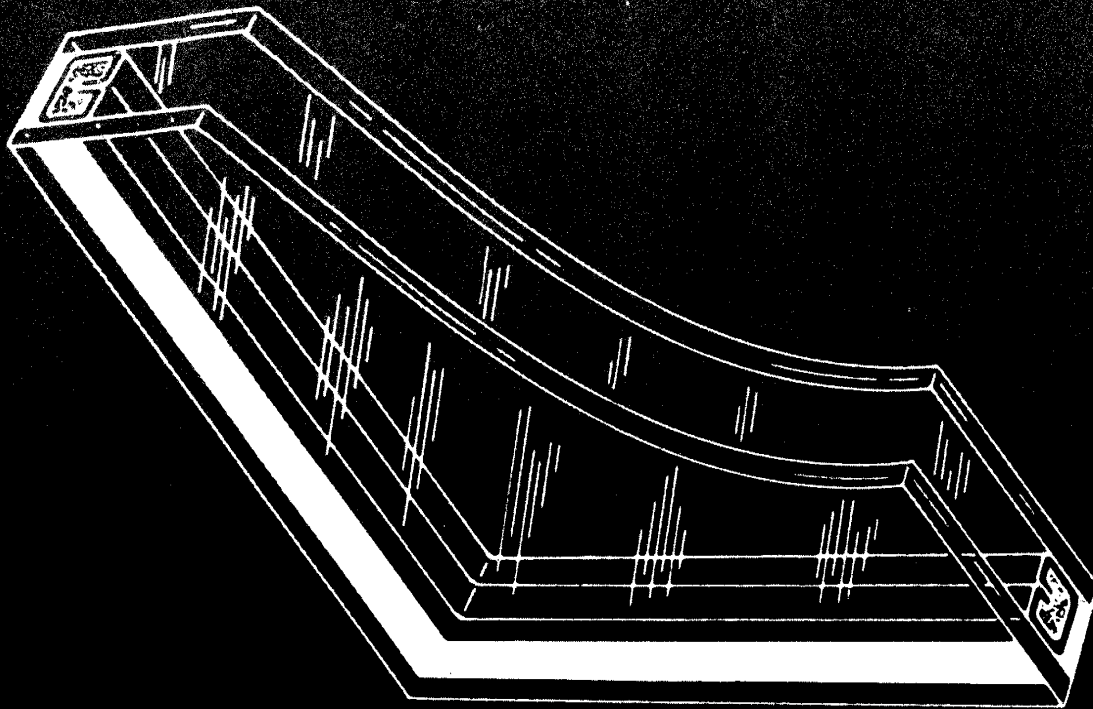


CERTIFIED PRODUCTS DIRECTORY

SEALED INSULATING GLASS

PHONE (315) 646-2234

FEBRUARY 2002



INSULATING GLASS

IGCC[®]

CERTIFICATION COUNCIL

CREDIBILITY IN INDUSTRY CERTIFICATION THROUGH ACTIVE PUBLIC PARTICIPATION

Visit Our Website @ WWW.IGCC.ORG

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IGCC® information and guidelines are included in the twice per year printing of the Certified Products Directory, or are available from IGCC® upon request. Re-printing of this information in any other manual, material or document without the written permission of IGCC® is in conflict with the desire of IGCC® and should not be interpreted as being endorsed by or affiliated with IGCC®.

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PROGRAM CONCEPT

Manufacturers of sealed insulating glass units, consumers, specifiers, and others who are responsible for or concerned with the quality and performance of products purchased in the public interest, recognizing a need for a sound product testing and performance certification program, have jointly established the Insulating Glass Certification Council (IGCC®). All IGCC® meetings are open to the public and public participation is encouraged.

IGCC® is a nonprofit organization which sponsors and directs a program of periodic accelerated laboratory testing and unannounced plant inspections to insure continuing product performance through specified standards. The testing specifications used are outlined in "ASTM Specification E774 for Sealed Insulating Glass." This specification basically classifies sealed units into three categories; C, CB or CBA, depending upon durability in the accelerated testing. It is the policy of IGCC® to remain flexible in referencing specifications and test methods in order to best reflect changing technology and new developments.

IGCC®'s responsibilities through its administrator are to see that periodic inspections and independent laboratory tests are performed on participating manufacturers' products and to validate the right of that manufacturer to use the IGCC® label on his product or products information claims. Additionally, IGCC® requires licensees to have a working quality assurance program for the fabrication of insulating glass. Adherence is verified during twice per year plant visits. These requirements were adopted to improve the overall quality of IG units in the program, and also to satisfy requirements established by the Department of Housing and Urban Development, HUD.

Management and control of the program is vested in a Board of Governors made up equally of industry and public interest members. The public interest representatives are empowered with 50 percent of the voting rights, and can veto any actions, regardless of the number present at a meeting. This insures against industry dominance of IGCC® action.

The program is under the supervision of a qualified administrator who is not affiliated with any manufacturer of insulating glass, material supplier, or participating testing laboratory, and is hired by and responsible to the Insulating Glass Certification Council. The manufacturers of the products listed herein have certified that the labeled materials comply with the performance characteristics established by ASTM E774. The compliance of the manufacturers with the requirements of that specification is validated periodically by the IGCC® administrator through inspections and testing by an independent testing laboratory under his direction.

Every manufacturer of insulating glass is eligible and encouraged to apply for the right to use the IGCC® label. However, permission to use the label is not granted until an independent laboratory test verifies compliance with the requirements. Once all requirements have been met, each product is assigned an IGCC® number to identify the product, performance class, and the factory in which it is made. Throughout the year, IGCC® requires the manufacturer to certify that the labels are being used only on units that are produced in the same manner and with the same materials as the tested specimens. Based upon these declarations, IGCC® authorizes continued use of the IGCC® label and the product listing published in this directory.

The Insulating Glass Certification Council wishes to recognize the substantial contributions made by the Safety Glazing Certification Council, the Sealed Insulating Glass Manufacturers Association (SIGMA), American Society for Testing and Materials (ASTM), The National Bureau of Standards (NIST), National Institute of Standards & Technology (NIST), FHA, HUD, Public Interest Persons, the Industry, and particularly consumers. Without input from such a broad cross-section, this program would not be possible.

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Mark Cody, President
Lyle N. Krohnberg, Vice President, Treasurer
Jim Spetz, Secretary

IGCC CERTIFICATION COMMITTEE

Donald J. Vild, Chairman

Note: Board members are members of the Certification Committee by virtue of being a board member.

<u>Licensee</u>	<u>Primary Member</u>	<u>First Alternate</u>	<u>Second Alternate</u>
ACI Distribution			
AFG Insulating	James Brooks	Mark B. Cody	Thomas Mewbourne
AFGD	James Brooks	Mark B. Cody	Thomas Mewbourne
AFGD, Div. Of AFG Ind. Ltd.	James Brooks	Mark B. Cody	Thomas Mewbourne
Alside Window Co-Midwest			
Arch Aluminum & Glass Co.			
Arch Aluminum & Glass L.C.	Leon Silverstein	Dan Haney	
Architectural Window Mfg. Corp.			
Atwood Mobile Products			
Berkowitz J E Inc.	Jim Stinsman		
Brin Northwestern Glass Co.			
Cardinal IG	Robert G. Spindler	Roger O'Shaughnessy	James Larsen
Casmere Glass Corporation			
Classic Glass of Battle Creek Inc.			
Coastal Glass Distributors			
Crystal Window & Door Systems, Ltd.			
Curved Glass Distributors			
Custom Glass Prod. Of Carolina	Steven Reeder		
Custom Glass Products Inc.	Victor Reeder	Eric Reeder	Joseph Oboikovitz
Custom Insulated Glass, Inc.			
Edge Seal Technologies Inc.	Michael McHugh	Mike Bayer	Susan Ordd
Exxal-Sistemas Universales de Aluminio			
Floral Glass & Mirror Inc.			
GGI Glass Distributors Corp.	Ron Vance		
Glass Enterprises Inc.			
Glasswerks Phx, LLC			
Glenny Glass Co.			
Globe Amerada Architectural Glass	Walt Myers	Cheri Kellman	
Graham Architectural Products			
Guardian Fabrication Inc.	Hal F. Brothers	Carrie L. Gillis	Daphinne Pedreschi
Guardian Inds Corp.-Lewistown	Hal F. Brothers	Carrie L. Gillis	Daphinne Pedreschi
Harvey Industries, Inc.			
Hehr Glass Company			
Hurd Millwork	James Sorge	Terri Ziembo	Mark Hoffman
Insulating Glass 18 Z.B. Ltd.			
Insulpane of Connecticut Ind			
Interpane Glass Co	Dalton Schreiber		
Jersey Tempered Glass, Inc			
Louisville Plate Glass			
Mannix; Div of Interstate Window			
Marvin Windows	James Krahn	Douglas Steinbring	
Mid-American Glass			
Nashville Tempered Glass Corp.			
National Glass Ltd.			
Norco Windows			
Northern Building Products, Inc.			
Northwest Glass, Inc.			
Northwestern Inds, Inc.	Tim McQuade	James Levingston	Henry Heiss
NY Glass Products Inc.			

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<u>Licensee</u>	<u>Primary Member</u>	<u>First Alternate</u>	<u>Second Alternate</u>
ODL, Inc.			
Oldcastle Glass, Inc.*	Richard Wright	Robert Williams	
Patio Enclosures, Inc.	Jeff Nowell	Bob Boger	
PDC Glass of Michigan Inc.			
Perilstein Distributing Corp.			
Philips Products Inc.-IN	John Lewis, Jr.	Rob Manthey	
PPG Inds. Inc.			
Prelco Inc.			
Pride Insulated Glass Co. Inc.			
REPCO			
Revere Building Products, Div.of Gentek			
Rochester Insulated Glass Inc.	Stanley Wolk		
S N E Enterprises, Inc.	Dave Brounacker	Steve Laszinski	
Shenzhen Nanfang Insul. Glass Co.			
Sierra Pacific Windows			
SIGCO, Inc.	David McElhinny	Steven Freeman	
Solar Seal Co.	Frederic P. Shaw, Jr.		
Syracuse Glass Co. Inc.			
Taiwan Glass USA Sales Corp.			
Tecnoglass S.A.			
Tempered Glass, Inc.	Rob Brewer	Joseph M. Scalzo	
Thermolite Inc.			
Thermolock Mfg Co., LLC			
Thermoseal Glass Corp.	Richard Chubb	Larry Klick	
Thermo-Twin Industries, Inc.			
Tower Glass Products Corp.			
TRACO (Three Rivers Alum)			
Twin Pane Insulated Glass Co. Inc.			
United Plate Glass Co. Inc.			
Vidrios Marte SA de CV			
Vinylbilt Glass			
Vinylume Products	Robert P. Randall		
Viracon Inc.	Lyle Krohnberg	Roger Skluzacek	Don Boutelle
Vitro Flotado Cubiertas S.A. de C.V.			
W A Wilson Inc.	Bob Hartong	Mark Bond	Jody Campbell
Weather Shield Mfg. Inc.	Val Rogers	Rick Gugliuzza	Steve Wright
Weatherproof Inc.			
Winchester Industries			

*Oldcastle Glass, Inc. represents Downey Glass, Free State Glass, General Glass, Glass Distributors of America, HGP Industries, Hoffer's, North American Glass, Tempglass, and United Tempering Systems.

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IN RECOGNITION OF PAST PRESIDENTS WHO SERVED IGCC® SINCE ITS INCEPTION

Roger D. O'Shaughnessy	Cardinal IG	1977-1979
Donald J. Vild	LOF Glass	1979-1981
Colin S. Brady	Twin Pane	1981-1982
Robert G. Spindler	PPG	1982-1983
Jerry Catalano	Hordis Brothers	1983-1985
Dr. Joseph Minor	University of Missouri	1985-1989
Mitchell D. Edwards	SPI Glass Corp.	1989-1992
John Colapietro	Tempglass Inc.	1992-1993
Robert G. Spindler	Cardinal IG	1993-1996
James Krahn	Marvin Windows	1996-1999
Mark Cody	AFG Industries	1999-Present

**MEETINGS OF THE
CERTIFICATION COMMITTEE**

The Certification Committee of the Insulating Glass Certification Council meets once every nine months. Interested persons may obtain minutes of this meeting and earlier meetings by writing to the Insulating Glass Certification Council.

By-laws are also available by writing to the Insulating Glass Certification Council.

Certification in this directory is up to date as of the date of issue; however, products may be authorized to use the permanent label or authorization removed from time to time. Please contact the IGCC® office for the latest up-to-date information.

Direct all requests or any comments to:

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CERTIFIED PRODUCTS KEY

Sealant:

BSS	=	Butyl sealant spacer
HMB	=	Hot melt butyl
MPS	=	Modified Polysulfide
MPU	=	Modified Polyurethane
PIB	=	Polyisobutylene
PS	=	Polysulfide
PU	=	Polyurethane
SI	=	Silicone
PUMS	=	Polyurethane modified silicone
RHMB	=	Reactive Hot melt butyl
EPU	=	Extrudable Polyurethane

Construction Components:

K	=	Key
J	=	Joiner
AP	=	Aperture plug
ASM	=	Air space material
L	=	Leg
CT	=	Capillary Tubes

Construction Materials:

AL	=	Aluminum
DC	=	Die cast
PL	=	Plastic
AA	=	Anodized aluminum
MA	=	Mill finish aluminum
AC	=	Aluminum channel
FS	=	Foam Spacer
GS	=	Galvanized steel
SS	=	Stainless steel
TPS	=	Tinplate steel
TP	=	Thermoplastic
R	=	Rubber

Desiccant:

MS	=	Molecular sieve
SG	=	Silica gel
BL	=	Blended desiccant
DM	=	Desiccated matrix

Substrate:

U	=	Uncoated
C	=	Coated
SCF	=	Suspended coated film

Thermal Break:

DP	=	Desiccated plastic
PF	=	Plastic foam
P	=	Plastic

Vapor Barrier:

AF	=	Aluminum foil
B	=	Butyl
P	=	Plastic

Fabrication Techniques:

S	=	Soldered
W	=	Welded
B	=	Brazed
BC	=	Bent Corners

Gas Fill: Ref. Page 37

Gas Fill =	Initial gas fill target met by Licensee
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Note: The materials of construction as listed above are presented as general information only. The designations for the various component parts are generic and do not reflect specific product modifications or technical differences within a component. For more detailed information on components, contact your insulating glass supplier.

