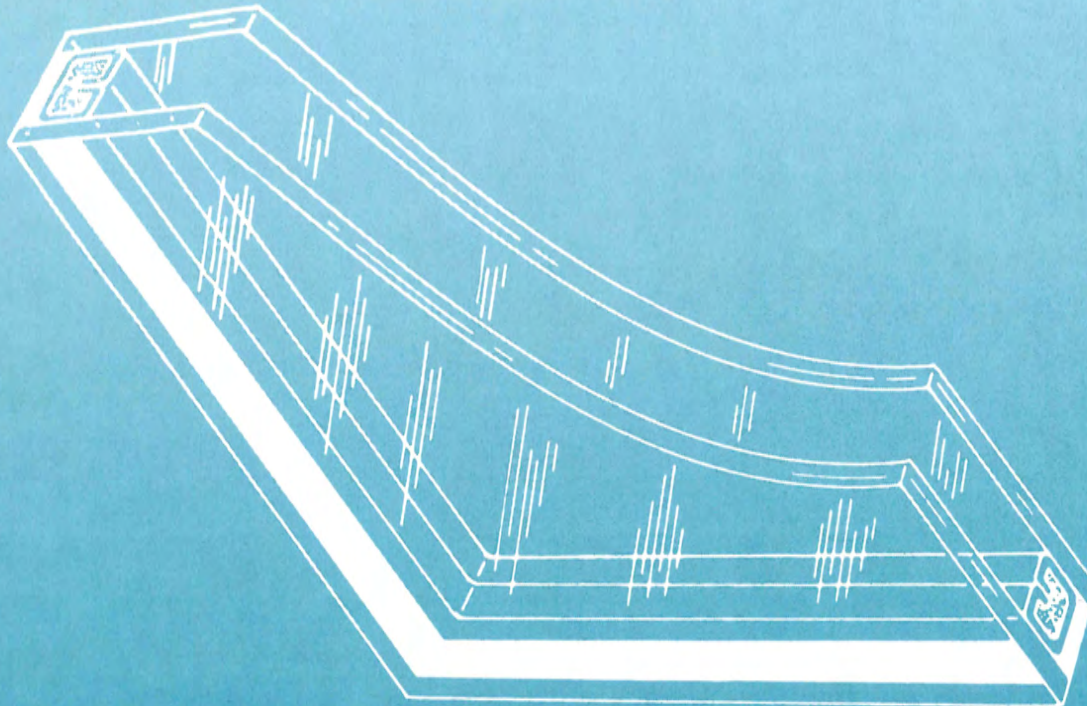


CERTIFIED PRODUCTS DIRECTORY

SEALED INSULATING GLASS

FEBRUARY 1, 1999



INSULATING GLASS

IGCC®

CERTIFICATION COUNCIL

CREDIBILITY IN INDUSTRY CERTIFICATION THROUGH ACTIVE PUBLIC PARTICIPATION

Visit Our Website @ 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.

Insulating Glass Certification Council, ® 1980

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.

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.

February 1, 1999

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COMMUNICATIONS

In all matters concerning the administration and implementation of the IGCC Certification Program. Correspondence may be directed to any of the following:

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Howe & Hutton Ltd.
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February 1, 1999

ROSTER

BOARD OF GOVERNORS

Representing Public Interest

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Joseph E. Minor, Consultant
Elaine S. Rodman
Donald J. Vild, Consultant

Representing Industry

Mark Cody, AFG Industries
Greg Carney, Interpane Glass
Jim Krahn, Marvin Windows
Lori Postak, TruSeal Technology
James Sorge, Hurd Millwork

IGCC Officers

James Krahn, President
James Sorge, VP&Treasurer
Lori Postak, 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 Acorn Window Systems Inc. AFGD, Div. Of AFG Ind. Ltd. Alpen Inc. Alside Window Co-Midwest American Flat Glass Dist. Arch Aluminum & Glass L.C. Assurance Glass Co. Berkowitz J E Inc. Capitol Aluminum & Glass Corp. Capitol Glass & Aluminum Corp. Cardinal IG Casmere Glass Corporation Classic Glass of Battle Creek Inc. Coastal Glass Distributors Croft Metals Inc.-NC Crystal Window & Door Systems, Ltd. Curved Glass Distributors Custom Glass Prod. Of Carolina Custom Glass Products Inc. DeLuxe Insulated Glass Inc. Downey Glass Dykstra Brothers Glass Co. Edge Seal Technologies Inc. Floral Glass & Mirror Inc. Four Seasons Solar Products Galaxy Mfg. Co. of CNY, Inc. Gardner Glass Products GGI Glass Distributors Corp. Glasmont Corp. Glass Dist. Of America Inc. Glass Enterprises Inc. Glaswerks Phx, LLC Graham Architectural Products Guardian Fabrication Inc. Guardian Inds Corp.-Lewistown Hehr Glass Company HGP Industries Inc.-MN Hoffer's Inc. Hurd Millwork Insulating Glass of Georgia Inc Insulpane of Connecticut Ind Interpane Glass Co Jersey Tempered Glass, Inc Laminated Glass Corp.	James Brooks James Brooks Leon Silverstein Walt Myers Jim Stinsman Robert G. Spindler Steven Reeder Victor Reeder Mark Wagner Brent Moomey Michael McHugh Mark Nahvi Ken Lancaster John Jablonski John Jablonski Robert Williams Barb Streigel James Sorge Rob Brewer Dalton Schreiber	Mark B. Cody Mark B. Cody Dan Haney Cheri Kellman Roger O'Shaughnessy Eric Reeder Jessica Smith Rick Kasten Mike Bayer Kevin Schulz Mark Steffina Mark Steffina Richard Wright Tom Beese Peter Nygard Joseph M. Scalzo Greg Carney Mike Lerner	Thomas Mewbourne Thomas Mewbourne James Larsen Joseph Oboikovitz Kevin Schulz Susan Ordd Jeff Sweet Henry A. Gorry Henry A. Gorry Kevin Schulz Paul Wagner John Neunlist

