bring the proceedings to an end.

ASC Z97 ANSI ACCREDITED STANDARDS COMMITTEE

Safety Requirements for Architectural Glazing Materials

Chairman: K. Olah, 2300 Harmon Road, Auburn Hills, MI 48326, Phone: 248-340-2141; E-mail: KOLAH@Guardian.com
Secretary: J.C. Schimmelpenningh, 730 Worcester Street, Springfield, MA 01151, Phone: 413-730-3413; E-mail: JCSCHI@eastman.com

ASC Z97 Update

October 4, 2012

ANSI Z97.1-2009 Standard

- Available for purchase at http://www.ansiz97.com/purchase/
- Interpretations have been issued and supplied for posting on the website. An ERRATA statement has also been issued February 11, 2011 with those modifications made to the standard.

Meeting Information

- Next Full Committee Meeting Fall 2013 – date & location TBD
- Last Full Committee Meeting was held September 24, 2012 in Washington, DC
    - Two Task Groups* & three Working Groups met:
        - Testing Requirements & Acceptance Criteria (TRAC)
            - Test Apparatus Working Group – work is progressing to design a new impactor
            - Mode of Breakage Working Group – systematically resolving and clarifying issues related to breakage of organic coated glass and plastic breakage on impact
            - Weathering Working Group – refined the weathering language for clarification and language moved to full committee for ballot
        - Labeling – restructured the language for clarification and will be adding a sample label; changes will be sent to full committee for ballot
    - GISC (Glazing Industry Secretariat Committee) met September 18th to review membership and financials

Any individuals interested in participating in a working group should contact Julie Schimmelpenningh directly at jcschi@eastman.com

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Membership

- 32 primary members; 18 alternates; 5 observers
- Committee must remain in balance according to ANSI Essential Requirements
  - There are six classifications of membership
  - No one group can exceed 33% of membership
- Currently have pending memberships due to balance requirements
- For new membership information please go to www.ansiz97.com and fill out a membership form

Website www.ansiz97.com
January - August 2012
Total "Visits": 33,527 (Avg. 4,190/month)

Top Five Visiting Countries

1. United States - 22,000 visits
2. China - 8,552 visits
3. Canada - 374 visits
4. Japan - 361 visits
5. Germany - 311 visits

Steering Committee

- Last meeting was held on October 27, 2010 in Naples, FL
- February 10, 2012 the Steering Committee approved the revised ASC Z97 Procedures based on feedback from the ANSI Audit
- Next meeting to be determined

Certification to Canadian Standards Can CGSB 12.1 (Tempered and Laminated)

➢ October 2007 SGCC Board Minutes

10.17.07.10 Certification to CAN CGSB 12.1

J. Kent presented information for the Canadian Standard for Tempered and Laminated glass (Attachment H). Discussion was held regarding standards. The SGCC Board remains open to further discussion but elected not to certify to CAN Standards at this time.

➢ Attachment H

- Several SGCC participants have expressed interest in certification to Canadian requirements, namely Can CGSB 12.1. This can usually be done in coordination with normal SGCC testing. Might SGCC wish to facilitate this activity and "Certify" to the Canadian standards along with ANSI and CPSC?

- At present, some companies who need some form of compliance documentation to the Canadian standards have submitted samples for SGCC. The lab will test the samples for SGCC, and in addition to the normal SGCC process, write a separate report validating compliance to the Canadian requirements.

- Current Canadian requirements

  - Glass for use in buildings must comply with applicable Codes (Provincial, regional)
  - Typically identical to NBCC "National Building Code of Canada"
  - NBCC states Glass must comply with CGSB standards
  - NBCC requires compliance, but does not state how to demonstrate
  - Typically Manufacturers "Self Declare" or label compliance
  - Building Inspectors generally accept this self marking

- Issues to consider

  - Currently SGCC only approves labs in US
  - Might SGCC need to gain Canadian accreditation?

What has changed since 2007?

- Increased enforcement with some possible miss-understanding of the requirement. The feeling that "Canadian Certification" is required.
- The Toronto (and other) balcony glass issue.
- " … Alberta is all but mandating third party certification on almost every building."
- Some suggestion that testing and/or certification must be by an SCC accredited facility.

➢ Excerpts:

National Building Code of Canada

4.3.6. Glass
4.3.6.1 Design Basis for Glass
1) Glass used in buildings shall be designed in conformance with CAN/CGSB-12.20-M "Structural Design of Glass for Buildings

CAN/CGSB-12.20-M

C3 Human Impact Safety Requirements
C3.1 General – In locations where glass is likely to be subjected to human impact the glazing shall comply with the safety glass requirements specified in CAN/CGSB-12.1-M

Per Alberta Code Official

… same requirements as Ontario (which is same as NBCC).