UNDER EACH COMPANY'S NAME IS THEIR IGCC® PERMANENT LABEL

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**CERTIFIED PRODUCTS
ALPHABETICAL BY PLANT**

<u>LICENSEE</u>	<u>IGCC NUMBER</u>	<u>FRAME CONSTRUCTION</u>	<u>SUBSTRATE</u>	<u>SPACER</u>	<u>DESICCANT</u>	<u>SEALANT</u>	<u>GAS FILL TARGET</u>
ACI Distribution 12900 Nicholson Road PO Box 815547 Dallas, TX 75381-5547 (972) 484-3691 ACI 140 IGCC® CBA '02	703 CBA	PLK	U	AA	MS	PIB/SI	
ACI Distribution 2765 La Fayette Street Santa Clara, CA 95050 (408) 748-2120 IGCC ® 1355 CBA '02	1106 CBA	PLK	U	AA	MS	PIB/HMB	
ACI Distribution 3225 S. 116th Ste. 133 Seattle, WA 98158 (206) 244-0727 ACI 197 IGCC ® CBA '02	1239 CBA	PLK	U/SCF	GS	MS	PU	
ACI Distribution 1170 CBA	1170 CBA	PLK	U/SCF	GS	MS	PU	
ACI Distribution 1171 CBA	1171 CBA	PLK/ASM	U	AA	MS	PU	
ACI Distribution 1172 CBA	1172 CBA	PLK/ASM	U	AA	MS	PIB/PU	
AFG Insulating 365 McClurg Road-Suite E Boardman, OH 44512 (330) 965-1000 PG IGCC ® CBA '02	1269 CBA	BC/ASM	U	TPS	DM	HMB	
AFG Insulating 1508 George Brown Drive Marshall, MI 49068 (616) 789-1267 AFG IGCC ® CBA '02	1309 CBA	PLK	U	AA	MS	PU	
AFG Insulating 480 California Road Quakertown, PA 18951 (215) 538-9424 AFG IGCC ® CBA '02	1310 CBA	BC	U	BSS		BSS	
AFG Insulating 1508 George Brown Drive Marshall, MI 49068 (616) 789-1267 AFG IGCC ® CBA '02	1391 CBA	BC	U/C	FS		HMB	
AFG Insulating 1734 CBA	1734 CBA	BC	U	TPS	DM	PUMS	
AFG Insulating 1508 George Brown Drive Marshall, MI 49068 (616) 789-1267 AFG IGCC ® CBA '02	1735 CBA	BC	U	BSS		BSS	
AFG Insulating 1626 CBA	1626 CBA	BC	U	TPS	DM	PUMS	
AFG Insulating 480 California Road Quakertown, PA 18951 (215) 538-9424 AFG IGCC ® CBA '02	1627 CBA	BC	U	BSS		BSS	
AFG Insulating 1628 CBA	1628 CBA	BC/ASM	U	FS		MPS	
AFG Insulating 207 Watlington Industrial Rd. Reidsville, NC 27320 (336) 342-3878 PG 62 IGCC ® CBA '02	1554 CBA	BC	U	BSS		BSS	
AFG Insulating 207 Watlington Industrial Rd. Reidsville, NC 27320 (336) 342-3878 PG 62 IGCC ® CBA '02	1596 CBA	BC/ASM	U	TPS	DM	PUMS	
AFGD 8017 Edith Blvd. Albuquerque, NM 87113 (505) 898-1460 CGAC-A IGCC ® CBA '02	1285 CBA	PLK	U	MA	MS	PIB/MPS	

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<u>LICENSEE</u>	<u>IGCC NUMBER</u>	<u>FRAME CONSTRUCTION</u>	<u>SUBSTRATE</u>	<u>SPACER</u>	<u>DESICCANT</u>	<u>SEALANT</u>	<u>GAS FILL TARGET</u>
AFGD 1201 Hwy 67 E Alvarado, TX 76009 (817) 477-1144 AFGD 24 IGCC @ CBA '02	1748 CBA	BC/PLJ	U	AA	BL	PIB/MPS	
AFGD 11950 E 33 Ave. Aurora, CO 80010 (303) 340-4000 AFGD 21 IGCC @ CBA '02	1612 CBA 1726 CBA	PLK/CT PLK/CT	U U	AA AA	BL BL	PIB/SI PIB/PS	
AFGD 3350 Ball St. Birmingham, AL 35224 (205) 841-6785 AFGD 03 IGCC @ CBA '02	1594 CBA	BC/PLK	U	AA	BL	PIB/SI	
AFGD 4041 Remi Place Burnaby, BC V5A 4J8 Canada (604) 420-3600 AFGD TWINSULITE VANCOUVER IGCC @ CBA '02	1491 CBA	PLK	U/C	MA	BL	PIB/SI	
AFGD 575 Currant Rd. Fall River, MA 02720 (508) 675-9220 AFGD 7 IGCC @ CBA '02	1339 CBA 1340 CBA	PLK PLK	U U	AA AA	BL BL	PIB/MPS MPS	
AFGD 148 Flint Hill Rd. Fort Mill, SC 29715 (800) 866-2341 AFGD 4 IGCC @ CBA '02	1215 CBA	PLK	U	AA	BL	PIB/MPS	
AFGD 160 N. High Street PO Box 220 Hebron, OH 43025-0220 (740) 929-2443 AFGD 06 IGCC @ CBA '02	1692 CBA 1730 CBA	BC/PLJ PLK	U U	AA AA	BL BL	PIB/SI PIB/PS	
AFGD 6600 Suemac Pl. Jacksonville, FL 32254-2792 (904) 786-6611 AFGD 02 IGCC @ CBA '02	1344 CBA 1447 CBA 1456 CBA 1631 CBA	PLK PLK PLK PLK	U U U U	AA AA AA AA	BL BL BL BL	MPS PIB/MPS PIB/SI MPS	
AFGD 2522 Westcott Blvd. Knoxville, TN 37923 (865) 691-2040 AFGD 05 IGCC @ CBA '02	1649 CBA	BC/GSJ	U	MA	BL	PIB/MPS	

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<u>LICENSEE</u>	<u>IGCC NUMBER</u>	<u>FRAME CONSTRUCTION</u>	<u>SUBSTRATE</u>	<u>SPACER</u>	<u>DESICCANT</u>	<u>SEALANT</u>	<u>GAS FILL TARGET</u>
AFGD 3200 Austell Rd. Marietta, GA 30060 (770) 434-2041 AFGD 1 IGCC @ CBA '02	1643 CBA 1644 CBA	BC/GSJ BC/GSJ	U U	AA AA	BL BL	PIB/PS PIB/SI	
AFGD 6200 Gorman Rd. Richmond, VA 23231 (804) 222-0120 AFGD 10 IGCC @ CBA '02	1327 CBA 1703 CBA	PLK/ASM BC/ALJ	U U	AA AA	BL BL	PIB/SI PIB/MPS	
AFGD 803 Prestige Pkwy Scotia, NY 12302 (518) 374-3812 AFGD 09 IGCC @ CBA '02	1737 CBA	PLK/ASM	U/C	AA	BL	PIB/MPS	
AFGD 450 Deschambault Street Winnipeg, MB R2H 0K1 Canada (204) 233-0229 AFGD Twinsulite Winnipeg IGCC @ CBA '02	1535 CBA 1536 CBA	PLK/AP BC	U/C U/C	MA FS	BL	PIB/MPS MPS	
AFGD, Div. Of AFG Ind. Ltd. 75 Doney Crescent Concord, ON L4K 1P6 Canada (905) 669-1930 AFGD TORONTO SEALITE IGCC @ CBA '02	679 CBA 1209 CBA	BC/ALJ BC/ALJ	U/C U/C	MA AA	MS MS	PIB/SI PIB/SI	
AFGD, Inc. 3515 South 300 West Salt Lake City, UT 84115 (801) 268-2521 CGAC IGCC @ CBA '02	1678 CBA	PLK	U	AA	MS	PIB/PS	
Alside Window Co-Midwest 3820 44th Ave. SW Cedar Rapids, IA 52401 (319) 390-4237 AWCMW IGCC @ CBA '02	1133 CBA	BC/ASM	U	TPS	DM	HMB	
Alside Window Co-SE 3800 Farmgate Road Kinston, NC 28501 (252) 527-5050 AWCSE IGCC @ CBA '02	1148 CBA	BC	U	TPS	DM	HMB	
Arch Aluminum & Glass Co. W226 N758 Eastmound Drive Waukesha, WI 53186 (800) 242-2071 IGCC @ CBA Wauk '02	1465 CBA 1468 CBA	PLK/AP PLK/AP	U U	MA MA	MS MS	PIB/PU PIB/SI	

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Arch Aluminum & Glass Co., Inc. 2030 N.W. Progress Parkway Jackson, MS 39213 (800) 815-5658 Jack IGCC @ CBA '02	1361 CBA	PLK	U	AA	MS	PIB/PS	
Arch Aluminum & Glass L.C. 750 Cardinal Drive Bridgeport, NJ 08014 (800) 237-5148 ARCH IGCC @ CBA '02	1590 CBA 1591 CBA	BC/PLK BC/PLK	U U	AA AA	MS MS	PIB/MPS PIB/SI	
Arch Aluminum & Glass L.C. 7701 W. New York St. Indianapolis, IN 46214 (800) 876-0646 INDY IGCC @ 1323 CBA '02	1323 CBA	PLK	U	AA	MS	PIB/MPS	
Arch Aluminum & Glass L.C. 41 Osage Avenue Kansas City, KS 66105 (800) 676-8199 KC IGCC @ CBA '02	1385 CBA	PLK	U	AA	MS	PIB/PS	
Arch Aluminum & Glass L.C. 3320-B Maggie Blvd. Orlando, FL 32811 (800) 367-7211 ORL IGCC @ CBA '02	1299 CBA	PLK	U	AA	MS	PIB/PS	
Arch Aluminum & Glass L.C. 1825 S. 43rd Avenue Phoenix, AZ 85009 (800) 854-8022 PHX IGCC @ CBA '02	1597 CBA 1598 CBA	PLK PLK	U U	AA AA	MS MS	PIB/SI PIB/PS	
Arch Aluminum & Glass L.C. 2303 N. Randolph Avenue Portland, OR 97227 ARCH IGCC @ CBA '02	1654 CBA	BC/PLJ	U	AA	MS	PIB/PS	
Arch Aluminum & Glass L.C. 540 Industrial Court West Villa Rica, GA 30180 (800) 241-7462 V/R IGCC @ CBA	1380 CBA 1645 CBA 1646 CBA	PLK BC/SJ BC/SJ	U U U	AA AA AA	MS MS MS	PIB/PS PIB/PS PIB/SI	
Arch Aluminum & Glass L.C. 400 Park Avenue Youngsville, NC 27596 (919) 554-1993 Young IGCC @ CBA '02	1485 CBA	PLK	U	AA	MS	PIB/MPS	
Arch Tempered Glass Products 2533 Royal Lane Suite 505 Dallas, TX 75229 Dallas IGCC @ CBA '02	1749 CBA 1750 CBA	PLK PLK	U U	AA AA	MS MS	PIB/SI PIB/MPS	

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Architectural Window Mfg. Corp. 87 Route 17 Maywood, NJ 07607 (201) 291-9100 AWN IGCC @ CBA '02	1579 CBA	BC/GSK/AP	U	AA	MS	PIB/SI	
Atwood Mobile Products 3196 Thompson Rd. Fenton Operation Fenton, MI 48430 (810) 629-9558 THOMPSON IG IGCC@ CBA '02	1367 CB	PLK	U	MA	MS	PIB/MPS	
Berkowitz J E Inc. Delsea Dr. & Harvard Dr. PO Box 186 Westville, NJ 08093 (856) 456-7800 JEB IGCC @ CBA '02	1565 CBA 1630 CBA 1720 CBA 1721 CBA	BC/GSK/AP BC/JL BC/GS JL PLK	U U U U	AA AA AA AA	MS MS MS MS	PIB/SI PIB/SI PIB/MPS PIB/MPS	
Brin Northwestern Glass Co. 2300 N. 2nd Street Minneapolis, MN 55411 (612) 529-9671 BV IGCC @ CBA '02	1580 CBA	BC/SSK/AP/ASM	U	MA	MS	PIB/PU	90%
Cardinal IG 4611 15th Ave N.W. Fargo, ND 58102 (701) 492-0920 CIG 6 IGCC @ CBA '02	1464 CBA 1492 CBA	BC/PLJ/SS/ASM BC/ALJ/AF/ASM	U/C U/C	SS AA	MS MS	PIB/SI PIB/SI	
Cardinal IG 301 E. McSwain Drive PO Box 99 Fremont, IN 46737 (219) 495-4105 CIG-5 IGCC @ CBA '02	1452 CBA 1453 CBA	BC/GS JL/ASM BC/PLJ/AF/ASM	U/C U/C	AA SS	MS MS	PIB/SI PIB/SI	
Cardinal IG Iowa 25 N. PO Box 99 Greenfield, IA 50894 (641) 343-7113 CIG 2 IGCC @ CBA '02	1030 CBA 1276 CBA	BC/PLJ/SS/ASM BC/ALJ/AF/ASM	U/C U/C	SS AA	MS MS	PIB/SI PIB/SI	
Cardinal IG 7115 W. Lake St. Minneapolis, MN 55426 (612) 929-0317 CIG 1 IGCC @ CBA '02	1033 CBA 1284 CBA	BC/PLJ/AF/ASM BC/PLJ/AF/ASM	U/C U/C	SS AA	MS MS	PIB/SI PIB/SI	