February 1, 1999

<u>Licensee</u>	<u>Primary Member</u>	<u>First Alternate</u>	<u>Second Alternate</u>
Louisville Plate Glass Mannix; Div of Interstate Window Marvin Windows Mid-American Glass Nashville Tempered Glass Corp National Glass Ltd. Norco Windows North American Glass Northern Building Products, Inc. Northwest Glass, Inc. Northwestern Inds, Inc. ODL, Inc. Oregon Glass Paramount Windows Patio Enclosures, Inc. PDC Glass of Michigan Inc. Penn Pane Insulating Inc. Perilstein Distributing Corp. Philips Products-CA Poma Glass & Specialty Windows PPG Inds. Inc. Prelco Inc. Pride Insulated Glass Co. Inc. REPCO Revere Building Products, Div.of Gentek Rochester Insulated Glass Inc. S N E Enterprises SIGCO, Inc. Solar Seal Co. Syracuse Glass Co. Inc. Taiwan Glass USA Sales Corp. Tecnoglass S.A. Tempglass Group Inc.-OH Thermalock Manufacturing Co., LLC Thermo-Twin Industries, Inc. Thermolite Inc. Thermoseal Glass Corp. Thompson IG Corp. Tower Glass Products Corp. TRACO (Three Rivers Alum) Vinylume Products Viracon Inc. W A Wilson Inc. Weather Shield Mfg. Inc. Weatherproof Inc. Western Glass/General Glass Winchester Industries	James Krahn Richard Wright Tim McQuade Jeff Nowell John W. Lewis, Jr. Stanley Wolk Doug Palmer Andrew C. Soule Frederic P. Shaw, Jr. William Coddington Richard Chubb Robert P. Randall Lyle Krohnberg Bob Hartong Val Brushaber Peter Fillmore	Douglas Steinbring Kevin Rose James Levingston Bob Boger Rob Manthey Steven Freeman Richard Wright Larry Klick Rick Bothun Mark Bond Rick Gugliuzza Richard Wright	Henry Heiss Tim Kachmarik Don Boutelle Jody Campbell Steve Wright Jim Miller

February 1, 1999

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February 1, 1999

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- 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:

Insulating Glass Certification Council
Mr. John G. Kent
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Henderson Harbor, NY 13651

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Fax: 315-938-7453
E-mail: jgkent@gisco.net

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

Desiccant:

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

Substrate:

U	=	Uncoated
C	=	Coated
SF	=	Suspended film
SCF	=	Suspended coated film

Construction Components:

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

Thermal Break:

DP	=	Desiccated plastic
PF	=	Plastic foam
P	=	Plastic

Construction Materials:

AL	=	Aluminum
DC	=	Die cast
NY	=	Nylon
PL	=	Plastic
AA	=	Anodized aluminum
MA	=	Mill finish aluminum
AC	=	Aluminum channel
SF	=	Silicone foam
GS	=	Galvanized steel
SS	=	Stainless steel
TPS	=	Tinplate steel
TP	=	Thermal plastic
R	=	Rubber

Vapor Barrier:

AF	=	Aluminum foil
B	=	Butyl
P	=	Plastic

Fabrication Techniques:

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

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

February 1, 1999

**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>
ACI Distribution PO Box 815547 12900 Nicholson Road Dallas, TX 75381-5547 (214) 484-3691 ACI 140 IGCC® CBA '99	703 CBA 1106 CBA 1239 CBA	NYK NYK NYK	U U U/SCF	AA AA GS	MS MS MS	PIB/SI PIB/HMB PU
ACI Distribution 2710 Patterson Street Greensboro, NC 27407 (800) 729-3909 IGCC @ 1426 CBA '99	1426 CBA	NYK	U	AA	MS	HMB/HMB
ACI Distribution 2765 La Fayette Street Santa Clara, CA 95050 (408) 748-2120 IGCC @ 1355 CBA '99	1355 CBA	NYK	U	AA	BL	PIB/SI
ACI Distribution 3225 S. 116 th Ste. 133 Seattle, WA 98158 (206) 244-0727 ACI 197 IGCC @ CBA '99	1170 CBA 1171 CBA 1172 CBA	PLK/BC PLK/BC PLK/BC	U U U	GS AA AA	MS MS MS	PU PU PIB/PU
Acom Window Systems Inc. 42 Cole St. Quincy, MI 49082 (517) 639-8731 AWS IGCC @ CBA '99	1145 C 1314 CBA	NYK/ASM BC/ASM	U U	AA TPS	MS DM	MPS PUMS
AFGD -SC 148 Flint Hill Rd. Fort Mill, SC 29715 (800) 866-2341 AFGD 4 IGCC @ CBA '99	1215 CBA 1413 CBA	NYK/ASM NYK	U U	AA AA	MS MS	PIB/MPS PIB/SI
AFGD, Div. Of AFG Ind. Ltd. 75 Doney Crescent Concord, ON L4K 1P6 Canada (905) 669-1930 AFG SEALITE IGCC @ CBA '99	679 CBA 1207 CBA 1209 CBA	BC/ALJ BC/ALJ BC/ALJ	U/C U/C U/C	MA MA AA	MS MS MS	PIB/SI PIB/PS PIB/SI
AFGD -NM 8017 Edith Blvd. Albuquerque, NM 87113 (505) 898-1460 CGAC-A IGCC @ CBA '99	1285 CBA	PLK	U	MA	MS	PIB/MPS
Alpen Inc. 5400 Spine Rd. Boulder, CO 80301 (303) 530-1150 ALP IGCC @ CBA '99	880 CBA	PLK/BC	U/SCF	ST	BL	PU
Alside Window Co-Central 3773 State Road Cuyahoga Falls, OH 44309 (330) 922-2119 AWCC IGCC @ CBA '99	1338 CBA	BC	U	TPS	DM	HMB
Alside Window Co-Midwest 3820 44th Ave. SW Cedar Rapids, IA 52401 (319) 390-4237 AWCMW IGCC @ CBA '99	1133 CBA	BC	U	TPS	DM	HMB