Alberta Building Code 2006

9.7.3.1.Glass Standards
1) Glass shall conform to
a) CAN/CGSB-12.1-M, "Tempered or Laminated Safety Glass,"

9.7.3.2.Structural Design of Glass
1) Glass in windows, sloped glazing and skylights shall be designed in conformance with CAN/CGSB-12.20-M, "Structural Design of Glass for Buildings." (See Appendix A.)

➢ Possibilities

1. No direct involvement for SGCC. Support License's direct testing with labs
2. SGCC does not "certify to 12.1 but helps facilitate testing
3. SGCC adds certification to 12.1 the same as current ANSI and CPSC certification - no action on Canadian recognition.
4. SGCC adds certification to 12.1 the same as current ANSI and CPSC certification - take appropriate steps for full recognition.

➢ Typical Label:

ABS Glass Tempered
16 CFR 1201 II
ANSI Z97.1-2009
4mm UA SGCC 9999
CAN/CGSB 12.1-M90

SGCC List of Accepted Interlayers
(as of 10/3/12)

Generic Code	Description	Generic Code	Description	The BOD instructed that all weathering data must be updated to the 2009 version of ANSI Z97.1 by 10/1/12
(b)	Poly Vinyl Butral	(p)	Polyethylene Terephthalate	
(ip)	Ionoplast	(f)	Fluorinated Ethylene Propylene	
(lc)	Liquid Resin – Multi Component	(u)	Polyurethane	
(lu)	Liquid Resin – UV Cure	(ev)	Ethylene-Vinyl Acetate	
		(el)	Epoxy-liquid Crystal Polymer	

Generic Class	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(ip)	(lu)	~~(ev)~~	(el)(p)	~~(lu)~~
Supplier	Solutia	Solutia	Solutia	DuPont	DuPont	Kurayray	Sekisui S-Lec Amercia LLC	DuPont	Bestroom Co. Ltd.	~~Interlayer Solutions Inc.~~	Polytronix Inc.	~~Cytec~~
Interlayer Brand	Saflex IIIG/Vanceva	Saflex Specialty	Saflex Composite	SentryGlas® Expressions™	Butacite®	Trosifol	Sekisui S-LEC Film & Sekisui S-LEC Acoustic Film	SentryGlas ®	UVLAM	~~Bridgestone EVASafe~~	Polyvision Film	~~Uvekol S Liquid Resin UV cure~~
Interlayer Formulations	Series A,C, D,F, H, M, N, P, R, S, &W Solutia report dated 08/11	Saflex Q series Saflex AG Saflex DB/DS Solutia report dated 8/11	Saflex V series Saflex K series Solutia report dated 8/11		50-56 551-553	BG, AF, SC, VG, XT90, Solar R40, HR100	.030		.040		.075	~~.040~~
Weathering Data	Solutia report dated 08/11	Solutia report dated 08/11	Solutia report dated 08/11	DuPont report dated 3/11	DuPont report dated 3/11	Kuraray report dated 5/23/12	ATI Report C0265.02-122-37 & C0265.01-122-37 6/12/12	DuPont report dated 3/11	Bestroom Laboratory Report 1/17/11 to ANSI Z97.1-2009	~~ATI Report 5/28/09 88275.02-122-37~~ Testing is in progress est. completion 12/2012	INDOOR USE ONLY - No weathering data	~~Cytec Report 12/3/08~~ 2009 Weathering Data Not provided

* denotes tested to ANSI Z97.1-2009 standard

Impact Data - Thinnest Interlayer Tested to Composite (ANSI Z97.1- 2009 and CPSC 16 CFR 1201)												
5/32 (4mm)	Intertek 100544179C RT-007 (.030) 12/13/11*											
3/16 (5mm)	ATI 0013.01-122-37 (.015)				ATI-B5710.03-201-37 (.015) 1/5/12*							ATI C0265.01-122-37 (.030) 6/12/12*
1/4 (6mm)	ATI-B6020.02-121-37 (.030) 2/13/12*				Intertek 100575929CRT-004 (.030) 12/19/11*	FTL 12-195 Lab 6089 1/11/12 (.035)*	ATI B3491.02-801-37 (.035)*			ATI-B7333.01-201-37 (.030) 2/27/12*	FTL 12-330 Lab 6297 5/25/12*	
5/16 (8mm)	FTL 11-195 Lab 5702 (.030) 6/9/11*			ATI Rpt 82294-07-122-37 (.030)	ATI 2453.067-201-37 (.030)	ATI-B4949.11-121-37 (.030) 3/14/12*	FTL 4041-258 (.030)	FTL 11-195 Lab 5990 (.060) 12/1/11*				
3/8 (10mm)	ATI 97140.10-301-37 (.030)			ATI Rpt 82294-06-122-37 (.030)	ATI-B6723.10-301-37 (.015) 2/14/12*	FTL 4089-265 (.090)	ATI B3491.01-801-37 (.030)*		ATI Report B7215.01-301-37 (.040) 2/24/12*	ATI 9574.08-201-38 (.030)		
1/2 (12mm)	FTL 11-1955727 (.030)		ETC 08-246-21428.0 (.030)		Intertek 100311449CRT-004 (.030)	ATI-B3716.14-301-37 (.035)*	ATI A5232.09-801-37 (.030)	FTL 11-195 Lab 5768 (.060)		CCL 12-5608-0232 (.030) 3/29/12*		
5/8 (16mm)	ATI 6731.02-122-37 (.030)		ETC 08-246-21428.0 (.060)		ATI B0389.12-122-37 (.090)	ATI-A9631.01-301-37 (.015) 8/24/11*		ATI-A6857.01-122-37 (.060) 2/17/11*				