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Cardinal IG 1011 E. Madison St. PO Box 789 Spring Green, WI 53588 (608) 588-7415 CIG 3 IGCC @ CBA '02	1036 CBA	BC/PLJ/AF/ASM	U/C	SS	MS	PIB/SI	
Cardinal IG 1620 Town Line Rd. Tomah, WI 54660 (608) 372-3300 CIG 4 IGCC @ CBA '02	1039 CBA	BC/PLJ/AF/ASM	U/C	SS	MS	PIB/SI	
	1295 CBA	BC/ALJ/AF	U/C	AA	MS	PIB/SI	
Cardinal IG 201 Cardinal Road Waxahachie, TX 75165 (972) 937-4969 CIG-8 IGCC @ CBA '02	1574 CBA	BC/ALJ	U/C	AA	MS	PIB/SI	
	1718 CBA	BC/PLJ	U/C	SS	MS	PIB/SI	
Care-free; Div. of Philips Products 150 Westside Drive Asheville, NC 28806 (828) 254-2351 PP IGCC @ CBA '02	1707 CBA	BC/ASM	U	TPS	DM	HMB	
Care-free; Div. of Philips Products 1023 Reynolds Road Charlotte, MI 48813 (517) 543-0430 PP IGCC @ CBA '02	1706 CBA	BC/ASM	U	TPS	DM	HMB	
Casmere Glass Corporation 21847 Schmeman Road Warren, MI 48089 (810) 447-3100 CASMERE IGCC @ CBA '02	1572 CBA	BC/TPSJ	U	AA	MS	PIB/PU	
	1573 CBA	BC/TPSJ	U	AA	MS	PU	
Classic Glass of Battle Creek Inc. 21472 M-37 Battle Creek, MI 49017 (616) 968-2791 CLASSIC GLASS IGCC @ CBA '02	1004 CBA	PLK/AP	U	AA	MS	PIB/PS	
	1010 CBA	PLK/AP	U	AA	MS	PIB/SI	
Coastal Glass Distributors 7421 E. Spartan Blvd. Charleston, SC 29418-8462 (843) 552-6377 CGD IGCC @ CBA '02	1366 CBA	BC	U	FS		HMB	
Crystal Window & Door Systems, Ltd. 131-40 Maple Ave. Flushing, NY 11355 (718) 961-7300 IGCC@ CBA CWDI '02	1328 CBA	BC	U	BSS		BSS	
	1732 CBA	BC	U	TPS	DM	HMB	

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Curved Glass Distributors 72 Chappel St. Derby, CT 06418 (203) 735-4665 CGD IGCC @ CBA '02	1063 CBA	PLK	U/C	AA	MS	PIB/PU	
Custom Glass Prod. Of Carolina 1475 Harrison Rd. PO Box 2049 Salisbury, NC 28144 (704) 633-4946 CGPC IGCC @ CBA '02	918 CBA 1599 CBA	PLK/ASM PLK/ASM	U U	AA AA	BL BL	PIB/PU PU	
Custom Glass Products Inc. 5906 Mester St. PO Box 590 Schofield, WI 54476 (715) 359-2252 CGP IGCC @ CBA '02	745 CBA	BC/PLK/AP	U	AA	MS	PIB/PU	
Edge Seal Technologies 6750 Vistoria East Austintown, OH 44515 (330) 793-7677 EST 1200 IGCC @ CBA '02	1200 CBA	BC/AP/ASM	U	TPS	DM	HMB	
Edge Seal Technologies Inc. 7850 Northfield Rd. Walton Hills, OH 44146 (440) 439-0980 EST 1268/1561 IGCC @ CBA '02	1268 CBA 1561 CBA 1581 CBA 1606 CBA 1742 CBA	BC BC BC/PLJ BC/ASM BC	U U U U U	TPS TPS TPS FS TPS	DM DM MS	HMB MPU/HMB PU HMB RHMB	
Exxal-Sistemas Universales de Aluminio Camino El Guanaco 4748 Huechuraba Casilla Santiago, 52454 Chile (562) 685-8784 IGCC @ CBA '02	1501 CBA 1502 CBA	BC/PLJ/AP GSK/AP	U U	AA AA	MS MS	HMB/SI HMB/SI	
Floral Glass & Mirror Inc. 895 Motor Pkwy. PO Box 18039 Hauppauge, NY 11788-8839 (631) 234-2200 INSULA 1 IGCC @ CBA '02	1577 CBA	BC	U	TP	TP	TP/SI	95%
Glass Enterprises Inc. 2277 New York Avenue Bensalem, PA 19020 (215) 638-1007 Beta-Pane IGCC @ CBA '02	1436 CBA	PLK	U	AA	MS	PIB/PU	
GGI Glass Distributors Corp. 5012 Expressway Drive S. Ronkonkoma, NY 11779 (631) 580-9000 GGI IGCC @ CBA '02	1455 CBA	PLK	U	MA	MS	PIB/SI	

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Glasswerks Phx, LLC 3233 E. Corona Avenue Phoenix, AZ 85040 (800) 243-4277 IGCC @ 856 CBA '02	856 CBA 1618 CBA	BC/PLK PLK	U U	MA MA	MS BL	PIB/PS PIB/MPS	
Glenny Glass Co. 11310 Williamson Road PO Box 62476 Cincinnati, OH 45262 (800) 535-2133 GLENNY IGCC @ CBA '02	1701 CBA	PLK	U	MA	MS	PIB/MPS	
Globe Amerada Architectural Glass 616 Selfield Rd. Selma, AL 36703 (800) 633-2513 AG IGCC @ CBA '02	1248 CBA	PLK	U	MA	BL	PIB/SI	
Graham Architectural Products 1551 Mt. Rose Ave. York, PA 17405 (717) 849-8100 GRAHAM IGCC @ CBA '02	1428 CBA	BC/SSJL	U	AA	MS	PIB/SI	
Guardian Fabrication Inc. 1412 S. First St. Rogers, AR 72756 (501) 636-0888 GRD-028 IGCC @ CBA '02	1108 CBA	PLK	U	AA	MS	MPS	
Guardian Fabrication Inc. 5 Cudworth Road Webster, MA 01570 (508) 671-4332 IGCC @ CBA '02	1673 CBA 1674 CBA	BC/PLJ BC/PLJ	U U	AA AA	MS MS	PIB/PS PIB/SI	
Guardian Inds Corp.-Lewistown One Belle Ave. Lewistown, PA 17044 (717) 242-2571 GRD-065 IGCC @ CBA '02	566 CBA 613 CBA	PLK PLK	U U	AA AA	MS MS	PIB/MPS PIB/SI	
Harvey Industries , Inc. 7 LedgeWood Boulevard North Dartmouth, MA 02747 (508) 998-9779 HII-3 IGCC @ CBA '02	1625 CBA	BC/AP/ASM	U/C	TPS	DM	HMB	
Harvey Industries, Inc. 725 Huse Road Manchester, NH 03103 (800) 633-8500 HII-1 IGCC @ CBA '02	1531 CBA	BC/AP/ASM	U/C	TPS	DM	HMB	

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Harvey Industries, Inc. 570 Cottage Road Springfield, MA 01104 (413) 788-0066 HII-4 IGCC ® CBA '02	1533 CBA	BC/AP/ASM	U/C	TPS	DM	HMB	
Hehr Glass Company 1021 Walnut Ave. Pomona, CA 91766 (909) 628-5557 HEHR Glass IGCC ® CBA '02	1357 CBA	PLK	U	AA	BL	PIB/PS	
Hurd Millwork 1815 Water St. Merrill, WI 54452 (715) 536-5755 HURD IGCC ® CBA '02	1256 CBA 1264 CBA	BC/ASM BC	U/C U/SCF	TPS TPS	DM DM	PIB/PU PIB/PU	80% 80%
Insulating Glass 18 Z.B. Ltd. 61, Gelis Street Petah Tiqwa, 49277 Israel Insulating Glass Rubanenko IGCC ® CBA '02	1679 CBA	BC/GSJ	U/C	MA	MS	PIB/SI	
Insulpane of Connecticut Ind 30 Edmond St Hamden, CT 06517 (203) 865-8212 INSULPANE OF CT IGCC ® CBA '02	770 CBA	PLK/ASM	U	AA	MS	PIB/PU	
Interpane Glass Co PO Box 408 Clinton, NC 28328 (910) 592-7101 INTERPANE IGCC ® CBA 3 '02	984 CBA 1731 CBA	PLK BC/AJ	U/C U	AA MA	MS MS	PIB/SI PIB/SI	
Interpane Glass Co 201 Interpane Lane PO Box 26 Deerfield, WI 53531 (608) 764-5461 INTERPANE WI IGCC ® CBA '02	1158 CBA	PLK/ASM	U	MA	MS	PIB/SI	90%
Jersey Tempered Glass, Inc 2035 Briggs Rd Mt. Laurel, NJ 08054 (609) 273-8700 JTG IGCC ® CBA '02	689 CBA 750 CBA	PLK PLK	U U	AA AA	MS MS	PU PIB/PU	
Louisville Plate Glass 1401 W Broadway PO Box 1203 Louisville, KY 40201 (502) 584-6145 LPG IGCC ® CBA '02	1281 CBA 1603 CBA	PLK PLK	U U	AA AA	MS MS	PIB/SI PIB/MPS	

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Mannix; Div of Interstate Window 345 Crooked Hill Road Brentwood, NY 11717 (631) 231-0800 IMANNIX IGCC @ CBA '02	1337 CBA	PLK	U	AA	MS	HMB/PU	
Marvin Windows PO Box 100 Warroad, MN 56763 (218) 386-1430 MARVIN 01 IGCC @ CBA '02	496 CBA 1135 CBA	PLK BC	U U	AA TPS	MS DM	PIB/PU PIB/PU	
Mid-American Glass 117 S. Sturdevant St. PO Box 3428 Davenport, IA 52802 (563) 326-6294 MAG IGCC @ CBA '02	1542 CBA 1543 CBA	PLK PLK	U U	AA PL	BL BL	PIB/RHMB PIB/RHMB	
Nashville Tempered Glass Corp. 1241 Avondale Drive Hendersonville, TN 37075 (615) 826-6336 NTGC IGCC @ CBA '02	1117 CBA 1184 CBA	PLK PLK	U U	AA MA	MS MS	PIB/PU PIB/PU	
National Glass Ltd. 5744 198th Street Langley, BC V3A 7J2 Canada (604) 530-2311 Nationallite Langely IGCC@ CBA '02	1454 CBA	PLK	U	MA	MS	PIB/SI	
Norco Windows PO Box 140 Hawkins, WI 54530 (715) 585-6311 NORCO IGCC @ CBA '02	1415 CBA 1526 CBA	BC BC	U U	FS TPS		PU PUMS	
Northern Building Products, Inc. One Remsen Place Ridgefield, NJ 07657 (201) 943-6400 NBP IGCC @ CBA '02	1341 CBA	BC	U	BSS		BSS	
Northwest Glass, Inc. 127 Regal St. PO Box 21258 Billings, MT 59104 (406) 252-7196 NWG IGCC@ CBA '02	865 CBA	PLK/ASM	U	AA	BL	PU	
Northwestern Inds, Inc. 2501 Commodore Way Seattle, WA 98199 (206) 285-3140 NWI IGCC@ CBA '02	1635 CBA	BC/PLK	U	MA	BL	PIB/SI	

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NY Glass Products Inc. 45 Doat Street Buffalo, NY 14211 (716) 891-1000 GMAC TRIPLE SEAL LTD IGCC @ CBA '02	1586 CBA	PLK/ASM	U/C	AA	BL	PIB/PS	
ODL, Inc. 215 E. Roosevelt Avenue Zeeland, MI 49464 (616) 772-9111 ODL IGCC @ C '02	1672 C 1694 C	PLK PLK	U U	AA AA	MS MS	HMB HMB	
Oldcastle Glass (Downey Glass) 5631 Ferguson Dr. Los Angeles, CA 90022 (323) 887-6000 D.G. 74 IGCC @ CBA '02	1437 CBA 1619 CBA	BC/PLJ BC/PLJ	U U	AA AA	MS MS	PIB/SI PIB/PS	
Oldcastle Glass (Free State Glass) 5415 Lee Highway Warrenton, VA 20187 (540) 347-5600 FSI 13 IGCC @ CBA '02	1576 CBA	PLK	U	AA	MS	PIB/PU	
Oldcastle Glass (General Glass) 11205 E. 37th Ave. PO Box 390711 Denver, CO 80239 (800) 776-4460 GG 71 IGCC @ CBA '02	932 CBA 1496 CBA	BC/PLK BC/PLK	U U	AA AA	MS MS	PIB/SI PIB/PS	
Oldcastle Glass (Glass Dist. of America) 2241 Sweetwater Ind. Blvd. Lithia Springs, GA 30122 (770) 732-2000 GDA 45 IGCC @ CBA '02	1434 CBA 1435 CBA	BC/PLJ BC/PLJ	U U	AA AA	MS MS	PU PIB/PU	
Oldcastle Glass (HGP Industries) 5334 Barthel Drive PO Box 130 Albertville, MN 55301 (612) 497-3212 HGP 22 IGCC @ CBA '02	317 CBA 1566 CBA	BC/PLK BC/PLJ	U U	MA MA	MS MS	PIB/PU PIB/SI	
Oldcastle Glass (HGP Industries) 1331 W. Sam Houston Pkwy N. Houston, TX 77043 (713) 464-5611 HGP 65 IGCC @ CBA '02	1136 CBA 1137 CBA	PLK PLK	U U	AA AA	MS MS	PIB/HMB PIB/SI	
Oldcastle Glass (HGP Industries) 541 Industry Rd., Ste. 430 Louisville, KY 40208 (502) 637-2022 HGP 64 IGCC @ CBA '02	1240 CBA 1600 CBA	BC/PLJ/SJ BC/PLJ/SJ	U U	AA AA	MS MS	PIB/SI PIB/PS	

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Oldcastle Glass (HGP Industries) 1500 Glen Ave. Moorestown, NJ 08057 (856) 234-9222 HGP 12 IGCC @ CBA '02	494 CBA	PLK	U	AA	MS	PIB/SI	
Oldcastle Glass (HGP Industries) 3404 W. Papago St. Phoenix, AZ 85009 (602) 253-6980 HGP 63 IGCC @ CBA '02	1639 CBA	PLK	U	AA	MS	PIB/PS	
Oldcastle Glass (HGP Industries) 1900 Midland St. PO Box 11339 Rock Hill, SC 29731 (803) 366-5167 HGP 44 IGCC @ CBA '02	1167 CBA 1219 CBA	PLK BC/PLK	U U	AA GS	MS MS	PIB/SI PU	
Oldcastle Glass (HGP Industries) 10000 N. Harrison Shawnee, OK 74801-9503 (800) 654-2710 HGP 61 IGCC @ CBA '02	1168 CBA 1610 CBA	PLK PLK	U U	AA AA	MS MS	PIB/SI PIB/PS	
Oldcastle Glass (HGP Industries) 1548 Stone Ridge Dr. Stone Mountain, GA 30083 (800) 241-9455 HGP 42 IGCC @ CBA '02	914 CBA 1077 CBA 1418 CBA	PLK PLK PLK	U U U	AA AA AA	MS MS MS	PIB/SI PIB/HMB PIB/PU	
Oldcastle Glass (HGP Industries) 5115 East Hartford St. Tampa, FL 33619 (800) 282-7291 HGP 43 IGCC @ CBA '02	1372 CBA	PLK	U	AA	MS	PIB/HMB	
Oldcastle Glass (HGP Industries) 1700 Daniel Boone Ind. Pk. Warrenton, MO 63383 (636) 456-3452 HGP 21 IGCC @ CBA '02	1445 CBA 1604 CBA	BC/PLK BC/PLK	U/C U	AA AA	MS MS	PIB/PS PIB/SI	
Oldcastle Glass (Hoffer's Dykstra) 4257 30th St. Burnips, MI 49314 (616) 896-8341 HOFFERS 28 IGCC @ CBA '02	732 CBA 1424 CBA	PLK PLK	U U	AA AA	MS MS	PIB/SI PIB/PU	
Oldcastle Glass (Hoffer's Glasmont) 4635 W. 84th St., Suite 100 PO Box 68596 Indianapolis, IN 46268 (317) 876-1155 HOFFERS 29 IGCC @ CBA '02	653 CBA 917 CBA 1514 CBA	PLK/AP/ASM PLK/AP/ASM PLK/AP/ASM	U/C U/C U/C	MA MA AA	MS MS MS	PIB/SI PIB/PU PIB/PU	