February 1, 1999

<u>LICENSEE</u>	<u>IGCC NUMBER</u>	<u>FRAME CONSTRUCTION</u>	<u>SUBSTRATE</u>	<u>SPACER</u>	<u>DESICCANT</u>	<u>SEALANT</u>
Alside Window Co-SE 3800 Farmgate Road Kinston, NC 28501 (919) 527-5050 AWCSE IGCC @ CBA '99	1148 CBA	BC	U	TPS	DM	HMB
American Flat Glass Dist. 1201 Hwy 67 E Alvarado, TX 76009 (817) 477-1144 AFGD 24 IGCC @ CBA '99	1025 CBA	NYK	U	AA	BL	PIB/MPS
American Flat Glass Dist. 11950 E 33 Ave. Aurora, CO 80010 (303) 371-1151 AFGD 21 IGCC @ CBA '99	1259 CBA	NYK	U	AA	BL	PIB/MPS
American Flat Glass Dist. 3350 Ball St. Birmingham, AL 35224 (205) 841-6785 AFGD 03 IGCC @ CBA '99	1331 CBA 1332 CBA	NYK NYK	U U	AA AA	MS MS	MPS PIB/MPS
American Flat Glass Dist. 575 Currant Rd. Fall River, MA 02720 (508) 675-9220 AFGD 7 IGCC @ CBA '99	1339 CBA 1340 CBA	NYK NYK/ASM	U U	AA AA/ASM	BL BL	PIB/MPS MPS
American Flat Glass Dist. PO Box 220 160 N. High Street Hebron, OH 43025 (740) 929-2443 AFGD 06 IGCC @ CBA '99	1155 CBA 1241 CBA	BC/NYJ BC/NYJ	U/C U/C	AA AA	BL BL	PIB/PS PIB/SI
American Flat Glass Dist. 6600 Suemac Pl. Jacksonville, FL 32254-2792 (904) 786-6611 AFGD 02 IGCC @ CBA '99	1344 CBA	NYK	U	AA	BL	MPS
American Flat Glass Dist. 2522 Westcott Blvd. Knoxville, TN 37923 (423) 691-2040 AFGD 05 IGCC @ CBA '99	1347 CB 1381 CBA	NYK NYK	U U	AA AA	BL BL	MPS PIB/MPS
American Flat Glass Dist. 3200 Austell Rd. Marietta, GA 30060 (770) 434-2041 AFGD 1 IGCC @ CBA '99	1324 CBA 1326 CBA	BC/NYJ BC/NYJ	U U	AA AA	MS MS	PIB/SI PIB/MPS
American Flat Glass Dist. 6200 Gorman Rd. Richmond, VA 23231 (804) 222-0120 AFGD 10 IGCC @ CBA '99	957 CBA 1085 CBA 1327 CBA	NYK NYK NYK	U U U	AA AA AA	BL BL BL	MPS PIB/MPS PIB/SI
American Flat Glass Dist. 803 Prestige Pkwy Scotia, NY 12302 (518) 374-3812 AFGD 09 IGCC @ CBA '99	1349 CBA	NYK	U	AA	BL	PIB/MPS
Arch Aluminum & Glass L.C. 7701 W. New York St. Indianapolis, IN 46214 (800) 876-0646 INDY IGCC @ 1323 CBA '99	1323 CBA	NYK	U	AA	MS	PIB/PS