Patterned Glass Assessment

The Board directed the Administrator to contact patterned glass suppliers and ask for updates to the current patterned glass list of the SGCC Certified Products Directory as to maintain and update for accuracy. The administrator contacted the two domestic primary suppliers of patterned glass and asked for updates.

Guardian: (partial response):
P-516
Niagara,
Spraylite
Tetra
Esto
Etre
Ima
Glue Chip

AGC : Will update at the SGCC meeting regarding the patterned glasses they produce and any suggestions they may have.

List of Pattern Glass Suppliers:

- Guardian
- AGC

Comments:

- Auditors to develop list during audits and/or request samples

CLASSIFIED TEMPERED GLASS PATTERNS
(Number indicates SGCC Pattern ID#)

1/8 inch shallow

(01) P-516	(09) Spraylite	(34) Velvex	(221) Gluechip Pattern		
(37) Aquatex	(39) Industrex	(82) Pattern 62	(86) Showerlite		
(117) Solatex	(147) Solite	(168) Pattern 50	(111) Illusions		

1/8 inch medium

(04) Rattan	(05) Cotswold	(07) Burlap	(08) Smooth Rough		
(35) Flax	(52) Pattern 73	(56) Syenite	(57) Pattern 299		
(NEW) Glacier	(11) Flemish	(167) Leaf	(154) Rain		

1/8 inch deep

(10) Autumn

5/32 inch shallow

(64) Spraylite	(72) Velvex	(75) Aquatex	(183) Stippolyte	(186) Oak	(111) Illusions
(118) Solatex	(123) P-516	(126) Pattern 62	(128) Showerlite	(148) Solite	
(176) Hammered	(177) Industrex	(182) Sycamore	(195) Chantilly	(153) Flax	

5/32 inch medium

(61) Cotswold	(63) Smooth Rough	(66) Flemish	(181)Taffeta	(211) Niagara
(77) Pattern 73	(155) Rain	(73) Flax	(222) Glacier	

5/32 inch deep

(65) Autumn	(67) Oceanic	(173) Fluted	(180) Warwick	(184) Reeded

3/16 inch shallow

(50) Pattern 62	(51) P-516	(54) Showerlite	(116) Heliolite	(119) Solatex	(122) Sunadex
(131) Industrex	(132) Velvex	(133) Aquatex	(140) Flax	(142) Chinchilla	(149) Solite
(171) Crepe	(172) Pebble	(125) Spraylite	(159) Model 10	(111) Illusions	(220) Gluechip Pattern

3/16 inch medium

(143) Seashell	(144) Syenite	(145) Flemish	(176) Rain	(210) Niagara	(213) Smooth Rough
(214) Floralite	(216) Privata	(218) Radiance			

3/16 inch deep

(12) Oceanic	(14) Lozenge	(174) Krystal Flutes	(178) Flutex	(179) Bamboo	(222) Glacier

.210 inch shallow

(89) Velvex	(90) Muralex	(91) Industrex	(92) Aquatex	(93) Pattern 100	(94) Pattern 6
(95) Pattern 62	(96) Spraylite	(97) Burlap	(98) Factrolite	(99) Satinlite	(100) Luxlite
(101) J-3	(102) P-516	(103) Smooth Rough	(105) Cascade	(106) Pluralite	(108) Flax
(110) Skytex	(115) Chinchilla				

7/32 inch shallow

(14) Velvex	(16) Industrex	(17) Aquatex	(20) Pattern 62	(21) Spraylite	(22) Burlap
(24) Satinlite	(27) P-516	(28) Smooth Rough	(30) Cascade	(44) Flax	(84) Chinchilla

7/32 inch medium

(42) Seashell	(48) Flemish	(209) Niagara

7/32 inch deep

(29) Lizenge	(53) Boardlite

1/4 inch shallow

(169) P-516	(197) Strata	(198) Staccato	(200) Matrix	(203) Autumn	(111) Illusions	(299) Rain

1/4 inch medium

(175) Fluted	(199) Reeded	(201) Flemish	(202) Everglade	(208) Niagara

1/4 inch deep

(222) Glacier	(223) Pyramid

3/8 inch shallow

(204) Rain	(205) Stippolyte

Note: Numbers in parenthesis represent internal coding.