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Oldcastle Glass (Hoffer's Glass Fab.)	1178 CBA	BC/ASM	U/C	TPS	DM	PIB/PU	88%
5103 Janice Ave.	1262 CBA	BC/ASM	U/C	FS		PU	88%
Schofield, WI 54476	1312 CBA	BC/PLK/ASM	U/C	AA	MS	PIB/PU	88%
(800) 922-6639	1319 CBA	BC/PLK/ASM	U/C	AA	MS	PIB/SI	88%
HOFFERS 27 IGCC @ CBA '02	1616 CBA	BC/ASM	U	TPS	DM	EPU	
Oldcastle Glass (Laminated Glass Company)	857 CBA	PLK	U	AA	MS	PIB/SI	
375 E. Church Ave. PO Box 1003 Telford, PA 18969-1003 (215) 721-0400 LGC 14 IGCC @ CBA '02							
Oldcastle Glass (North American Glass)	1477 CBA	PLK	U	MA	MS	PIB/MPS	
1001 Foster Ave	1478 CBA	PLK	U	MA	MS	PIB/SI	
Bensenville, IL 60106 (630) 595-3750 NAG 23 IGCC @ CBA '02							
Oldcastle Glass (North American Glass)	1289 CBA	PLK	U	AA	MS	PIB/HMB	
4161 S Morgan St Chicago, IL 60609 (773) 523-8400 NAG 24 IGCC @ CBA 2000							
Oldcastle Glass (North American Glass)	1290 CBA	PLK	U	AA	MS	PIB/PU	
3805 S. Main St	1611 CBA	PLK	U	AA	MS	PIB/SI	
South Bend, IN 46614 (219) 291-6044 NAG 25 IGCC @ CBA 2000							
Oldcastle Glass (Tempglass Wauseon)	1704 CBA	BC/GSJ	U	AA	MS	PIB/SI	
1051 N. Ottokee Street	1705 CBA	BC/GSJ	U/C	AA	MS	PIB/PU	
Wauseon, OH 43567 TEMPGLASS 87 IGCC @ CBA '02							
Oldcastle Glass (Tempglass)	1585 CBA	PLK	U	AA	MS	PIB/SI	
15601 Brookpark Road	1729 CBA	PLK	U	AA	MS	PIB/PU	
Brook Park, OH 44142 (216) 676-6920 TEMPGLASS 86 IGCC @ CBA '02							
Oldcastle Glass (Tempglass)	1111 CBA	PLK	U	AA	MS	PIB/SI	
48999 Kato Road	1578 CBA	PLK	U	AA	MS	PIB/HMB	
Fremont, CA 94539 (510) 651-2292 TEMPGLASS 84 IGCC @ CBA '02							

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Oldcastle Glass (Tempglass) 1101 Fountain Pkwy. Grand Prairie, TX 75050 (972) 647-4028 TEMPGLASS 83 IGCC @ CBA '02	862 CBA	PLK	U	AA	MS	PIB/SI	HMB
Oldcastle Glass (Tempglass) 17851 NW Miami Court Miami, FL 33169 (305) 652-3350 TEMPGLASS 82 IGCC @ CBA '02	1101 CB	PLK	U	AA	MS	PIB/SI	PIB/HMB
Oldcastle Glass (Tempglass) 22475 Heslip Drive Novi, MI 48375 (248) 305-8445 TEMPGLASS 85 IGCC @ CBA '02	1670 CBA	PLK	U	AA	MS	PIB/SI	PIB/PU
Oldcastle Glass (Tempglass) 291 "M" Street, Ampoint Industrial Park Perrysburg, OH 43551 (419) 666-2000 TEMPGLASS 81 IGCC @ CBA '02	1489 CBA	BC/PLK	U	AA	MS	PIB/PS	PIB/SI
Oldcastle Glass (United Tempering Systems) 1611 S.E. Commerce Avenue Battle Ground, WA 98604 (800) 443-0991 UTS 73 IGCC @ CBA '02	1517 CBA	PLK	U	AA	MS	PIB/PS	PIB/SI
Patio Enclosures, Inc. 720 East Highland Road Macedonia, OH 44056 (330) 468-0700 PEI IGCC @ CBA '02	800 CBA	PLK	U	AA	MS	PIB/PU	
PDC Glass of Michigan Inc. 300 Dunn Street Plymouth, MI 48170 (734) 384-0300 PERMA-PANE IGCC@ CBA '02	466 CBA	PLK/ASM	U	AA	MS	PIB/MPS	PIB/SI
Perilstein Distributing Corp. 100 Business Center Drive Cheswick, PA 15024 (800) 232-9050 PERMA-PANE IGCC @ CBA '02	765 CBA	PLK	U	AA	BL	PIB/MPS	PIB/SI
Philips Products Inc.-IN 3221 Magnum Drive, PO Box 2327 Elkhart, IN 46515 (219) 296-0000 PP62 IGCC @ CBA '02	1508 CBA	BC	U	TPS	DM	HMB	HMB

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Philips Products, Inc. 1500 Patman Drive Clarkesville, TX 75426 (903) 427-2256 PP10 IGCC @ CBA '02	1764 CBA 1768 P	BC BC/ASM	U U	TPS FS	DM	HMB HMB	
Philips Products, Inc. 499 West Sassafrass Street PO Box 118 Selinsgrove, PA 17870 (570) 374-8163 PP07 IGCC @ CBA '02	1504 CBA 1505 CBA	BC/AF/AP/ASM BC/AP/ASM	U U	FS TPS	DM	HMB HMB	
Philips Products, Inc. 1620 Wilco Road Stayton, OR 97383 (503) 769-6321 PP28 IGCC @ CBA '02	1054 CBA 1242 CBA	PLK/ASM/AP BC/ASM/AP	U U	AA TPS	BL DM	HMB HMB	
PPG Inds. Inc. 3700 Division Street Burlington, IA 52601 (319) 753-2961 TWINDOW 42 IGCC @ CBA '02	1303 CBA	BC	U	TPS	DM	PIB/PS	
Prelco Inc. 94 Boulevard Cartier Riviere-du-Loup, QC G5R 2M9 Canada (418) 862-2274 PRELCO IGCC @ CBA Riviere-du-loup 2001	1387 CBA 1388 CBA	BC/PLK/AP BC/PLK/AP	U/C U/C	AA AA	BL BL	PIB/PS PIB/SI	
Pride Insulated Glass Co. Inc. 75 N. Brandon Drive Glendale Heights, IL 60139 (630) 351-1441 PRIDE IGCC @ CBA '02	1048 CBA	PLK	U	AA	MS	PIB/MPS	
Revere Building Products Div. Gentek Bldg. Products 4545 Carolian Ave., Bldg. F Richmond, VA 23222 (804) 321-1793 GBP IGCC @ CBA '02	1175 CBA	BC	U	BSS		BSS	
Rochester Insulated Glass Inc. No. 73 Merrick Circle Manchester, NY 14504 (716) 289-3611 RIG IGCC @ CBA '02	451 CBA	BC/PLJ	U	AA	MS	PIB/SI	
S N E Enterprises, Inc. 750 10th Ave. West Huntington, WV 25717 (304) 522-7700 SNE H IGCC @ CBA '02	1669 CBA	BC/PLK/AP/ASM	U	AA	MS	PIB/EPU	90%

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S N E Enterprises, Inc. 1000 S. View Dr. Mosinee, WI 54455-0700 (715) 693-7000 SNE M IGCC @ CBA '02	553 CBA 1544 CBA	BC/PLK/AP/CT BC/PLK/AP/CT/A	U U	AA AA	MS MS	PIB/PU PIB/EPU	90% 90%
S N E Enterprises, Inc. 2116 Wood Street Stevens Point, WI 54481 (715) 693-7000 SNE P IGCC @ CBA '02	1001 CBA 1668 CBA	BC/PLK/AP BC/PLK/AP	U U	AA AA	MS MS	PIB/PU PIB/EPU	90% 90%
Saf-ti Glass Distributors 11950 Globe Road Livonia, MI 48150 SaftiSeal IGCC @ CBA '02	1715 C	PLK/ASM	U	AA	MS	PIB/MPS	
Shenzhen Nanfang Insul. Glass Co. Southern Glass Bldg., #10 6th Industrial Rd. Shekou, Shenzhen, 518067 P.R. China IGCC @ CBA '02	1476 CBA	BC/GSJ	U	AA	MS	PIB/PS	
Sierra Pacific Windows 11605 Reading Road PO Box 8489 Red Bluff, CA 96080 (530) 527-9620 SPW IGCC @ CBA '02	1637 CBA	BC/ASM	U/C	FS		HMB	
SIGCO, Inc. 299 Presumpscot St. Portland, ME 04103 (207) 775-2676 SIGCO IGCC @ CBA '02	1444 CBA 1740 CBA 1741 CBA	PLK/ASM PLK/ASM PLK/ASM	U U U	AA AA AA	MS MS MS	PIB/SI MPS PIB/MPS	
Solar Seal Co. 55 Bristol Drive South Easton, MA 02375 (508) 238-0112 SOLAR SEAL IGCC @ CBA '02	1079 CBA 1487 CBA	BC/PLJL/AAJL BC/PLJL/AAJL	U U	AA AA	MS MS	PIB/SI PIB/PS	
Syracuse Glass Co. Inc. 4019 New Court Ave. PO Box 381 Syracuse, NY 13206 (315) 437-9971 SGC IGCC @ CBA '02	823 CBA 828 CBA	BC/SSJL/PLJL BC/SSJL/PLJL	U U	AA AA	BL BL	PIB/MPS PIB/SI	
Taiwan Glass USA Sales Corp. PO Box 307 Wilsonville, OR 97070 (503) 682-2255 Taiwan Glass Ind. Corp. 1356 IGCC @ CBA '02	1356 CBA	PLK	U	AA	MS	PU/SI	

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Tecnoglass S.A. Avenida Circunvalar a 100 mts de la Via 40 Las Flores, Barranquilla Columbia (575) 355-3333 Tecnoglass IGCC @ CBA '02	1393 CBA	PLK/AP	U/C	MA	MS	PIB/MPS	
Tempered Glass, Inc. 7160 Delta Circle Austell, GA 30001 (404) 819-3054 Inde-Pane ATL IGCC @ CBA '02	1003 CBA	BC/GSJ	U	MA	MS	PIB/SI	
	1123 CBA	BC/GSJ	U	MA	MS	PIB/MPS	
Thermolite Inc. 950 N. South Road Scranton, PA 18504 (570) 969-1957 THERMOLITE INC IGCC @ CBA '02	646 CBA	PLK	U	AA	MS	HMB	
Thermolock Mfg Co., LLC 16880 Front Street Copemish, MI 49625 (800) 831-6289 TMC IGCC @ CBA '02	1313 CBA	BC	U	BSS		BSS	
Thermoseal Glass Corp. 400 Water Street Gloucester City, NJ 08030 (856) 456-3109 TSL IGCC @ CBA '02	1408 CBA	BC/PLK	U	AA	BL	MPS	
	1494 CBA	BC/PLK	U	AA	BL	PU	
	1682 CBA	PLK	U	AA	BL	PU	
Thermo-Twin Industries, Inc. 1155 Alleghany Avenue Oakmont, PA 15139 (800) 641-2211 IGCC @ CBA '02	1684 CBA	BC	U	FS		HMB	
Tower Glass Products Corp. 95 Horton Avenue Lynbrook, NY 11563 (516) 887-3300 Tower Glass IGCC @ CBA 1470 '02	1470 CBA	PLK	U	AA	MS	PIB/SI	
TRACO (Three Rivers Alum) 71 Progress Ave. Cranberry Ind. Pk. Cranberry Township, PA 16066-3596 (724) 776-7000 TRACO IGCC @ CBA '02	439 CBA	BC/PLJ	U	MA	MS	PIB/SI	
TRACO (Three Rivers Alum) 2400 Broadway Street Red Oak, IA 51566 (712) 623-5800 TRACO WINDOWS IGCC @ CBA '02	1307 CBA	BC/ASM	U	TPS	DM	HMB	

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Twin Pane Insulated Glass Co. Inc. 86 E. Horseblock Rd. PO Box 279 Yaphank, NY 11980 (631) 924-1060 TP IGCC @ CBA '02	1528 CBA	PLK	U	AA	MS	PIB/SI	
United Plate Glass Co. Inc. 108 Grundman Drive Butler, PA 16001 (800) 772-7783 UPG '02 IGCC @ CBA 1513	1513 CBA	BC/SSJ	U/C	AA	BL	PIB/PU	
Vidrios Marte SA de CV Tlatilco 138 col. Tlatilco, Mexico City, 02860 MEXICO IGCC @ CBA '02	1617 CBA	BC/PLJ	U	AA	MS	PIB/PS	
Vinylbilt Glass 170 Sharer Road Woodbridge, Ontario L4L 8P4 Canada (905) 265-9285 IGCC @ CBA '02	1656 CBA	BC	U	FS		HMB	
Vinylume Products 3745 Hendricks Road Austintown, OH 44515 (330) 799-2000 IGCC @ 1369 V-L CBA '02	1369 CBA	BC	U	BSS		BSS	
Viracon Inc. 800 Park Drive PO Box 990 Owatonna, MN 55060 (507) 451-9555 VIRACON IGCC @ CBA Owatonna, MN '02	169 CBA 980 CBA 1462 CBA 1463 CBA	BC/ALK/S/AP BC/ALK/AP BC/GSJ/AP BC/GSJ/AP	U/C U/C U/C U/C	MA AA MA AA	MS MS MS MS	PIB/SI PIB/SI PIB/SI PIB/SI	90% 90% 90% 90%
Viracon Inc. 8373 Zell Miller Parkway Statesboro, GA 30458 (912) 871-8315 VIRACON IGCC @ CBA Statesboro, GA '02	1529 CBA 1530 CBA	BC/GSJ/AP BC/GSJ/AP	U/C U/C	MA AA	MS MS	PIB/SI PIB/SI	
Vitro Flotado Cubiertas S.A. de C.V. Ex-Hacienda de la Santa Cruz San Juan Ixhuatepec, Tlanepantla Edo. De Mexico, Apartado Postal 14710 C.P. 54180 MEXICO (525) 227-6088 VPM IGCC @ CBA '02	1546 CBA 1557 CBA	BC/PLJ BC/PLJ	U/C U/C	AA AA	BL BL	PIB/PS PIB/SI	