February 1, 1999

<u>LICENSEE</u>	<u>IGCC NUMBER</u>	<u>FRAME CONSTRUCTION</u>	<u>SUBSTRATE</u>	<u>SPACER</u>	<u>DESICCANT</u>	<u>SEALANT</u>
Arch Aluminum & Glass L.C. 41 Osage Avenue Kansas City, KS 66105 (800) 676-8199 IGCC @ 1385 CBA '99	1385 CBA	NYK	U	AA	MS	PIB/PS
Arch Aluminum & Glass L.C. 3142 Connahbrook Dr. Memphis, TN 38116 (800) 240-0148 IGCC @ 1361 CBA '99	1361 CBA	NYK	U	AA	MS	PIB/PS
Arch Aluminum & Glass L.C. 3320-B Maggie Blvd. Orlando, FL 32811 (407) 425-8367 IGCC @ 1299 CBA '99	1299 CBA	NYK	U	AA	MS	PIB/PS
Arch Aluminum & Glass L.C. 540 Industrial Court West Villa Rica, GA 30180 (770) 944-2724 V/R IGCC @ CBA	1292 CBA 1380 CBA	BC/NYK NYK	U U	AA AA	MS MS	PIB/SI PIB/PS
Arch Aluminum & Glass L.C. 400 Park Avenue Youngsville, NC 27596 (919) 554-1993 IGCC @ 1379 CBA '99	1379 CBA	NYK	U	AA	BL	PS
Assurance Glass Co. PO Box 1452 Selfield Ind. Pk. Selma, AL 36702 (334) 875-1900 AG IGCC @ CBA '99	420 CBA 1248 CBA	NYK NYK	U U	MA MA	BL BL	PIB/PS PIB/SI
Berkowitz J E Inc. Route 47 Westville, NJ 08093 (609) 456-7800 JEB IGCC @ CBA '99	1138 CBA 1139 CBA 1140 CBA 1362 CBA	BC/WL BC/WL NYK BC	U U U U	MA MA AA TPS	MS MS MS DM	PIB/SI PIB/PS PIB/PS HMB
Capitol Aluminum & Glass Corp. 1276 W. Main St. Bellevue, OH 44811 (419) 483-7050 CAG-HM IGCC @ CBA '99	884 CBA	NYK	U/SCF	GS	MS	PU
Capitol Glass & Aluminum Corp. 3515 S 300 W Salt Lake City, UT 84115 (801) 268-2521 CGAC IGCC @ CBA '99	1132 CBA	PLK	U	AA	BL	PIB/MPS
Cardinal IG 4611 15th Ave N.W. Fargo, ND 58102 (701) 492-0920 CIG 6 IGCC @ CBA '99	1464 CBA 1492 CBA	BC/PLJ/AF/ASM BC/ALJ/ASM	U/C U/C	SS AA	MS MS	PIB/SI PIB/SI
Cardinal IG 3200 McSwain Drive PO Box 99 Fremont, IN 46737 (219) 495-4105 CIG IGCC @ CBA '99	1452 CBA 1453 CBA	BC/ALJ/ASM BC/PLJ/ASM	U/C U/C	AA SS	MS MS	PIB/SI PIB/SI
Cardinal IG PO Box 99 Iowa 25 N. Greenfield, IA 50894 (515) 343-7113 CIG 2 IGCC @ CBA '99	1030 CBA 1276 CBA	BC/PLJ/SS/ASM BC/ALJ/AF/ASM	U U	SS AA	MS MS	PIB/SI PIB/SI

February 1, 1999

<u>LICENSEE</u>	<u>IGCC NUMBER</u>	<u>FRAME CONSTRUCTION</u>	<u>SUBSTRATE</u>	<u>SPACER</u>	<u>DESICCANT</u>	<u>SEALANT</u>
Cardinal IG 7115 W. Lake St. Minneapolis, MN 55426 (612) 929-0317 CIG 1 IGCC @ CBA '99	1033 CBA 1284 CBA	BC/PLJ/AF/ASM BC/PLJ/AF/ASM	U/C U/C	SS AA	MS MS	PIB/SI PIB/SI
Cardinal IG 1011 E. Madison St. Spring Green, WI 53588 (608) 588-7415 CIG 3 IGCC @ CBA '99	1036 CBA 1306 CBA	BC/PLJ/AF/ASM BC/ALK/ASM	U U	SS AA	MS MS	PIB/SI PIB/SI
Cardinal IG 1620 Town Line Rd. Tomah, WI 54660 (608) 372-3300 CIG 4 IGCC @ CBA '99	1039 CBA 1295 CBA	BC/PLJ/AF/ASM BC/ALJ/AF/ASM	U/C U/C	SS AA	MS MS	PIB/SI PIB/SI
Casmere Glass Corporation 8300 Grinnell Road Detroit, MI 48213 (313) 921-1223 IGCC @ CBA '99	1430 CBA	NYK	U	AA	MS	PIB/PS
Classic Glass of Battle Creek Inc. 21472 M-37 Battle Creek, MI 49017 (616) 968-2791 CLASSIC GLASS IGCC @ CBA '99	1004 CBA 1010 CBA	NYK NYK	U U	AA/AP AA/AP	MS MS	PIB/PS PIB/SI
Coastal Glass Distributors 7421 E. Spartan Blvd. Charleston, SC 29418-8462 (803) 552-6377 IGCC @ CBA '99	1365 CBA 1366 CBA	NYK BC	U U	AA SFS	MS	HMB HMB
Croft Metals Inc.-MS PO Box 826 McComb, MS 39648 (601) 684-6121 CMI 92-1 IGCC @ CBA '99	1131 CBA 1270 CBA	BC NYK	U U	BSS AA	MS	BSS HMB
Croft Metals Inc.-NC PO Drawer 90 Hwy 71 Lumber Bridge, NC 28357 (910) 843-3391 CMI 92-2 IGCC @ CBA '99	1069 CBA	BC/ASM	U	BSS		BSS
Crystal Window & Door Systems, Ltd. 131-40 Maple Ave. Flushing, NY 11355 (718) 961-7300 IGCC@ CBA CWDI '99	1328 CBA 1439 CBA	BC BC	U U	BSS TPS	DM	BSS HMB
Curved Glass Distributors 72 Chappel St. Derby, CT 06418 (203) 735-4665 CGD IGCC @ CBA '99	1063 CBA	NYK	U/C	AA	MS	PIB/PU
Custom Glass Prod. Of Carolina PO Box 2049 1475 Harrison Rd. Salisbury, NC 28144 (704) 633-4946 CGPC IGCC @ CBA '99	918 CBA	BC/NYK/ASM	U	AA	MS	PIB/PU