SGCC Safety Characteristics of Tempered Glass After Heat Soak Certification

(As of 9-12-12)

Introduction

Heat soaking of tempered safety glass is a process whereby tempered glass is heated and held at an elevated temperature for a period of time before being cooled. The purpose of heat soaking is to induce breakage in glass that might contain imperfections, while not eliminating the temper of the glass. By inducing breakage during the heat soak process, the likelihood of future field breakage may be reduced.

In recognition that the heat soak process, if performed incorrectly, can affect the safety characteristics of tempered safety glass, SGCC shall offer a voluntary program to 1) validate acceptable heat soak processes are adhered to, and 2) verify the safety characteristics of heat soaked tempered glass. In offering a certification program to accomplish these goals, **SGCC makes no statement as to the effectiveness of heat soaking to reduce field breakage.** A Licensee Participant in the SGCC heat soak certification process shall comply with all aspects of the SGCC certification process.

During regular twice per year audits, as well as regular SGCC certification requirements, SGCC heat soak Licensee Participants will also be audited for adherence to section 5.3 and 6 of BS EN 14179-1:2005; "Glass in building – Heat soaked thermally toughened soda lime silicate safety glass". As with regular test samples, the SGCC Administrator shall identify heat soaked specimens for routine evaluation or request licensee's heat soaked samples when none are available at the time of sampling. The licensee is permitted six weeks in which to effect delivery of said specimens to the SGCC approved Laboratory of the Licensee Participant's choice. For the products and thicknesses intended for heat soak certification, the Licensee Participant shall submit heat soaked test samples, in lieu or non-heat soaked SGCC 6 month test samples. The Laboratory shall conduct normal testing of these specimens. Testing of heat soaked tempered glass samples shall allow the Licensee Participant to also certify non-heat soaked tempered safety glass fabricated in the same manner as the heat soaked samples.

Auditing

As well as regular SGCC certification requirements, SGCC heat soak Licensee Participants will also be audited for adherence to section 5.3 and 6 of BS EN 14179-1:2005 to include:

1. Verify heat soak process system calibration test (at 100% and 10% load)
    a. Appropriate pattern of Stillage(s)
    b. Appropriate thermocouple placement, with good thermal contact to the glass surface (≥25mm from edge).
    c. Type of glass used for calibration
    d. Minimum separation of the glass, type, position, material and shape of separators. Constant for all glass.
    e. Air temp (measured at air egress) at beginning of calibration, ≤35C (95F)
    f. Continuous air temp recording
    g. Time for 1st glass to reach 280C (536F)

h. Time for last glass to reach 280C (536F)
i. No Glass shall exceed 320C (608F)
j. Holding phase, held for 2 hours at 290C ± 10C (536F to 572F)
k. Cool phase time, from end of 2hrs to 70C (158F)

2. Verify heat soak process cycle(s) (regular production)
   a. Heating phase
      i. The longer of the calibration times, 100% and 10% load, time for last glass to reach 280C (536F), shall be used.
      ii. Appropriate thermocouple placement, with good thermal contact to the glass surface (≥25mm from edge).
      iii. Minimum separation of the glass, type, position, material and shape of separators. Constant for all glass. (The norm Requires 20mm)
      iv. Verify continuous parameter monitoring
      v. Start temperature (ambient)
      vi. Time for last glass to reach 280C (536F)
      vii. Verify max glass surface temperature, not to exceed 320C (608F)

   b. Holding phase
      i. Duration of hold phase (2 hours)
      ii. Temperature at 290C ± 10C (536F to 572F)

   c. Cooling phase time, from end of 2hrs to 70C (158F)

3. Heat soak process
   a. Oven heated by convection
   b. Unhindered air circulation led parallel to the glass surfaces
   c. Glass shall not be fixed or clamped
   d. No glass to glass contact

Notes:

1. Validation of calibration may best be performed by paperwork submittal at the Administrative Office (training?)
   - This is exactly what we did, when we initially installed the equipment.
2. How often is calibration required?
   - The norm EN 14179-1:2005 does not prescribe any particular occurrences.
3. Does stillage(s) need to be per diagrams for production?
   It is not in the norm EN 14179-1:2005 nor is it in our internal procedure.
4. Do TC's need to be placed on glass for production heat soak or just calibration?
   The norm EN 14179-1:2005 does not prescribe that TCs be installed during production. In fact, it would be rather problematic as TCs are very long to install. Calibration is actually done to do a verification depending on a 10% or 100% cycle. We would oppose to that. We would rather consider redoing a calibration as described in the norm let's say once a year.