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W A Wilson Inc. 6 Inds. Pk. Dr. PO Box 6712 Wheeling, WV 26003 (304) 232-2200 STARLITE IGCC @ CBA '02	1395 CBA	PLK	U	AA	BL	PIB/SI	
Weather Shield Mfg. Inc. Adams Avenue E. PO Box 432 Ladysmith, WI 54848 L IGCC @ CBA '02 WS	1568 CBA	BC/PLK/ASM	U	AA	MS	PIB/RHMB	
Weather Shield Mfg. Inc. Adams Avenue E. PO Box 432 Ladysmith, WI 54848 L IGCC @ CBA '02 WS	1709 CBA	BC/PLK/ASM	U	AA	MS	RHMB/EPU	90%
Weather Shield Mfg. Inc. 2990 S. 8th W. Logan, UT 84321 (435) 753-6590 U IGCC @ CBA '02 WS	1589 CBA	BC/PLK/ASM	U/C	AA	MS	RHMB/EPU	
Weather Shield Mfg. Inc. One Weathershield Plaza PO Box 309 Medford, WI 54451 (715) 748-2100 M IGCC @ CBA '02 WS	408 CBA	PLK/ASM	U	AA	MS	PIB/PU	90%
Weather Shield Mfg. Inc. One Weathershield Plaza PO Box 309 Medford, WI 54451 (715) 748-2100 M IGCC @ CBA '02 WS	1569 CBA	BC/PLK/ASM/AP	U	AA	MS	RHMB/EPU	90%
Weather Shield Mfg. Inc. 400 Legacy Lane Park Falls, WI 54552 (715) 762-3834 P IGCC @ CBA '02 WS	1661 CBA	BC/PLK/ASM	U	AA	MS	RHMB/EPU	
Weatherproof Inc. 385 Watts Rd. Jackson, MI 49203 (517) 764-1330 WEATHERPROOF IGCC @ CBA '02	1446 CBA	BC/PLJ/ASM/AP	U/C	AA	MS	EPU	
Winchester Industries Route 286 E. Box 160 Saltsburg, PA 15681 (724) 639-3551 WI IGCC @ CBA '02	928 CBA	BC	U	BSS		BSS	

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“PROTOTYPES IN PROGRESS”

The following candidate Licensees have a prototype test in progress for possible inclusion in the IGCC® Program.

MANUFACTURERS

ACI Distribution	Dallas, TX
ACI Distribution	Greensboro, NC
AFGD	Birmingham, AL
AFGD	Fort Mill, SC
AFGD	Lenexa, KS
AFGD, Div. Of AFG	London, Ontario, Canada
AFG Insulating	Boardman, OH
AFG Insulating	Reidsville, NC
A.L. Smith Co.	Ijamsville, MD
Arch Aluminum & Glass Co., Inc.	Cuyahoga Falls, OH
Arch Aluminum & Glass L.C.	Kansas City, KS
Arch Aluminum & Glass L.C.	Youngsville, NC
Care-Free; Div. of Philips	Asheville, NC
Care-Free; Div. of Philips	Charlotte, MI
Crystal Window & Door Systems, Ltd.	Flushing, NY
Custom Glass Products, Inc.	Schofield, WI
Edge Seal Technologies Inc.	Walton Hills, OH
Fen-Tech	Superior, WI
Floral Glass Ind. Inc.	Cheshire, CT
Free State Glass	Warrenton, VA
GGI Glass Distributors Corp.	Ronkonkoma, NY
Glass Professionals	Des Moines, IA
Glass Wholesalers	Houston, TX
GlassTechs	Magnolia, TX
Guardian Fabrication Inc.	Webster, MA
Gulf Glass Industries	Sharjah, United Arab Emirates
Insulite Glass Co., Inc.	Olathe, KS
Lockheed Window Corp.	Pascoag, RI
Mannix; Div. of Interstate Windows	Brentwood, NY
Nashville Tempered Glass Corp.	Nashville, TN
Paramount Windows	Winnipeg, Manitoba, Canada
Philips Products Inc.	Clarksville, TX
Revere Bldg. Products, Div. of Gentek Bldg. Products	Richmond, VA
W.A. Wilson Inc.	Wheeling, WV
Weatherproof Inc.	Jackson, MI
Wenco Windows	Ringtown, PA
Winco Window Co.	St. Louis, MO
Wolverine Glass	Grandville, MI
Woodstone Co.	Westminster, VT

NOTICE

In accordance with the terms of the IGCC® Procedural Guide, the IGCC® Standard License Agreement and Appendix A (Affidavit) thereto, a manufacturer with a prototype product test in progress is not authorized to use an IGCC® permanent label for that product or to certify that its product is in compliance with IGCC® Program Standards and Procedures until a passing prototype test report for that product is presented by the manufacturer to the IGCC® office and the manufacturer is otherwise in compliance with IGCC® Program Procedures.

IGCC® LABEL REQUIREMENTS

THE IGCC® CERTIFICATION LABEL MUST BE PERMANENTLY MARKED ON A VISIBLE PORTION OF EACH SEALED INSULATING GLASS UNIT OR IT IS NOT CERTIFIED BY THE MANUFACTURER TO THE PUBLIC. The label shall be etched, sand blasted, embossed, printed, painted or otherwise permanently marked on the spacer or at least one component pane of the sealed unit.

This label must be visible after installation in the building. The IGCC® permanent label must be in block capital letters and have a minimum height of 0.050 inches. The letters IGCC® must be followed by the Federal Registration Mark or a close facsimile, i.e., IGCC®.

The IGCC® permanent label must contain the company identification. (company name, trade name or company code) plant code*, registered "IGCC®" mark, C, CB, or CBA rating level, and a date code spanning no more than a 12 month period, plus or minus one month. The date code should commence with the beginning of each calendar year (effective for both the beginning and the ending of each period). Outdated spacers may be hand stamped to bring the label up to date. The Plant Code will only be required when there is more than one plant with an IGCC® certified product operating under the same company name. The IGCC® permanent label must be affixed to certified products only at the time and place of manufacture. The labeling must be approved by the Administrator. The rating level (C, CB, or CBA) will be considered as part of the IGCC® label. The permanent label must be affixed only to the sealed insulating glass units of the licensee's own manufacture which have been certified by the manufacturer through IGCC®.

The permanent label must not be sold, transferred or otherwise disposed of in any manner other than being affixed to the licensee's certified production. The permanent label must not be affixed to any product from which certification has been withdrawn or which is produced with a process basically different from the one used when certification was obtained.

Example of Minimum Labels:

<u>Company Identification</u> <u>Code</u>	<u>Plant Code</u>	<u>IGCC®</u>	<u>Rating Level</u>	<u>Year</u>
AMERICAN GLAZING COMPANY	*	IGCC®	CBA	'00

or

AMERIPANE

or

AGC

All 3 if desired but must be listed

The IGCC® permanent label is listed under each company's name in the "Certified Products" section of this directory.

* A plant code will only be required when there is more than one plant with an IGCC® certified product operating under the same company name

**A GUIDELINE FOR YOUR ASSISTANCE IN ADVERTISING YOUR PRODUCTS
AND THEIR CERTIFICATION STATUS UNDER THE INSULATING GLASS
CERTIFICATION COUNCIL ("IGCC®") CERTIFICATION PROGRAM**

The following concepts are important to remember whether you are a Participant, Licensee in the IGCC® Certification Program, or a supplier to the sealed insulating glass industry. This discussion is intended to provide you with an accurate background description of the IGCC® Certification Program, to help you avoid making possibly misleading, deceptive, or ambiguous statements regarding the Program in the advertising of your products.

1. IGCC® is the sponsor of a Certification Program. IGCC® does not certify products.
2. The Administrator inspects laboratories and checks their equipment; inspects Licensees' production and fabrication of specimens; and validates test reports and certification claims.
3. Laboratories test specimens to specific test methods and specifications, referenced by IGCC®
4. Manufacturer/Licensees "certify" their products, affirming that their products are constructed similarly to specimens which were inspected, tested and found to pass the stated criteria. A Licensee's Certification Statement is the imprinting, sandblasting, etching or other form of permanent marking of an IGCC® Certification Program designation and number to its product.
5. IGCC® does not have "members," inasmuch as the term "members" carries with it a connotation that some detailed criteria must be met in order to participate in the organization. Under the IGCC® concept, anyone can participate and "participants" simply must possess a "legitimate interest in the purposes of IGCC®." Manufacturers, on the other hand, which are "fabricators of sealed insulating glass units," become Participants by virtue of executing a License Agreement with IGCC®. Any manufacturer of insulating glass may voluntarily enter into a license agreement with IGCC®, provided that they intend to certify at least one product under the IGCC® Certification Program. Thus, the proper term to use for a manufacturer participant is "Licensee." A manufacturer, with a prototype in progress, is termed a "Candidate Licensee."
6. Unit specimens, not their components, are tested under the IGCC® program. Thus, if you are a supplier to the industry, statements indicating that your components have complied with the test methods would be incorrect. A better nomenclature for example, would be, that "Units tested to ASTM E774 contained our X component have been found to meet the requirements of Class Y."
7. Should you have any questions concerning the IGCC® Certification Program, please contact:

Insulating Glass Certification Council
Mr. John G. Kent
PO Box 9
Henderson Harbor, NY 13651
Telephone: 315-646-2234
Fax: 315-646-2297
E-mail: jgkent@gisco.net

FEBRUARY 2002
PROCEDURAL GUIDE

INSULATING GLASS CERTIFICATION COUNCIL

CERTIFICATION PROGRAM FOR SEALED INSULATING GLASS

FOREWORD

Acceptance of certified sealed insulating glass comes with the conviction that such certification assures a high level of quality and the integrity of the identifying mark or certification label is being reliably maintained by a competent certifying agency.

The existing ASTM Specification E774 for sealed insulating glass provides a sound technical basis for the required quality of sealed insulating glass. With the addition of independent administration plus periodic routine in-plant visited and product evaluation, a program of product certification is developed in accordance with accepted standards. The certification program described here is predicated upon the concept of independent and impartial administration of the certification procedures in the IGCC® license agreement.

To insure administration of the certification program in a uniform and equitable manner, this procedural guide has been prepared for the information and guidance of the licensees.

It should be noted that the "IGCC® License Agreement" is the governing document for operation of the certification program. This procedural guide, which is not an extension of that document, serves merely to describe the administrative procedures and routine operation of the certification program.

GENERAL INFORMATION

The Certification Concept

The IGCC® Certification Program is based upon the conviction that no standard of quality is good without the continuous adherence of the licensees to that standard. To buyers, specifiers, code officials and users, the IGCC® certification label offers the manufacturers assurance that his sealed insulating glass units have been produced in conformance to the ASTM specification E774.

Who Can Participate?

Every manufacturer of sealed insulating glass is eligible, on a voluntary basis, to participate.

Who Conducts the Program?

The Insulating Glass Certification Council, a non-profit corporation, is the sponsor of this certification program. IGCC® supervises the certification program under which the administrator periodically checks and reports compliance of the manufacturers of products having the IGCC® certification label.

Administration

Administrative Management Systems, Inc. (AMS) is the independent administrator of the certification program. AMS maintains the IGCC® office of certification and handles the routine day-to-day business. All transactions are done in the name of IGCC®.

How Can You Become a Licensee?

The following steps must be accomplished before IGCC® can authorize a manufacturer to use the IGCC® permanent label:

- a) The manufacturer must present a passing prototype report from an approved IGCC® testing laboratory (fabrication of which was witnessed by the administrator) to the IGCC® office.

- b) The manufacturer signs two copies of the IGCC® License Agreement and sends these to the IGCC® office. IGCC® will countersign both copies and return one to the licensee.
- c) The Appendix A, to the License Agreement, contains a description of the model (prototype report attached) that will be authorized to use the IGCC® permanent label.
- d) The licensee sends IGCC® the necessary certification fee.
- e) After receipt by IGCC® of the above, the administrator validated that particular model and sends to the licensee a "Notice of Authorization to Use the IGCC® Permanent Label." The permanent label must be affixed on each certified sealed insulating glass unit.
- f) The certified model will then be listed in the next published Certified Products Directory.

HOW THE CERTIFICATION PROGRAM WORKS

American Society for Testing and Materials has test methods and specifications for sealed insulating glass. Sealed insulating glass must meet or exceed the applicable specification before it can be certified.

IGCC® recognized independent testing laboratories conduct all tests. The IGCC® certification committee shall approve all laboratories, whose test reports are utilized by this certification program.

As the sole judge of compliance with the applicable specifications, the administrator authorizes a product which has been approved to be listed in the Certified Products Directory.

Licensees label sealed insulating glass units in accordance with the labeling requirements established by the IGCC® Certification Committee.

Approved products are listed in the Certified Products Directory, which is published every six months. It is sent to door, sash and building manufacturers, glazing contractors, home builders, architects, regulatory agencies and code-making groups, etc. Directory listings contain the licensee's name, plant location and product description.

The administrator verifies production at the licensee's manufacturing location twice per year by making unannounced inspections. The prototype test will be considered as the test for the first year of certification. During the first year, two inspections will take place at which time the inspector will compare current production with the product authorized to use the IGCC® permanent label. During the first inspection in the second year, specimens will be fabricated for testing. IGCC® will ask the manufacturer to produce twelve test specimens. The fabrication of these twelve test specimens is witnessed by IGCC® and IGCC® verifies that they are produced in accordance with the construction certified. The licensee is instructed to send these test specimens to an official IGCC® testing laboratory where they are tested. The specimens must be shipped to the laboratory within four weeks of fabrication. Tests are made at the laboratory recommended by the licensee and selected by the administrator from the approved list.

A monthly report listing the status of testing is mailed to the licensee by IGCC® on the 15th of each month.

Upon completion of the test, the administrator mails results promptly to the licensee.

COMPLIANCE SAFEGUARDS

How is Compliance Assured?