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Custom Glass Products Inc. PO Box 590 5906 Mester St. Schofield, WI 54476 (715) 359-2252 CGP IGCC @ CBA '99	745 CBA	BC/NYK/AP	U	AA	MS	PIB/PU
Downey Glass 5631 Ferguson Dr. Los Angeles, CA 90022 (213) 887-6000 D.G. IGCC @ CBA '99	1311 CBA	PLK	U	AA	MS	PIB/PS
	1437 CBA	NYK	U	AA	MS	PIB/SI
Dykstra Brothers Glass Co. 4257 30th St. Burnips, MI 49314 (616) 896-8341 DYK IGCC @ CBA '99	732 CBA	NYK/ASM	U	AA	MS	PIB/SI
	1424 CBA	NYK/AP/ASM	U	AA	MS	PIB/PU
Edge Seal Technologies 45 Karago Street Boardman, OH 44512 (440) 439-0980 EST IGCC @ CBA '99	1200 CBA	BC	U	TPS	DM	HMB
Edge Seal Technologies Inc. 7850 Northfield Rd. Walton Hills, OH 44146 (440) 439-0980 EST IGCC @ CBA '99	1268 CBA	BC	U	TPS	DM	HMB
	1405 CBA	BC	U	TPS	DM	MPU
Floral Glass & Mirror Inc. 895 Motor Pkwy. Hauppauge, NY 11787 (516) 234-2200 INSULA 1 IGCC @ CBA '99	881 CBA	BC/ALK/W	U	MA	MS	PIB/SI
Floral Glass Ind. Inc. 224 Sandbank Rd. PO Box 882 Cheshire, CT 06410 (203) 272-2211 INSULA 2 IGCC @ CBA '99	801 CBA	NYK/ASM	U	MA/AP	MS	PIB/SI
Four Seasons Solar Products 5005 Veterans Memorial Pkwy. Holbrook, NY 11741 (516) 563-4000 FSSP 968 90996 IGCC @ CBA	968 CBA	NYK	U/SCF	GS	MS	PU
Galaxy Mfg. Co. of CNY, Inc. 109 Monarch Dr. Liverpool, NY 13088 (315) 451-5353 GALAXY IGCC @ CBA '99 or COMFORT WINDOW	691 CBA	NYK	U/C	AA	MS	PU
Gardner Glass Products PO Box 1295 Newington, VA 22122 (703) 455-5101 INSULVUE IGCC @ CBA '99	868 CBA	NYK	U	AA	MS	PIB/PU
GGI Glass Distributors Corp. 5012 Expressway Drive S. Ronkonkoma, NY 11779 (516) 580-9000 GGI IGCC @ CBA '99	1455 CBA	NYK	U	MA	MS	PIB/SI

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Glasmont Corp. 4635 W. 84th St. Suite 100 Indianapolis, IN 46268 (800) 382-4509 GMT IGCC @ CBA '99	653 CBA	NYK	U/C	MA	MS	PIB/SI
	917 CBA	NYK	U	MA	MS	PIB/PU
Glass Dist. Of America Inc. 2310 Sweetwater Ind. Blvd. Lithia Springs, GA 30057-2882 (404) 732-2000 GDA IGCC @ CBA '99	1434 CBA	PLK/ASM	U	AA	MS	PU
	1435 CBA	PLK	U	AA	MS	PIB/PU
Glass Enterprises Inc. 2277 New York Avenue Bensalem, PA 19020 (215) 638-1007 IGCC @ CBA '99	1436 CBA	NYK	U	AA	MS	PIB/PU
Glaswerks Phx, LLC 3233 E. Corona Avenue Phoenix, AZ 85040 (800) 243-4277 IGCC @ 856 CBA '99	856 CBA	BC/NYK	U	MA	MS	PIB/PS
	1428 CBA	BC/SSJ	U	AA	BL	PIB/SI
Graham Architectural Products 1551 Mt. Rose Ave. York, PA 17405 (717) 849-8100 GRAHAM IGCC @ CBA '99	1108 CBA	NYK	U	AA	MS	MPS
Guardian Fabrication Inc. 1412 S. First St. Rogers, AR 72756 (501) 636-0888 GRD-028 IGCC @ CBA '99	566 CBA	NYK	U	AA	MS	PIB/MPS
	613 CBA	NYK	U	AA	MS	PIB/SI
Guardian Inds Corp.-Lewistown One Belle Ave. Lewistown, PA 17044 (717) 242-2571 GRD-065 IGCC @ CBA '99	1357 CBA	PLK	U	AA	MS	PIB/PS
Hehr Glass Company 1021 Walnut Ave. Pomona, CA 91766 (909) 628-5557 IGCC @ CBA '99	1136 CBA	NYK	U	AA	MS	PIB/HMB
	1137 CBA	NYK	U	AA	MS	PIB/SI
HGP Inds Inc.-TX 1331 W. Sam Houston Pkwy N. Houston, TX 77043 (713) 464-5611 HGP 65 IGCC @ CBA '99	1240 CBA	NYK/ASM	U	AA	MS	PIB/SI
HGP Industries Inc-KY 541 Industry Rd., Ste. 430 Louisville, KY 40208 (502) 637-2022 HGP 64 IGCC @ CBA '99	1102 CBA	NYK	U	AA	MS	PIB/HMB
HGP Industries Inc.-AZ 3404 W. Papago St. Phoenix, AZ 85009 (602) 253-6980 HGP 63 IGCC @ CBA '99	1372 CBA	NYK	U	AA	MS	PIB/HMB
HGP Industries Inc.-FL 5115 East Hartford St. Tampa, FL 33619 (800) 282-7291 HGP 43 IGCC @ CBA '99						