5. Shall a manufacturer procedure for heat soak be mandated?

6. What if participant doesn't heat soak regulary (once each 8 months say)?

7. Can you claim SGCC for heat soak product if the company doesn't participate in an SGCC program?

Suggest: Verify safety characteristics of heat soaked tempered glass (test), with requirement for heat soak QA procedure … maybe that references 14179?

Testing

Testing of SGCC heat soak certification samples shall be the same as normal SGCC certification testing.

Labeling

Current typical label:

ABS Glass
16 CFR 1201 II
ANSI Z97.1-2009
4mm UA SGCC 9999

Voluntary heat soak certification label:

ABS Glass
16 CFR 1201 II
ANSI Z97.1-2009
4mm UA S-SGCC 9999

Where S = Heat Soaked

Fees

- It is anticipated that test fees for heat soaked products would be the same as non-heat soaked tempered safety glass.
- There would be an additional administrative fee assessment to address the additional auditing and administrative obligations.
- There may be a need for initial program set-up and plant visits which may include additional cost.

Attachment #14

Testing Range of Thickness Failures

Thickness	Cert Pd	Prod Thick/Type	# Samples Broken by Impactor/Ctr Punch	Avg. Particle Weight (g) Impactor/Ctr Punch	Acceptance Criteria (g)	Type Failure (IF/CF)	Number of failed pieces per set	Average Weight of Failed Particles IF/CF
1/8"								
	F12	1/8" TTG	5/0	36/0	51	IF1/CF0	1/5	83/0
	F10	1/8" TTG	5/0	75/0	52	IF4/CF0	4/5	84/0
	F10	1/8" TTG	5/0	65/0	51	IF2/CF0	2/5	127/0
	L10	1/8" TTG	5/0	102/0	52	IF3/CF0	3/5	152/0
	L10	1/8" TPG (s)	6/0	76/0	49	IF2/CF0	2/6	182/0
	L10	1/8" TTG	5/0	360	51	IF1/CF0	1/5	56/0
	L10RT	1/8" TTG	5/0	40/0	51	IF1/CF0	1/5	112/0
	L10	1/8" TTG	5/0	30/0	51	IF1/CF0	1/5	90/0
	L10	1/8" TTG	5/0	27/0	51	IF1/CF0	1/5	69/0
	L10	1/8" TTG	5/0	93/0	51	IF3/CF0	3/5	125/0
	L10	1/8" TTG	5/0	28/0	52	IF1/CF0	1/5	64/0
	F12	1/8" TPG (s)	6/0	42/0	51	IF1/CF0	1/6	83/0
	L11	1/8" TPG (s)	6/0	43/0	50	IF1/CF0	1/6	70/50
	L11	1/8" TPG (s)	6/0	45/0	49	IF2/CF0	2/6	117/0
	L11	1/8" TTG	5/0	20/0	52	IF1/CF0	1/5	143/0
	L11	1/8" TPG (s)	6/0	37/0	51	IF1/CF0	1/6	108/0
	L11	1/8" TTG	5/0	24/0	52	IF1/CF0	1/5	57/0
	L11	1/8" TTG	5/0	101/0	50	IF5/CF0	5/5	101/0
	F11	1/8" TPG (s)	6/0	19/0	48	IF1/CF0	1/6	54/0
	L10	1/8" TTG	5/0	41/0	52	IF1/CF0	1/5	71/0
	L11	1/8" TTG	5/0	50/0	52	IF2/CF0	2/5	80/0
	F11	1/8" TPG (s)	6/0	55/0	51	IF2/CF0	2/6	78/0
	L11	1/8" TTG	5/0	34/0	50	IF1/CF0	1/5	92/0
	F11	1/8" TTG	5/0	36/0	51	IF1/CF0	1/5	53/0
	F11	1/8" TTG	5/0	74/0	52	IF1/CF0	1/5	205/0
	L11	1/8" TTG	5/0	98/0	51	IF2/CF0	2/5	183/0
	F12	1/8 TTG	5/0	44/0	50	IF1/CF0	1/5	73/0
	F11	1/8" TTG	5/0	57/0	48	IF1/CF0	1/5	129/0
	F12	1/8" TPG (s)	6/0	38/0	48	IF2/CF0	2/6	52/0
	L11	1/8" TPG (s)	6/0	40/0	50	IF1/CF0	1/6	63/0