Any certified product found in the course of routine inspection and evaluation not to be in compliance with the model description is subject to having authorization to use the IGCC® permanent label removed. The licensee is sent a Request for Clarification giving thirty days in which to demonstrate to the satisfaction of the administrator that his product is in compliance with the model description that is certified. If he does not respond, a “Warning of Possible Removal of Authorization to Use the IGCC® Permanent Label” is sent by certified mail; return receipt requested, giving an additional thirty days to respond. If he does not respond, authorization to use the IGCC® permanent label is **automatically terminated** at the end of that thirty-day period.

In the case of a routine test failing to comply with the specifications, the licensee will be officially notified by certified mail, return receipt requested, that within 15 days he must respond by stating that a retest fabrication is requested and by paying all administrative and test fees. If there is no response within the 15 days, authorization to use the IGCC® permanent label is automatically terminated. If the retest option is accepted, the administrator will perform an inspection and witness fabrication of the retest specimens within 45 days of payment of fees.

Challenging a Certified Product

Complaints of non-compliance from any corporation or business source will be investigated promptly by IGCC® upon receipt of the complaint in writing along with an appropriate surety deposit. A minimum surety deposit of \$1,500 will be required for each complaint of non-compliance. The surety deposit will be assessed at the rate of \$300 per man plus the reasonable cost of travel and other expenses entailed in resolving such incidents. Refunds of part or all of the surety deposit will be made when applicable. The surety deposit will cover all costs involved, unless the investigation proved non-compliance, in which case all costs will be borne by the licensee found to be in non-compliance.

Complaints by Consumers

The administrator shall receive and log the complaint; responding to the consumer with a Certified Products Directory and instructions on how to locate the IGCC® label.

It will be the consumer's responsibility to identify the label, number, class and date code which appear on the spacer of glass and advise the administrator of the same. Note: If no IGCC® label exists, the product has not been certified by the manufacturer to IGCC® and the administrator and IGCC® have no further responsibilities or options.

Once the consumer has identified the label, name, etc. and advised the administrator, the administrator shall respond, advising the consumer of the name, address, primary contact, model description and other pertinent information at hand as it pertains to the subject licensee. Note: If the complaint is being made for reasons of product appearance or failure such as glass quality, fogging, seal failure, dust, etc., the consumer shall be advised to contact the licensee for manufacturer directly. Some manufacturers and their dealers or distributors offer warranties on their products. Normal claims, procedures and legal remedies are available to consumers on a state by state basis.

If the consumer wishes to determine whether or not a labeled product is in compliance with the model described through an investigation by IGCC®, the corporation or business challenge procedure shall be utilized. The surety deposit shall be modified to \$400 and charges per man day shall be assessed against the surety deposit in the amount of \$300 plus reasonable travel costs and other expenses.

Withdrawal of Certified Product

Any product which has been authorized to use the IGCC® permanent label may be voluntarily withdrawn from the Certification Program by the licensee at any time.

COSTS

What Does the Program Cost?

The initial administration fee will be based on the date of authorization to use the IGCC® permanent label in a manner that participation in the Certification Program will be on a February 1 to January 31 basis thereafter. If the authorization date is between August 1 and December 1, 50% of the administration fee for the first year will be charged for participation and will include one inspection prior to the following February 1 date. A licensee is invoiced for each item that is certified and listed separately in the Certified Products Directory. An additional invoice for testing laboratory fees will be issued upon fabrication of test units. Testing of these units will not begin until payment has been received. Should failure of these units occur during certification testing, any remaining balance will be refunded to the licensee. (Revised 8/1/99)

DOCUMENTS AND AGREEMENTS

License Agreement

This agreement, incorporating independent program administration and routine, periodic, independent plant inspections, sampling and evaluation, govern the relationship between IGCC and the licensee.

Future amendments or revisions to the License Agreement will be recommended by the IGCC® Certification Committee and enacted by the IGCC® Board of Governors.

Effective Date, Duration, and Termination

The License Agreement becomes effective on the date of its execution; has an initial duration of twelve months (adjustable to a February 1 to January 31 basis), and is automatically renewed for successive, twelve month periods, unless either party gives notice, at least sixty days prior to date of expiration, that cancellation is requested, or unless revoked by IGCC® for causes set forth in the document.

Administrative Service Agreement

This agreement entered into by IGCC® and Administrative Management Systems, Inc. (AMS) governs the relationship between IGCC® and AMS, the independent administrator. In general, it provides that the administrator:

- a) routinely inspects licensee manufacturing facilities twice per year, and during the first inspection in the second and subsequent years, witnesses fabrication of specimens for testing at one of the IGCC® testing laboratories
- b) has the right to witness any and all testing
- c) reviews all test reports in order to determine compliance of the certified product with the specifications
- d) inspects and approves all test laboratory facilities for use in this certification program (test laboratories are recognized or approved by the IGCC® certification committee)
- e) publishes and mails the IGCC® Certified Products Directory twice each year and handles all routine clerical duties of IGCC® with respect to certification matters
- e) acts as IGCC® treasurer, invoicing licensees, maintaining a bank account and dispersing funds (fiscal reports are made to the Board of Governors)
- h) attends all scheduled meetings of the IGCC® Certification Committee and
- i) in all of its actions acts in the name of IGCC®

Procedural Guide

This guide outlines program procedures in accordance with the provisions of the License Agreement and the Administrative Service Agreement, for the guidance of those concerned with the procedural details of the Certification Program's operation. It covers the steps to be taken in any given procedural situation in the interest of equitable and uniform treatment of licensees and the preservation of the integrity of the certification program.

Certified Products Directory

This directory is the one document and publication that is normally in the public's eye and contains a listing of the certified seal insulating glass units of each licensee.

Certification Label

The licensee permanently affixes this certification mark to each unit of certified sealed insulating glass. This certification mark contains a code that refers to the listing in the Certified Products Directory. The listing then provides a product description including the company name, plant location, etc.

PROGRAM RESPONSIBILITY

The IGCC® Board of Governors has overall responsibility for the well being and acceptance of the Certification Program by the industry, building officials and the public. It also bears legal corporate responsibility.

The IGCC® Certification Committee has the responsibility for the general procedure and policy pertaining to operation of the Certification Program. As a part thereof, it:

- a) establishes "guidelines"
- b) determines the applicability of the specifications in a specific situation where a question is raised by a licensee or the administrator
- c) approves test laboratories
- d) determines which of the specifications are to be designated effective for the purposes of product certification and the date or dates on which they become effective
- e) recommends to the IGCC® Board of Governors changes to be made in the license agreement

QUALITY ASSURANCE PROGRAM

IGCC® requires licensees to have a working quality assurance program for the fabrication of insulating glass. IGCC® does not define the type or details of a program; simply that one must be in place. Adherence is verified during twice per year plant visits. These requirements were adopted to improve the overall quality of IG units in the program, and also to satisfy requirements established by the Department of Housing and Urban Development, HUD.

A licensee's QA program, as a minimum, must have the following elements:

- 1. A quality manual
- 2. Operating procedures documenting how IG units are fabricated
- 3. A designated person responsible for quality assurance
- 4. Routine product or component checks

INITIAL GAS FILL CERTIFICATION AND TESTING

Participation in the IGCC Initial Gas Fill Certification Program will be on a voluntary basis. A licensee must certify to IGCC seal durability requirements to participate in the initial gas fill program. The licensee will be asked for their target initial gas fill level and independent laboratory testing will validate that target value. Commencing with the February 2002 IGCC CPD and subsequent CPD's, the Licensees actual percent targeted fill level will be listed in the CPD. The IGCC initial gas fill certification process will be as follows:

1. As well as the normal twelve (12) seal durability test units, four (4) additional 14x20-inch test units, identical to seal durability test units, shall be fabricated under inspector witness during normal IGCC visits. At the licensee's discretion, units may be made with or without a sampling septum. All 16 test units shall be gas filled. The test lab shall randomly select four (4) units for initial gas fill testing from any of the 16 fabricated test units.
2. Four (4) additional production units shall be randomly selected by the IGCC inspector from inventory and shipped with the 14x20-inch test units. Production units shall be 3 to 20 square feet nominally.
3. Units shall be tested for initial gas fill percent by destructive direct sample method. At the Fabricator's discretion, gas analysis shall be by either oxygen analyzer or gas chromatograph (Procedures available on request). Up to two (2) test units (14" x 20") may be used to replace any unit broken in shipping or handling.
4. Laboratories shall report results of testing as "percent gas fill" to the IGCC Administrator and to no one else.
5. The IGCC Administrator shall provide the results of testing to the participating fabricator. The calculation of percent initial gas fill level of the four (4) test units and the four (4) randomly selected production units shall be the average of all eight tested units. The calculated average shall be no less than three (3) percentage points below the stated target level for the product to be IGCC initial gas fill certified. This tolerance is in light of the range of accuracy of current testing instrumentation and sampling techniques.

CERTIFICATION GUIDELINES AND INTERPRETATIONS

For guidance in labeling and certifying sealed insulating glass units the IGCC® Certification Committee has adopted the following:

ALWAYS

The following situations permit the licensee to **always** certify the sealed insulating glass units with the same IGCC® number.

GLASS

A.GL.1

Any change in glass thickness from that tested (3/16 or 1/4 inch is required in test specimens).

A.GL.2

Any change in glass tint or color from that tested (clear glass is required in test specimens).

A.GL.3

Any change in glass size from that tested (14 by 20 inches is required for test specimens).

A.GL.4

Any change in glass type (i.e. tempered, heat strengthened, laminated or patterned glass) from that tested (annealed glass is normally used in all test specimens).

A.GL.5

Any change in glass shape from that tested (rectangular glass is required in test specimens). This guideline permits the same IGCC® number for triangular, circle head, trapezoidal and other shapes.

A.GL.6

Any change in glass supplier from that tested.

A.GL.7 - Pyrolytic Coated Glass

Inorganically coated glass (i.e. pyrolytic applied low E or reflective coatings) are acceptable with the same IGCC® number as uncoated glass. It is recommended that a Licensee verify sealant adhesion to the pyrolytic coating by peel or lap shear testing. (Modified 7/31/01)

A.GL.8 - Edge Deleted Sputter Coated Glass

Edge deleted sputter coated glass (i.e. reflective or Low E) is acceptable with the same IGCC® number as uncoated glass. (Adopted 9/11/96)

SPACER

A.SP.1

Any change in air space dimension from that tested (one-quarter inch to one-half inch air space is allowed for testing).

A.SP.2

Any change in spacer wall thickness from that tested.

A.SP.3

Any change in spacer seam design (i.e. butt seam or lock seam) from that tested.

A.SP.4

Any change in supplier of spacer from that tested, everything remaining the same.

A.SP.5

Corners or connections which are soldered, welded, brazed or bent, but uncut, may be used interchangeably with the same IGCC® number. (Adopted 2/19/85)

A.SP.6

Corners may be changed to bent-uncut corners, using the same IGCC® number and utilizing a joiner or key of plastic, aluminum, stainless, or galvanized steel. (Adopted 10/18 /89, Modified 12/5/00)

DESICCANT

A.DE.1

A manufacturer may use the same certification number for units fabricated having air space equal to, or greater than 1/4-inch, provided the weight of desiccant per inch of perimeter edge remains the same or is greater than the model tested. On units fabricated having 3/16-inch air spaces, a manufacturer may use the same certification number, provided the manufacturer maintains the same weight of desiccant per inch of perimeter edge or as close to that value as possible. (Modified 7/28/99)

A.DE.2

A change in supplier of the same generic type of desiccant from that tested will not require a different IGCC® number.

A.DE.3

The use of the same desiccant manufactured in different particle size ranges will not require a different IGCC® number.

A.DE.4

An increase in the percentage of molecular sieve in a blended desiccant (defined as a "molecular sieve/silica gel" mix) will not require retest unless the molecular sieve content exceeds 75% of weight. (Adopted 8/29/84)

A.DE.5

A licensee may change supplier of desiccant matrix provided that the licensee (1) immediately informs the administrator of the change, (2) provides written documentation that the adsorption capacity per perimeter edge of seal is equal to or greater than the matrix used in the original model, and (3) prepares test specimens at the time of the next scheduled inspection. (Adopted 4/29/97)

SEALANT

A.SE.1

Any increase in moisture vapor transmission path length is an acceptable alternate for labeling

A.SE.2

A licensee may use a temporary alternate sealant in the same generic class by (a) notifying the administrator of the change, and (b) having test specimens witnessed by the administrators representative at the next regular inspection, and (c) sending the test specimens to an approved testing laboratory within four weeks of the test specimens' fabrication date. The licensee may temporarily use the certification label on a provisional basis commencing with written notification of the administrator and end when test results are received by the administrator. (Modified 6/7/90)

NEVER

The following situations never permit the licensee to certify with the same IGCC® number. They require the use of a different IGCC® number.

SPACER

N.SP.1

A change in spacer material, i.e. aluminum to steel or any other material will require a different IGCC® number.

N.SP.2

A change in spacer surface finish, i.e. anodized to mill finish or hot dip to electro galvanized, will require a different IGCC® number.

N.SP.3

A change in corner design from soldered, welded, braised or bent to mechanical corner will require a different IGCC® number. (Modified (4/16/91)

N.SP.4

A change in corner key material to another material, except for same material as the spacer, will require a different IGCC® number. All plastic keys and joiners are considered generically equivalent. (Modified 7/28/99)

N.SP.5

If bent, uncut spacer corners or connections are changed to mechanically fastened spacer corners, a new IGCC® number is required. (Adopted 2/19/85)

DESICCANT

N.DE.1

A change in generic type of desiccant will require a different IGCC® number. Generic types, for purpose of this guideline, are silica gel, molecular sieve and blends of silica gel and molecular sieve up to 75% by weight molecular sieve. (Adopted 8/29/84)

SEALANT

N.SE.1

In a single sealant system, a change in generic type of sealant will require a different IGCC® number.

N.SE.2

In a two sealant system, a change in generic type of primary sealant will require a different IGCC® number.

N.SE.3

In a two sealant system, a change in generic type of secondary sealant will require a different IGCC® number.

N.SE.4

Any decrease in the minimum design moisture vapor transmission path length will require a different IGCC® number.

N.SE.5

Any increase in thickness of design moisture vapor transmission path (glass to spacer dimension) will require a different IGCC® number.

GENERAL

CLASS I - UNIT MODIFICATION

DEFINITIONS

Breather Tube - Tube inserted into the I.G. spacer and intended to be sealed prior to glazing of the unit.

Capillary Tube - Tube inserted into the I.G. spacer and intended to be left permanently open.