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HGP Industries Inc.-GA 1548 Stone Ridge Dr. Stone Mountain, GA 30083 (770) 939-6900 HGP 42 IGCC @ CBA '99	914 CBA 1077 CBA 1418 CBA	NYK NYK NYK	U U U	AA AA AA	MS MS MS	PIB/SI PIB/HMB PIB/PU
HGP Industries Inc.-MN PO Box 130 5334 Barthel Drive Albertville, MN 55301 (612) 497-3212 HGP 22 IGCC @ CBA '99	317 CBA 1421 CBA	NYK BC/NYJ	U U	MA MA	MS MS	PIB/PU PIB/SI
HGP Industries Inc.-MO 1700 Daniel Boone Ind. Pk. Warrenton, MO 63383 (314) 456-3452 HGP 21 IGCC @ CBA '99	1397 CBA 1398 CBA 1445 CBA	BC/NYK/AP/ASM BC/NYK/AP/ASM BC/NYK/AP/ASM	U U U/C	AA AA AA	MS MS MS	PIB/SI PIB/HMB PS/PIB
HGP Industries Inc.-NJ 1500 Glen Ave. Moorestown, NJ 08057 (609) 234-9222 HGP 12 IGCC @ CBA '99	494 CBA	NYK	U	AA	MS	PIB/SI
HGP Industries Inc.-OK 10000 N. Harrison Shawnee, OK 74801-9503 (800) 654-2710 HGP 61 IGCC @ CBA '99	1165 CBA 1168 CBA	NYK NYK	U U	AA AA	MS MS	PIB/HMB PIB/SI
HGP Industries Inc.-SC PO Box 11339 1900 Midland St. Rock Hill, SC 29731 (803) 366-5167 HGP 44 IGCC @ CBA '99	1167 CBA 1219 CBA	NYK BC/NYK	U U	AA GS	MS MS	PIB/SI PU
Hoffer's Inc. 5103 Janice Ave. Schofield, WI 54476 (800) 922-6639 H.I. GFB IGCC @ CBA '99	1178 CBA 1262 CBA 1312 CBA 1319 CBA	BC/ASM BC/ASM BC/NYK/ASM BC/NYK/ASM	U/C U/C U/C U/C	TPS SFS AA AA	DM MS MS	PIB/PU PU PIB/PU PIB/SI
Hurd Millwork 1815 Water St. Merill, WI 54452 (715) 536-5581 HURD IGCC @ CBA '99	1013 CBA 1256 CBA 1264 CBA	BC/NYK/AP BC/ASM BC	U/SCF U/C U/SCF	GS/SFS TPS TPS	MS DM DM	PU/AL/PIB PIB/PU PIB/PU
Insulating Glass of Georgia Inc. 7160 Delta Circle Austell, GA 30001 (404) 819-3054 Inde-Pane ATL IGCC @ CBA '99	1003 CBA 1123 CBA	NYK NYK	U U	MA MA	MS MS	PIB/SI PIB/PS
Insulpane of Connecticut Ind 30 Edmond St Hamden, CT 06517 (203) 865-8212 INSULPANE OF CT IGCC @ CBA '99	770 CBA	NYK	U	AA	MS	PIB/PU
Interpane Glass Co PO Box 408 Clinton, NC 28328 (910) 592-7101 INTERPANE GLASS CO IGCC @ CBA '99	876 CBA 984 CBA	BC/NK/WL NYK	U U	MA AA	MS MS	PIB/SI PIB/SI
Interpane Glass Co PO Box 26 201 Interpane Lane Deerfield, WI 53531 (608) 764-5461 INTERPANE IGCC @ CBA '99	1158 CBA	BC/PLJ	U	MA	MS	PIB/SI