	F12	1/8" TTG	5/0	69/0	48	IF2/CF0	2/5	115/0
	L11	1/8" TTG	5/0	49/0	51	IF2/CF0	2/5	76/0
	F11	1/8" TTG	5/0	43/0	49	IF1/CF0	1/5	80/0
	F12	1/8" TPG (m)	6/0	21/0	47	IF1/CF0	1/6	70/0
	F12	1/8" TTG	5/0	41/0	51	IF1/CF0	1/5	61/0
	F12RT	1/8" TTG	5/0	32/0	52	IF1/CF0	1/5	68/0
	F11	1/8" TTG	5/0	58/0	51	IF1/CF0	1/5	135/0
	F11	1/8" TTG	5/0	23/0	50	IF1/CF0	1/5	62/0
	F11	1/8" TTG	5/0	49/0	51	IF2/CF0	2/5	75/0
	L11	1/8" TTG	5/0	41/0	52	IF1/CF0	1/5	61/0
	F11	1/8" TTG	5/0	113/0	51	IF4/CF0	4/5	137/0
	F10RT	1/8" TTG	5/0	45/0	49	IF2/CF0	2/5	69/0
	F11	1/8" TPG (s)	6/0	20/0	47	IF1/CF0	1/6	49/0
	F12	1/8" TTG	5/0	48/0	49	IF3/CF0	3/5	56/0
	L10	1/8" TTG	5/0	40/0	51	IF2/CF0	2/5	100/0
	L10	1/8" TTG	5/0	37/0	51	IF2/CF0	2/5	79/0
	F10	1/8" TTG	5/0	75/0	52	IF5/CF0	5/5	94/0
	F10	1/8" TTG	5/0	75/0	51	IF3/CF0	3/5	137/0
	L10RT	1/8" TTG	5/0	76/0	51	IF2/CF0	2/5	122/0
	L10	1/8" TTG	5/0	118/0	51	IF4/CF0	4/5	135/0
	L11	1/8" TTG	5/0	52/0	52	IF2/CF0	2/5	71/0
3/16"								
	F12	3/16" TPG (s)	6/0	26/0	72	IF1/CF0	1/6	92/0
	L10	3/16" TPG (s)	6/0	55/0	70	IF2/CF0	2/6	83/0
	F10	3/16" TTG	5/0	68/0	76	IF2/CF0	2/5	83/0
	F10	3/16" TTG	5/0	44/0	75	IF1/CF0	1/5	103/0
	F10	3/16" TPG (m)	6/0	32/0	68	IF1/CF0	1/6	84/0
	L10	3/16" TTG	5/0	59/0	74	IF1/CF0	1/5	131/0
	L10	3/16" TPG (s)	6/0	48/0	76	IF1/CF0	1/6	89/0
	L11	3/16" TTG	4/0	108/0	76	IF1/CF0	1/4	273/0
	F11	3/16" TPG (s)	6/0	113/0	76	IF5/CF0	5/6	129/0
	L10	3/16" TPG (d)	4/0	127/0	72	IF1/CF0	1/4	449/0
	F11	3/16" TPG (m)	6/0	103/0	71	IF4/CF0	4/6	114/0
	L10	3/16" TTG	5/0	43/0	79	IF1/CF0	1/5	95/0
	L11	3/16" TTG	5/0	32/0	76	IF1/CF0	1/5	79/0
	L11	3/16" TPG (m)	6/0	52/0	68	IF1/CF0	1/6	105/0
	L10	3/16" TPG (m)	6/0	56/0	67	IF1/CF0	1/6	105/0
	L10	3/16" TPG (m)	6/0	69/0	73	IF2/CF0	2/6	107/0
	L11	3/16" TPG	6/0	40/0	74	IF1/CF0	1/6	85/0
	L11	3/16" TTG	5/0	59/0	77	IF1/CF0	1/5	192/0
	F10	3/16" TPG (s)	6/0	48/0	67	IF1/CF0	1/6	143/0