Capillary, Tube and How It Is Related to Membrane - IGCC® observes that organically sealed insulating glass units are not actually hermetically sealed, but rather are composed of sealing systems which demonstrate sufficiently low water and gas transmission rates as to pass the accelerated weathering conditions imposed in ASTM E773 and E774. We acknowledge that certain capillary tube designs may also control the passage of water and gases in such a manner as to allow breathing but still demonstrate the ability to pass the test conditions.

G.0 - (Added Guideline – 8/14/85)

An I.G. construction incorporating a permanently open capillary tube will be considered and listed as equivalent to a previously IGCC® program certified I.G. model without a capillary tube, provided the following applies:

- a. Material and construction of the units are identical, except for the inclusion of the capillary tubes.
- b. Both sets of I.G. units reach the same rating level when tested according to ASTM E774. The units with capillary tubes need only be tested once.
- c. The test must be run by an IGCC® approved lab.
- d. Preparation of test specimens need not be witnessed. However, the test result must be reviewed and approved by the administrator.

G.1 Breather Tube (Temporarily Open Type)

A licensee is permitted to insert the open end of a breather tube in a bag or container of desiccant during shipment of a specimen to the test laboratory. The breather tube must be sealed prior to testing. (Adopted 8/14/85)

G.2 Breather Tube (Temporarily Open Type)

The addition of a breather tube is acceptable, for shipping only, even though not in the test specimen. The breather tube should be properly sealed before installation. (Adopted 8/14/85)

G.3 Edge Protection

The addition of edge protection such as metal banding, metallic foil, barrier coat, etc., is acceptable with the same IGCC® number.

G.8 Muntins

Two (2) of the twelve (12) test specimens shall be constructed utilizing all of the components of the muntin system which are used in the ultimate product and shall be situated in a four lite divided arrangement in a diagonal or rectangular pattern for testing to ASTM E-1877 Fog Test. A licensee may use the same certification number for units manufactured without internal muntins providing the yearly testing has been accomplished in accordance with the above procedure. (Modified 7/31/01)

G. 15 Multiple Air Spaces

Multiple air space units may be certified with the same IGCC® number as single air space units, provided that the construction of each space complies with the guidelines for single space units; pressure communication of spaces is permitted, but not required.

G. 19 Sputter Coated Glass (Coated to Edge)

A sputter coated insulating glass unit shall be considered equivalent to certified insulating glass units made with uncoated glass provided that the test level is the same for both sets of insulating glass units. Tests shall be by IGCC® approved laboratories. For reflective coatings, only the lowest light transmission product for which equivalency is desired need be tested provided that the outermost layer contacting the sealant is the same composition for all visible light transmissions. The equivalency shall apply for all coated products of the same generic type (i.e. metal or metal compounds that can be glazed monolithically) regardless of the source of manufacture.

For Low E sputtered coatings (which are non-edge deleted), equivalency must be established as above in insulating glass unit testing.

Preparation of the test specimens need not be witnessed; however, the test results must be reviewed and approved by the administrator.

A licensee needs to establish equivalency for a model only once. (Modified 9/10/96)

G.26 Desiccant in 1/2-inch Air-Space Test Units

In cases where units are made for testing with 1/2-inch air-space, glass thickness shall remain within the guidelines already established and that the desiccant quantity shall be limited to a maximum of filling one-half of the perimeter. (Adopted 8/28/86) However, if equivalent desiccant quantity to a standard 1/4-inch air space unit can be demonstrated, filling of all sides will be allowed (modified 9/1/87).

It should be noted that the limitation upon desiccant quantity is done in order to maintain the relationship of quantity of desiccant within the 1/2-inch air space test unit identical with that of a 1/4-inch air space test unit since the moisture vapor transmission area in each of these units is identical. Filling 4 spacers of a 1/2-inch air space would give manufacturers having this larger air-space unit tested an unfair advantage. It was asked to point out that testing of units containing a 1/2-inch air space will undergo greater stress during the test and, therefore, is considered a more difficult test in this configuration. (Adopted 8/28/86)

G.27 A sealed insulating glass unit that has been structurally modified, i.e. hole or holes for gas filling, shall be tested annually for certification assembled with standard production procedures including these modifications. At the option of the manufacturer, the units may be tested with gas or air in the interspace. Non-gas-filled units shall be considered equivalent providing construction is identical except for the omission of the gas filling hole/holes. To accommodate this modification a nominal 1/2 inch \pm 1/16 inch gas or air space may be tested under this guideline. (Modified 7/31/01)

CLASS II - SPECIMEN

G.6 Specimens - Quantity

A minimum of 12 specimens up to a maximum 24 specimens, will be fabricated for testing purposes. (No more than 12 specimens may be shipped to the laboratory at one time.)

G.9 Specimens - Production

When a licensee is producing only unlabeled units at the time of an unannounced plant inspection, the licensee will be requested by the IGCC® inspector to label at least one unit in accordance with Guideline G.7 to permit completion of the inspection. (The label may be hand scribed or crayon marked on the inside surface.)

G.10 Specimens - Production

If a licensee is not producing units at the time of an unannounced inspection, a labeled unit from inventory may be cut apart for inspection, provided that the date code is within the inspection period.

G.11 Specimens - Production

A portion of the unannounced inspection will be used to determine whether a licensee is using the IGCC® label on unauthorized units.

G.12 Specimens - Shipment

Units fabricated for test during an unannounced inspection must be shipped within four weeks of the date of fabrication. If they are not, the inspection is considered invalid and another inspection must take place. All costs related to this guideline are to be borne by the licensee.

G.14 Specimen Frequency

The prototype test will be considered as the test for the first year of certification (providing application is made within 18 months from the date of the test report). This is effective for matters initiated after May 1982. The next fabrication for testing purposes will be in the first half of the second year.

CLASS III - LABELING

G.7 Labeling

The permanent label shall be etched, sand blasted, embossed, printed, painted, or otherwise permanently marked on the spacer or at least one component pane of the sealed unit.

G.17 Labeling - Qualification

A licensee may accept certification to any level passed on any test (retest, prototype, routine testing) under any IGCC® supervised testing conditions.

G.18 Labeling

The IGCC® permanent label must contain the company identification, company name, trade name, or company code consisting of letters, plant code, registered "IGCC®" mark, C, CB, or CBA rating level, and a date code spanning no more than a 12-month period, plus or minus one month and commencing with the beginning of each calendar year (effective for both the beginning and ending of each period). The plant code would only be required when there is more than one plant, with an IGCC® Certified Product operating under that company name. The labeling must be approved by the administrator. (Adopted 8/28/86)

CLASS IV - EQUIVALENCY

G.5 Gray Area

Situations that are not included in the "Always" or "Never" categories listed above, fall into the gray area. The gray area situation is covered by Minutes item 10.10.77.10 and is repeated here.

When there is a change and the licensee desires to use the same IGCC® number, the licensee shall immediately notify the administrator with all details of the change and also satisfy either 1 or 2 below:

- 1) establish equivalency by passing the same level of ASTM test as certified to by:
 - a) having specimens tested at an IGCC® independent testing laboratory or
 - b) having specimens tested at an in house (licensee) facility, testing done in house by a licensee must be done under the surveillance of the administrator.

Specimens must be fabricated and submitted to the laboratory within two weeks after notification of the administrator. During the test period, the licensee may temporarily use the certification label on a provisional basis or:

- 2) demonstrate the equivalency of the change to the satisfaction of the Certification Committee or a subcommittee. (specimens not required)

G.21 Transfer

If a licensee manufactures the same model using the same technology at a different location, a certification number with a temporary status will be issued provided that testing of the model is initiated at the next scheduled testing inspection. (Modified 9/10/96)

G.23

A licensee needs to establish equivalency for a model only once.

G.24

Special note should be taken that the ASTM E773 test method only provides testing for "Vision glass areas." As such, it is only these types of units that fall within the IGCC® Certification Program. This, however, in no way precludes the ultimate use of these units in other applications; e.g. Spandrel units. (Adopted 8/28/86) Labeled spacer may be used in IG units, other than vision glass; but in that case, certification does not apply. (Adopted 4/16/91)

G.28

A Current licensee with currently certified products may certify additional constructions or replace a certified construction at the same plant location by having specimens tested at an IGCC® independent testing laboratory. These samples need not be witnessed by an IGCC® representative. Upon completion of passing test results the construction shall be eligible for IGCC® certification. IGCC® witnessed testing must occur at the next regular inspection.

CLASS V - APPEALS, REVIEW AND DE-CERTIFICATION

G.13 Monetary

The administrator shall remove authorization to use the IGCC® permanent label from all of any licensees products for failure to pay monies due to IGCC® within 60 days of invoice date (reference License Agreement A. 13 and B.6).

G.16 Appeals

In cases where a routine test fails to comply with the specifications.

- a) Upon notification of failure of routine test samples to reach the certified level, the licensee will be officially notified by certified mail; return receipt requested. Within 15 days the licensee must respond to the certified letter stating a retest fabrication is requested by paying all required administrative and test fees. If there is no response within 15 days, authorization to use the IGCC® permanent label will be removed.

If the retest option is accepted:

- 1) Request for retest option is granted by IGCC® only upon receipt in full of any administrative and retest fees within 15 days of date of mailing of the notification of failure.
 - 2) IGCC® will perform an inspection and witness fabrication of retest specimens within 45 days of payment of fees in 1) above.
 - 3) Licensee must ship and deliver retest specimens to the testing laboratory within 7 days of fabrication (Copy of shipping papers and delivery receipt must be received by IGCC® within 14 days of fabrication of retest specimens.)
- b) There is to be no change in certification status during the retest period.
 - c) All routine inspections will continue. Sample fabrication for subsequent routine testing of the questionable model will be suspended pending the outcome of the retest.
 - d) If the retest units comply, they shall be considered as the next routine test.
 - e) If the retest units fail, the licensee is issued a cease and desist order on use of the label immediately.
 - f) The licensee may choose to accept certification at any level passed by the retest, although it might be a lower level than originally desired.

G.20

Authorization to use the IGCC® permanent label will be removed if a routine inspection discloses that a licensee is labeling units containing the same unauthorized construction for the third time.

G.22

Clarification of due process appeal process under License Agreement, Paragraph A.11:

A licensee's appeal from a final adverse decision by the Administrator, under License Agreement Paragraph A.11, shall in the first instance be to the Certification Action Subcommittee of the Certification Committee, which acts as an executive committee for the Certification Committee in order to provide a prompt hearing for the Licensee and to act on the Licensee's appeal as quickly as possible. A decision by the Certification Action Subcommittee favorable to the Licensee shall be a final decision. A decision by the Certification Action Subcommittee adverse to the Licensee may be appealed to the full Certification Committee for a due process review and hearing. Such an appeal to the Certification Committee must be made in writing within 30 days of an adverse decision by the Certification Action Subcommittee and this appeal will be heard at the next regularly scheduled meeting of the Certification Committee. Pending a hearing by the Certification Committee on such an appeal, the Licensee may maintain certification for the product at issue.

SPECIFICATION USED FOR SEALED INSULATING GLASS

ASTM E774

Specification may be obtained by writing to.....

ASTM
100 Barr Harbor Drive
West Conshohocken, PA 19428-2959
Telephone: (610) 832-9585

The program requires that the manufacturer shall certify and permanently label all sealed insulating glass units to class (C, CB, or CBA) through the Insulating Glass Certification Council (IGCC®) Program.

Adopted: May 13, 1977
Revised: August 1, 1981
Revised: January 15, 1986

PARTICIPANT'S AGREEMENT

I have read the PURPOSES of the INSULATING GLASS CERTIFICATION,COUNCIL and hereby declare that I have a legitimate interest in the goals of the Council. I further declare that I do not manufacture insulating glass units nor am I employed by any company which is in such manufacturing business; as such I do not qualify to become a Licensee of the Insulating Glass Certification Council.

In view of the above declaration, I wish to be recognized at a "participant" in the Insulating Glass Certification Council.

Print Name: _____ Date: _____
Address: _____ Phone: _____
City: _____ State: _____ Zip: _____

My interest in the Council is: _____
Signature: _____

ARTICLE II

SECTION I - PURPOSES

The purposes of the Insulating Glass Certification Council shall be:

1. Promote public benefit by encouraging maintenance of the highest standards of excellence in the manufacture of insulating glass.
2. To encourage and cooperate in developing standards related to performance characteristics of insulating glass products.
3. To plan, organize, direct, coordinate and sponsor a certification program for insulating glass manufacturers to assure that their products meet applicable standards and/or performance requirements, adopted or approved by the Council.

ANNUAL FEE

The annual fee for a non-manufacturing participant will be \$350.00 per company.

There will be no fee for public interest or consumer participants.

CREDIBILITY IN CERTIFICATION THROUGH ACTIVE PUBLIC PARTICIPATION

FEBRUARY 2002

**INSULATING GLASS CERTIFICATION COUNCIL, INC.
CERTIFICATION PROGRAM FOR SEALED INSULATING GLASS UNITS
LICENSE AGREEMENT**

This agreement, made this _____ day of _____, 20____, by and between INSULATING GLASS CERTIFICATION COUNCIL, INC., a corporation having its administrative office at P.O. Box 9, Henderson Harbor, NY 13651 hereinafter called "LICENSOR"

and _____ having its principal office

at _____
hereinafter called "LICENSEE"

WITNESSETH

WHEREAS, Licensor is sponsoring a Certification Program for Insulating Glass Units, which will provide for (1) the validation of a manufacturers certification of such products by means of independent laboratory testing to the requirements of the Specification(s) and applicable Test Method(s) and ASTM Standards; and under the further terms and conditions of the Certification Program set forth in this Agreement and the Program's Procedural Guide, and also providing for (2) the stipulation by each such manufacturer that the manufacturer maintains a quality assurance program which covers the production of all the units to which above clause (1) refers.