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Jersey Tempered Glass, Inc 2035 Briggs Rd. Mt. Laurel, NJ 08054 (609) 273-8700 JTG IGCC @ CBA '99	689 CBA	NYK/ASM	U	AA	MS	PU
	750 CBA	NYK	U	AA	MS	PIB/PU
Laminated Glass Corp. PO Box 1003 375 E. Church Ave. Telford, PA 18969-1003 (215) 721-0400 LGC IGCC @ CBA '99	857 CBA	NYK	U	AA	MS	PIB/SI
Louisville Plate Glass 1401 W Broadway PO Box 1203 Louisville, KY 40201 (502) 584-6145 LPG IGCC @ CBA '99	1280 CBA	NYK	U	AA	MS	PIB/PS
	1281 CBA	NYK	U	AA	MS	PIB/SI
Mannix; Div of Interstate Window 345 Crooked Hill Road Brentwood, NY 11717 (516) 231-0800 IMANNIX IGCC @ CBA '99	1337 CBA	NYK	U	AA	MS	HMB/PU
Marvin Windows PO Box 100 Warroad, MN 56763 (218) 386-1430 MARVIN 01 IGCC @ CBA '99	496 CBA	NYK/PF	U	AA/AP	MS	PIB/PU
	1135 CBA	BC/NK	U	TPS/AP	DM	PIB/PU
Mid-American Glass PO Box 3428 117 S. Sturdevant St. Davenport, IA 52802 (319) 326-6294 MAG IGCC @ CBA '99	1272 CBA	NYK	U	MA	BL	PIB/PS
Nashville Tempered Glass Corp. 1860 Air Lane Dr. Nashville, TN 37210 (800) 228-3729 NTGC IGCC @ CBA '99	995 CBA	BC/NK/WL	U	MA	MS	PIB/PU
	1117 CBA	NYK	U	AA	BL	PIB/PU
	1184 CBA	PLK	U	MA	BL	PIB/PU
National Glass Ltd. 5744 198th Street Langley, BC V3A 7J2 Canada (604) 530-2311 IGCC @ CBA '99	1454 CBA	NYK	U	MA	BL	PIB/SI
Norco Windows PO Box 140 Hawkins, WI 54530 (715) 585-6311 NORCO IGCC @ CBA '99	1415 CBA	BC	U	SFS		PU
	1416 CBA	BC	U	TPS	DM	HMB
North American Glass 1001 Foster Ave Bensenville, IL 60106 (800) 323-2290 NAG-23 IGCC @ CBA '99	538 CBA	NYK	U	AA	MS	PIB/MPS
	753 CBA	NYK	U	AA	BL	PIB/SI
North American Glass 4161 S Margan St Chicago, IL 60609 (733) 523-8400 NAG-24 IGCC @ CBA 1999	1289 CBA	NYK	U	AA	MS	PIB/HMB

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North American Glass 3805 S. Main St South Bend, IN 46614 (219) 291-6044 NAG 25 IGCC® CBA 1999	1290 CBA	NYK	U	AA	MS	PIB/PU
Northern Building Products, Inc. One Remsen Place Ridgefield, NJ 07657 (201) 943-6400 NBP IGCC @ CBA '99	1341 CBA	BC	U	BSS		BSS
Northwest Glass, Inc. PO Box 21258 127 Regal St. Billings, MT 59104 (406) 252-7196 NWG IGCC® CBA '99	865 CBA	NYK/ASM	U	AA	BL	PU
Northwestern Inds, Inc. 2501 Commodore Way Seattle, WA 98199 (206) 285-3140 NWI IGCC® CBA '99	940 CBA 941 CBA 1274 CBA	BC/NYK BC/NYK BC	U/C U/C U	MA MA TPS	MS MS DM	PIB/PS PIB/SI PIB/PS
ODL, Inc. 215 E. Roosevelt Avenue Zeeland, MI 49464 (616) 772-9111 ODL IGCC @ C '99	1407 C 1411 C	NYK NYK/AP	U U	AA AA	MS MS	HMB PS
Oregon Glass PO Box 649 10450 SW Ridder Rd. Wilsonville, OR 97090 (503) 682-3846 IGCC @ OR CBA '99	1373 CBA 1375 CBA	NYK NYK	U U	AA AA	BL BL	PIB/HMB PIB/PS
Paramount Windows 105 Panet Rd Winnipeg, MB R2J OS1 Canada (204) 233-4966 Paramount 1999	1377 CBA	NYK/ASM	U/C	SS	BL	PIB/PS
Patio Enclosures, Inc. 720 East Highland Road Macedonia, OH 44056 (330) 468-0700 PEI IGCC @ CBA '99	800 CBA	NYK	U	AA/AP	MS	PIB/PU
PDC Glass of Michigan Inc. 300 Dunn Street Plymouth, MI 48170 (734) 354-0310 PERMA-PANE IGCC® CBA '99	466 CBA 467 CBA	NYK NYK	U U	AA AA	MS BL	PIB/MPS PIB/SI
Perilstein Distributing Corp. 100 Business Center Drive Cheswick, PA 15024 (412) 274-9050 PERMA-PANE IGCC @ CBA '99	765 CBA 927 CBA	NYK NYK	U U	AA AA	BL BL	PIB/MPS PIB/SI
Philips Products-CA 9141 Arrow Highway Cucamonga, CA 91730 (909) 987-4694 PP-03 IGCC @ CBA '99	1458 CBA	BC/ASM	U	TPS	DM	HMB
Philips Products-OR 1620 Wilco Road Stayton, OR 97383 (503) 769-6321 PP-28 IGCC @ CBA '99	1054 CBA 1242 CBA	NYK/ASM BC/ASM	U U	AA TPS	BL DM	HMB HMB