	L10RT	3/16" TPG (s)	6/0	67/0	72	IF3/CF0	3/6	92/0
	F11	3/16" TTG	5/0	48/0	75	IF1/CF0	1/5	77/0
	F12	3/16" TTG	5/0	56/0	75	IF2/CF0	2/5	85/0
	F11	3/16" TTG	5/0	67/0	76	IF2/CF0	2/5	84/0
	F12	3/16" TPG (s)	6/0	112/0	72	IF4/CF0	4/6	144/0
	F11	3/16" TPG (s)	6/0	330/0	75	IF1/CF0	1/5	1536/0
	F12	3/16" TTG	5/0	67/0	75	IF2/CF0	2/5	81/0
	L11	3/16" TPG (s)	5/0	75/0	73	IF3/CF0	3/6	105/0
	F11	3/16" TPG (s)	5/0	77/0	72	IF3/CF0	3/6	94/0
	F10RT	3/16" TPG (s)	6/0	33/0	71	IF1/CF0	1/6	76/0
	F10	3/16" TPG (s)	6/0	50/0	68	IF2/CF0	2/6	82/0
	F12	3/16" TTG	5/0	101/0	76	IF3/CF0	3/5	130/0
	F12	3/16" TPG (m)	6/0	36/0	68	IF1/CF0	1/6	100/0
	F12	3/16" TTG	5/0	26/0	75	IF2/CF0	2/5	80/0
	F11	3/16" TTG	5/0	48/0	75	IF1/CF0	1/5	81/0
	F11	3/16" TPG (d)	6/0	34/0	68	IF1/CF0	1/6	80/0
	L11	3/16" TPG (s)	6/0	56/0	72	IF1/CF0	1/6	91/0
	F11	3/16" TPG (s)	6/0	56/0	72	IF1/CF0	1/6	96/0
	L10	3/16" TTG	5/0	73/0	77	IF1/CF0	1/5	201/0
	L11	3/16" TTG	5/0	54/0	76	IF1/CF0	1/5	89/0
	F10	3/16" TPG (m)	6/0	32/0	68	IF1/CF0	1/6	84/0
	L10	3/16" TTG	5/0	59/0	74	IF1/CF0	1/5	131/0
	L10	3/16" TPG (s)	6/0	48/0	76	IF1/CF0	1/6	89/0
	L11	3/16" TTG	4/0	108/0	76	IF1/CF0	1/4	273/0
	F11	3/16" TPG (s)	6/0	113/0	76	IF5/CF0	5/6	129/0
	F11	3/16" TPG (s)	6/0	67/0	72	IF1/CF0	1/6	158/0
5/32"								
	F12	5/32" TTG	5/0	33/0	63	IF1/CF0	1/5	64/0
	L10	5/32" TTG	5/0	66/0	64	IF1/CF0	1/5	133/0
	F10	5/32" TTG	5/0	57/0	63	IF2/CF0	2/5	111/0
	F10	5/32" TTG	5/0	65/0	63	IF2/CF0	2/5	120/0
	F10	5/32" TTG	5/0	46/0	64	IF1/CF0	1/5	66/0
	F11	5/32" TTG	5/0	32/0	63	IF1/CF0	1/5	82/0
	F11	5/32" TTG	5/0	50/0	63	IF2/CF0	2/5	91/0
	L11	5/32" TPG (s)	6/0	133/0	62	IF5/CF0	5/6	93/0
	F11	5/32" TPG (m)	6/0	27/0	54	IF1/CF0	1/6	62/0
	F12	5/32" TPG (d)	4/0	39/0	53	IF1/CF0	1/4	66/0
	F10	5/32 TPG (d)	6/0	38/0	56	IF3/CF0	3/6	65/0
	L11	5/32" TPG (d)	6/0	33/0	56	IF1/CF0	1/6	62//0
	F11	5/32" TPG (s)	6/0	35/0	60	IF1/CF0	1/6	82/0
	L11	5/32" TPG (d)	4/0	37/0	53	IF1/CF0	1/4	57/0