WHEREAS, The responsibilities of IGCC®, the IGCC® Administrator and the independent Laboratories are limited to the tasks set forth in this Certification Program; they do not endorse, warrant, or guarantee products Validated or Certified thereunder, and WHEREAS, Licensor is willing to accept participation in said Certification Program by all manufacturers of Insulating Glass Units under the terms set forth herein; and

WHEREAS, the Licensor's registered labels shall be permitted to be affixed to the Insulating Glass Units complying with the pertinent requirements of the Program; and

WHEREAS, the Licensor shall contract for the complete administration of the Program and the Administrator shall contract for services with the independent laboratories which meet the ethical, financial, and business experience standards of the American Council of Independent Laboratories or National Society of Professional Engineers for performance of tests and other administrative duties as are herein provided; and

WHEREAS, the Licensor shall appoint a "Certification Committee" comprised of representatives of Participants and the Public Interest members of the Board of Governors acting as a liaison between Licensor, Licensees and interested parties: meetings of this committee shall be called by the Chairman of the Certification Committee at least once each year; and

WHEREAS, the procedural guide, to be developed in accordance with paragraph B.4 shall be adhered to both by the Licensor and the Licensee; and

WHEREAS, the Administrator shall conduct all aspects of the program in accordance with the highest nationally recognized standards for conduct of such a program including HUD standards for accreditation of the Program and the Administrator as set forth in HUD's "Use of Materials Bulletin No. 82" ("HUD Building Product Standards and Certification Program for Sealed Insulating Glass Units"), which requires an accredited Program to include a quality assurance provision such that all participating manufacturers shall have quality assurance programs covering the production of the units to which Whereas Clause No. 1 above refers.; and

WHEREAS, Licensee is willing to participate in and support said Program under the terms and conditions set forth in the Agreement. Therefore, be it

RESOLVED, that it is agreed by and between the parties hereto as follows:

LICENSEE:

A.1) Shall sign this Agreement by providing the signature of its corporate officer or authorized representative, and also its primary IGCC® Engineering or Quality Dept. Contact, where noted herein.

A.2) Shall allow the Administrator's representative, without prior notice, free access at any time during regular business hours, to Licensee's place of manufacture of Insulating Glass Units certified hereunder and to witness the manufacture of samples which are to be tested for compliance with the requirements. Licensee's refusal to permit access for inspection purposes hereunder may be due cause for removal of its entire product listing from the Certification Directory and the withdrawal of its rights to affix Certification Labels thereto. Acceptable reasons for not permitting entrance for inspections would include strikes, acts of God, and circumstances beyond immediate control of the manufacturer. Areas which may have been set aside for research or prototype development may be restricted. It is understood that the Administrator or his representative shall be allowed to pick up samples from the field for inspection or testing. It is understood that one test per year will be made on each model to be certified and that said tests will be made at the laboratory selected by the Administrator or Licensee from the approved list. Results of each test shall be promptly mailed to the IGCC® Administrator. IGCC® will notify the Licensee of compliance or non-compliance. It is further understood that routine expense of sampling and testing will be borne by the Licensee. The Licensor will charge each Licensee accordingly and so contract with the Administrator. The Administrator will contract for testing with approved testing laboratories. Expenses for packaging, shipping, and purchasing of glass for testing will also be borne by the Licensee. These costs will be handled directly between the Administrator and each Licensee.

A.3) Shall affix to each of its certified products the permanent Certification Label, number and class assigned by the Licensor:

- a) Only at the time and place of manufacture; and
- b) Only to Insulating Glass Units of Licensee's own manufacture, which have been so approved by the Licensor.

A.4) Shall not sell, transfer or otherwise dispose of Certification Labels in any manner other than affixing to Licensee's certified production.

A.5) Shall not affix hereafter the IGCC® Certification Label, or Participant's Certification Label registered with Licensor, to any product from which certification has been withdrawn or which is produced with a process basically different from the one used when certification was obtained. A model change shall be as defined by the IGCC® Certification Committee.

A.6) Shall upon a finding by the Licensor that a certified product of Licensee has been changed as defined by the Certification Committee have thirty (30) days in which to submit a request for waiver of retest or request a new inspection and retest at Licensee's expense if no waiver is granted. Failure of Licensee to act as required immediately

above shall constitute due cause for exclusion of this product from the program.

A.7) May withdraw a certified product from the Program by written declaration and request for removal of said product from the Licensor's listing signed by the authorized representative of the Licensee.

A.8) Shall use all practical means at its command continuously to assure that its products hereunder certified fully comply with the Specification requirements, and are manufactured in the same manner as test specimens, and are subject to a quality assurance program maintained by Licensee, and Licensee shall so stipulate to the Administrator's representatives during the periodic visits of said representatives to Licensee's facilities described above in Section A.2) or when otherwise requested by the Administrator.

A.9) Shall refrain from using the terms implying or claiming certification, validation, accreditation, etc. in connection with advertising referring to products which have not been validated, or from which validation of certification claim has been withheld or withdrawn or any other statement or term which might be interpreted as compliance with this program.

A.10) In connection with the advertising of model systems which the Licensor has approved and granted a certification number or label, the Licensee must use the following concepts as guidelines: Licensor (IGCC®) Sponsors the Certification Program. Licensee (Manufacturer) certifies that the product is the same as the model which has been tested. Administrator validates the test results through Inspections according to the Licensor's guidelines.

A.11) Shall abide by the decision of the Administrator as to the compliance or non-compliance of Licensee's products, determined in accordance with the requirements of the specification testing of such products. It is understood that the Administrator shall be the sole judge of compliance or non-compliance with the Specifications, for purposes of Licensor's certification of such a product under this Program. Where questions involving interpretation arise, the matter will be referred to the Certification Committee for ruling.

A.12) Agrees that notice regarding the status of any of its certified products shall be carried in the Certification Directory.

A.13) Shall pay the participation fees shown in the Schedule of Fees, which is an APPENDIX hereof, upon signing of this Agreement and at each annual renewal thereof. It is understood, that this Schedule of Fees may be changed from time to time by the Licensor.

A.14) Agrees that the Administrator may, at his discretion, use any and all data, exclusive of Licensee's Company name, address, proprietary product designation or any other information which may provide clues as to the manufacture of the products, for the purpose of comparing test methods and correlating test methods with field performance, etc.

A.15) Shall legibly and permanently mark each piece of its certified product in accordance with the marking requirements of the applicable standards and, in addition, include a symbol identifying the plant in which the product was made to comply with the standard for the purpose of identification under this Certification Program.

A.16) Shall furnish Licensor with any information regarding its product as may be necessary to properly identify Licensee's Certified Product for listing in Licensor's Certification Directory.

A.17) Shall regularly mail to the Administrator, at the same time as such material is furnished others, copies of its catalogs and other literature, excluding price and discount information, where such materials list Licensee's products certified hereunder.

A.18) Shall abide by and comply with all procedural details which the Administrator may prescribe for the implementation of the Certification Program, provided that such procedural details are not in consistent with the purposes of this License Agreement.

A.19) Shall have the right, at its option, to designate a nominee from Licensee's organization for consideration by the Board of Governors for appointment to the Certification Committee.

LICENSOR:

B.1) Shall prepare and publish at least twice each year, with such interim supplements as may be desirable, a Certification Directory containing a listing of the Certified Insulating Glass Products which have been found by test to be in compliance with each required specification of each Licensee then in good standing with Licensor. This directory shall include the Licensee's assigned Certification Number, Name, Location and qualified class or classes (CBA).

B.2) Shall promptly mail substantial quantities of each Directory and supplement to door, sash, and building products manufacturers, glazing contractors, home builders, architects, regulatory agencies and code-making groups, and publicize the Directory to trade publications.

B.3) Shall provide and maintain a list of approved laboratories qualified to perform tests required hereunder and to authorize tests herewith specified. Said list of approved laboratories is to be developed by the Certification Committee.

B.4) Shall prepare and maintain a procedural guide and the standard forms which may be adopted for use with the Licensee and the approved laboratories in connection with the operation of the Certification Program.

B.5) Shall hold all test reports and correspondence with Licensees and others, relating to Licensee's products or tests, in strict confidence, except for communication necessary to effect proper listing in the Certification Directory.

B.6) Shall not list in or remove from the Certification Directory any product or Licensee except on due notification from the Administrator to do so, except as provided in Paragraph A.7 above or because Licensee fails to pay applicable fees as provided in A.13 above.

B.7) Shall enter into a contract with an independent agency, whereby this independent agency will act as Administrator of the Certification Program for and on behalf of Licensor, to provide and authorize all sampling and testing, review and approve test data, perform periodic evaluations or other duties and functions herein provided for.

B.8) Shall conduct the Program in accordance with HUD standards for HUD accreditation of the Program as set forth in HUD's "Use of Materials Bulletin No. 82" ("HUD Building Product Standards and Certification Program for Sealed Insulating Glass Units").

IT IS FURTHER AGREED THAT:

C.1) A certification test hereunder denotes and is limited to a test in accordance with the requirements of the appropriate specifications and related test methods.

C.2) Each branch or affiliated plant of each Licensee manufacturer must be registered individually, and products therefrom tested and certified separately and apart from products manufactures in other plants or branches of any Licensee manufacturer.

C.3) A procedure for handling complaints of non-compliance which provides for samples of like product to be provided by Licensee in a specified manner for repetition of tests within thirty (30) days, the total cost of which, including test specimens, is to be borne by the complainant, unless the test proves non-compliance, in which case the costs will be borne by the Licensee; tests to be initiated by the Licensor promptly upon receipt of a complaint in writing along with the appropriate surety deposit.

C.4) This agreement shall become effective on the date of signing and shall extend for a period of 12 months and shall be renewed automatically for successive periods of 12 months each, unless Licensor or Licensee, at least sixty (60) days prior to the date of expiration, gives notice in writing that cancellation or termination is requested and unless revoked by Licensor for causes set forth in this Agreement.

C.5) If this agreement is terminated, then upon the effective date of such termination, Licensee shall:

a) Not affix the registered quality Certification Labels to any product which Licensee shall thereafter manufacture; and

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- b) Make no further reference to, or use of, Licensor's Certification Program or registered Certification Labels.
- C.6) Licensor, in the event it shall be necessary to exclude Licensee from participation in the Certification Program in accordance with the provisions hereof, may do so by giving Licensee thirty (30) days written notice of Licensor's termination of the License Agreement.
- C.7) The interpretation of this Agreement and the parties performance thereunder shall be governed by the laws of the State of Illinois; and both parties acknowledge and agree that any and all actions brought by Licensor or Licensee for the enforcement of any right or remedy hereunder must be instituted in the Court having jurisdiction thereof located in the State of Illinois.
- C.8) In the event any part or parts of this Agreement are found to be void, the remaining provisions shall nevertheless be binding with the same effect as though the void parts were deleted.
- C.9) The use of any IGCC® Certified Label or registered participant's label on any unqualified product, or the use of any such registered Certification Label by a manufacturing or assembly or other facility other than that registered, will not be permitted by the Licensee, their employees, their representatives, and their agents. If the use of the IGCC® or registered Certification Label in contravention of this Agreement is discovered, after a due process hearing review by the Certification Committee, the Licensor will have cause to institute all or any of the following actions: a) Revocation of license. b) Imposition of a fine of one thousand dollars (\$1,000). c) Legal action preventing the Licensee from having IGCC® or registered Certification Labels printed, attached, or used in any manner, the entire cost of such legal action to be borne by the Licensee.
- C.10) The Licensee shall pay to the Licensor reasonable attorney's fees, including attorney's fees for services in appellate proceedings, occasioned by reason of Licensee's breach of any of the terms of this Agreement, provided that Licensee's breach shall have been determined by judgment of a court of competent jurisdiction and if

- such judgment be appealable that the time for Licensee's appeal therefrom is terminated. This shall not be construed so as to prohibit out-of-court settlement.
 - C.11) In the event Licensor promptly notified all those to whom it has sent the then most recent issue of the Certification Directory or Supplement thereto, as well as the National Better Business Bureau and the trade press, regarding any incorrect listing or reference to Licensee's product published in any Certification Directory, supplement thereto, or elsewhere, Licensee agrees not to hold Licensor liable in any way for any damage caused by such incorrect listing or reference, unless such damage was the result of an intentional tort, willful act or gross negligence by Licensor.
 - C.12) Licensee shall indemnify and hold Licensor harmless as to any expense whatsoever for any claims, losses, or defense of claims or losses, which may be asserted against Licensor by reason of this Agreement and services performed hereunder, shall name the Licensor, as its interest may appear, as an additionally insured party on any products liability insurance policy owned by the Licensee which affects those products of the Licensee certified under this Agreement; and proof of such coverage shall be sent by the Licensee to the Licensor within fifteen (15) days from the date of Certification or the date such coverage is secured, whichever first occurs.
 - C.13) Neither party shall make use of the others' trademarks, trade names or name in any manner without the prior written approval of the other provided each party hereby authorizes the other, during the term of this Agreement, to state that the Licensee is a participant in this Certification Program.
- THIS LICENSE AGREEMENT may not be transferred, assigned, or otherwise disposed of to any other company, individual, or successor company without the express prior written consent of both Licensee and Licensor.

LICENSEE: Company _____

Street Address _____

City, State and Zip _____

Telephone Number _____ Fax Number _____

Signed By _____ Title _____
(Corporate Officer or Authorized Representative)

Date _____

Signed By _____ Title _____
(Primary IGCC® Engineering or Quality Dept. Contact)

Date _____

LICENSOR: INSULATING GLASS CERTIFICATION COUNCIL, INC.

By _____ Title _____

Date _____

Insulating Glass Certification Council
P.O. Box 9
Henderson Harbor, NY 13651
Telephone: (315) 646-2234 Fax: (315) 646-2297

*A copy signed by Licensor will be returned to Licensee
February 2000 Revision

**IGCC® APPROVED LABORATORIES PRESENTLY CONDUCTING TESTS IN
ACCORDANCE WITH ASTM E773 & E774**

- | | | | |
|-----------|---|-----------|--|
| 30 | Architectural Testing Inc.
130 Derry Ct
York, PA 17402-9405
Attn: Craig Wagner
Phone: (717) 764-7700
Fax: (717) 764-4129 | 50 | Bodycote Materials Testing Canada Inc.
2395 Speakman Drive
Mississauga, Ontario L5K 1B3 Canada
Attn: Allan Major, David Bailey, Anna Prioste
Phone: (905) 822-4111 x-585
Fax: (905) 823-1446 |
| 35 | Architectural Testing Inc.
2524 East Jensen Ave.
Fresno, CA 93706
Attn: Leaton Kirk
Phone: (559) 233-8705
Fax: (559) 233-8360 | 45 | ETC; Jim Spetz Testing Division
29633 Lakeland Blvd.
Wickliffe, OH 44092
Attn: Nancy Spetz
Phone: (440) 944-3665
Fax: (440) 944-3671 |
| 40 | Architectural Testing Inc.
587 First Street S.W.
New Brighton, MN 55112
Attn: Dan Braun
Phone: (651) 636-3835
Fax: (651) 636-3843 | 55 | Performance Testing, Inc.
14253 169 th Dr. SE, Ste. 799
Monroe, WA 98272
Attn: John DeRose
Phone: (360) 805-5171
Fax: (360) 805-5263 |



P.O. Box 9
Henderson Harbor, NY 13651

FORWARDING AND ADDRESS
SERVICE REQUESTED

PRSRRT STD
U.S. POSTAGE
PAID
PERMIT NO. 281
HAZELTON, PA