	F12	5/32" TPG (d)	4/0	104/0	56	IF2/CF0	2/4	163/0
	F12	5/32" TPG (s)	6/0	30/0	58	IF1/CF0	1/6	64/0
	L11	5/32" TTG	5/0	108/0	63	IF4/CF0	4/5	108/0
	L11	5/32"TTG	5/0	54/0	63	IF1/CF0	1/5	77/0
	L11	5/32" TPG (m)	6/0	45/0	59	IF1/CF0	1/6	78/0
	F11	5/32" TPG (s)	6/0	61/0	60	IF2/CF0	2/6	81/0
	F11	5/32" TPG (s)	6/0	45/0	61	IF1/CF0	1/6	67/0
	F11	5/32" TTG	5/0	34/0	64	IF1/CF0	1/5	65/0
7/32"								
	F12	7/32" TPG (s)	5/1	54/43	83	IF1/CF0	1/6	90/0
1/4"								
	F12	1/4" TTG	5/0	67/0	92	IF1/CF0	1/5	100/0
	F11	1/4" TTG	5/0	65/0	91	IF1/CF0	1/5	161/0
	L10	1/4" TTG	4/1	50/228	92	IF0/CF1	1/5	0/228
	F11	1/4" TPG (d)	6/0	48/0	86	IF1/CF0	1/6	163/0
	L10	1/4" TTG	2/3	66/80	91	IF2/CF3	1/5	113/0
	F10	1/4" TPG (s)	6/6	16783/0	95	IF5/CF0	5/5	16783/0
	L11	1/4" TBG	5/0	109/0	92	IF2/CF0	2/5	207/0
	L10	1/4" TTG	5/0	4474/0	92	IF5/CF0	5/5	4474/0
	L10	1/4" TTG	5/0	71/0	92	IF1/CF0	1/5	128/0
	F11	1/4" TTG	5/0	83/0	93	IF1/CF0	1/5	291/0
	F10	1/4" TTG	5/0	74/0	92	IF2/CF0	2/5	107/0
	L10	1/4" TTG	5/0	57/0	92	IF1/CF0	1/5	95/0
	L10	1/4" TTG	5/0	141/0	95	IF1/CF0	1/5	95/0
	F11	1/4" TTG	5/0	42/0	92	IF1/CF0	1/5	95/0
	L10	1/4" TPG (m)	6/0	64/0	81	IF1/CF0	1/6	141/0
	F11	1/4" TTG	5/0	75/0	93	IF1/CF0	1/5	218/0
	F12	1/4" TTG	5/0	72/0	92	IF2/CF3	2/5	105/0
	L11	1/4" TTG	5/0	85/0	92	IF2/CF0	2/5	140/0
	F10	1/4" TTG	5/0	74/0	91	IF1/CF0	1/5	93/0
	F12	1/4" TTG	5/0	50/0	91	IF1/CF0	1/5	94/0
	F11	1/4" TPG (m)	6/0	54/0	82	IF2/CF0	2/6	122/0
	L11	1/4" TPG (m)	6/0	62/0	82	IF2/CF0	2/6	103/0
	F11	1/4" TTG	5/0	79/0	92	IF2/CF0	2/5	120/0
	F11	1/4" TTG	5/0	73/0	91	IF1/CF0	1/5	138/0
	L10	1/4" TTG	4/1	99/301	91	IF2/CF1	3/5	140/301
	L11	1/4" TTG	4/1	58/24	93	IF1/CF0	1/5	97/0
	L10	1/4" TPG (m)	6/0	67/0	82	IF2/CF0	2/6	116/0
5/16"								
	L11	5/16" TTG	2-Mar	262/433	122	IF3/CF2	5/5	262/433
3/8"								

	F12	3/8" TPG (s)	5/1	154/356	148	IF2/CF1	3/6	170/356
	F12	3/8" TTG	5/0	184/0	152	IF4/CF0	4/5	206/0
	F12	3/8" TTG	5/0	107/0	149	IF2/CF0	2/5	181/0
	L11	3/8" TPG (s)	5/6	239/816	148	IF4/CF1	5/6	287/816
	F12	3/8" TTG	0/5	0/163	151	IF0/CF1	1/5	0/365
	F10	3/8" TTG	5/0	86/0	151	IF2/CF0	2/5	190/0
	F10	3/8" TPG (m)	6/0	108/0	143	IF1/CF0	1/6	156/0
	L10	3/8" TTG	2/3	71/142	152	IF0/CF1	1/5	0/235
	F12	3/8" TTG	3/2	272/253	150	IF3/CF2	3/2	272/253
	F11	3/8" TTG	5/0	111/0	151	IF1/CF0	1/5	207/0
	L11	3/8" TTG	4/5	110/47	153	IF1/CF0	1/0	259/0
	F12	3/8" TPG (s)	6/0	94/0	148	IF1/CF0	1/6	163/0
	L11	3/8" TPG (s)	6/0	103/0	147	IF1/CF0	1/6	162/0
	F11	3/8" TPG (s)	6/0	162/0	147	IF1/CF0	1/6	365/0
	L11	3/8" TPG (s)	6/0	219/0	148	IF6/CF0	6/6	219/0
	F12	3/8" TTG	5/0	135/0	153	IF1/CF0	1/5	255/0
	F12	3/8" TTG	3/2	135/341	152	IF1/CF1	2/5	159/595
1/2"	F12	1/2" TTG	0/5	0/309	208	IF0/CF5	5/5	0/309
	F12	1/2" TTG	1/4	0/229	202	IF0/CF2	2/5	0/346
	L11	1/2" TTG	5/0	128/0	202	IF1/CF0	1/5	224/0
	L10	1/2" TTG	3/2	268/386	198	IF3/CF2	5/5	268/386
5/8"								
	F11	5/8" TTG	5/0	221/0	253	IF1/CF0	1/5	301/0
3/4"								
	L10	3/4" TTG	5/0	2545/0	302	IF5/CF0	5/0	2545/0

Thickness	Number of failures
1/8"	51
3/16"	45
5/32"	22
7/32"	1
1/4"	27
5/16"	1
3/8"	17
1/2"	4
5/8"	1
3/4"	1