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Poma Glass & Specialty Windows 365 McClurg Road-Suite E Boardman, OH 44512 (330) 965-1000 PG IGCC @ CBA '99	1269 CBA 1309 CBA 1310 CBA 1389 CBA 1390 CBA 1391 CBA 1392 CBA	BC NYK BC BC BC BC BC	U U U U/C U/C U/C U/C	TPS AA BSS TPS TPS SFS TPS	DM MS DM DM DM DM DM	HMB PU BSS HMB/PU HMB HMB HMB/PU PIB/PS
PPG Inds. Inc. 3700 Division Street Burlington, IA 52601 (319) 753-2961 TWINDOW 42 IGCC @ CBA '99	1303 CBA	BC	U	TPS	DM	PIB/PS
Prelco Inc. 94 Boulevard Cartier Riviere-du-Loup, QC G5R 2M9 CANADA (800) 463-1325 PRELCO IGCC @ CBA Riviere-du-loup 1999	1387 CBA 1388 CBA	BC/PLK BC/PLK	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 '99	1048 CBA	NYK	U	AA	MS	PIB/MPS
REPCO 510 Station Ave. Bensalem, PA 19020 (215) 637-1300 REPCO IGCC @ CBA '99	833 CBA	NYK	U	AA	MS	MPS
Revere Building Products, Div.of Gentek Bldg. Products 4545 Carolina Ave.,Bldg. F Richmond, VA 23222 (804) 321-1793 GBP IGCC @ CBA '99	1175 CBA	BC	U	BSS		BSS
Rochester Insulated Glass Inc. No. 73 Merrick Circle Manchester, NY 14504 (716) 289-3611 RIG IGCC @ CBA '99	451 CBA	BC/NYK	U	AA	MS	PIB/SI
S N E Enterprises PO Box 700 1000 S. View Dr. Mosinee, WI 54455-0700 (715) 693-7828 SNE M IGCC @ CBA '99	553 CBA	BC/NYK/AP/ASM	U	AA	MS	PIB/PU
S N E Enterprises 2116 Wood Street Stevens Point, WI 54481 (715) 693-7828 SNE P IGCC @ CBA '99	1001 CBA	BC/NYK/AP/ASM	U	AA	MS	PIB/PU
SIGCO, Inc. 299 Presumpscot St. Portland, ME 04103 (207) 775-2676 SIGCO IGCC @ CBA '99	654 CBA 1232 CBA 1444 CBA	NYK NYK/ASM NYK	U U U	AA AA AA	MS MS MS	PS PIB/MPS PIB/SI
Solar Seal Co. 55 Bristol Drive South Easton, MA 02375 (508) 238-0112 SOLAR SEAL IGCC @ CBA '99	748 CBA 1079 CBA 1201 CBA	NYK NYK ALK/S	U U U	AA AA MA	MS MS MS	PIB/MPS PIB/SI PIB/MPS

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Syracuse Glass Co. Inc. 4019 New Court Ave. PO Box 381 Syracuse, NY 13206 (315) 437-9971 SGC IGCC @ CBA '99	823 CBA 828 CBA	NYK NYK	U U	AA AA	BL BL	PIB/MPS PIB/SI
Taiwan Glass USA Sales Corp. PO Box 307 Wilsonville, OR 97070 (503) 682-2255 IGCC @ CBA '99	1356 CBA	PLK	U	AA	MS	PU/MPS
Tecnoglass S.A. Avenida Circunvalar a 100 mts de la Via 40 Las Flores, Barranquilla Columbia (575) 355-3333 IGCC @ CBA '99	1393 CBA	PLK/AP	U	MA	BL	PIB/MPS
Tempglass Group Inc.-CA 48999 Kato Road Fremont, CA 94539 (510) 651-2292 TEMPGLASS 84 IGCC @ CBA '99	1111 CBA	NYK	U	AA	MS	PIB/SI
Tempglass Group Inc.-FL 17851 NW Miami Miami, FL 33169 (305) 652-3350 TEMPGLASS 82 IGCC @ CBA '99	1101 CBA	NYK	U	AA	MS	PIB/SI
Tempglass Group Inc.-MI 22475 Heslip Drive Novi, MI 48375 (248) 305-8445 TEMPGLASS 85 IGCC @ CBA '99	1488 CBA	NYK	U	AA	MS	PIB/HMB
Tempglass Group Inc.-OH 291 "M" Street Willis Day Industrial Park Perrysburg, OH 43551 (419) 666-2000 TEMPGLASS 8A IGCC @ CBA '99	722 CBA 1084 CBA	BC/NYK BC/NYK	U U	MA/AP MA/AP	MS MS	PIB/SI PIB/PS
Tempglass Group Inc.-TX 1101 Fountain Pkwy. Grand Prairie, TX 75050 (972) 647-4028 TEMPGLASS 83 IGCC @ CBA '99	862 CBA 1304 C 1469 CBA	NYK NYK NYK	U U U	AA AA AA	MS MS MS	PIB/SI HMB PIB/HMB
Thermalock Manufacturing Co,LLC 16880 Front Street Copemish, MI 49625 (800) 831-6289 TMC IGCC @ CBA F99	1313 CBA	BC	U	BSS		BSS
Thermolite Inc. 950 N. South Road Scranton, PA 18504 (717) 969-1957 THERMOLITE INC IGCC @ CBA '99	646 CBA	PLK	U	AA	MS	HMB
Thermoseal Glass Corp. 400 Water Street Gloucester City, NJ 08030 (609) 456-3109 TSL IGCC @ CBA '99	1408 CBA	BC/NYK	U	AA	BL	MPS

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Thompson IG Corp. 3196 Thompson Rd. Fenton, MI 48430 (810) 629-9558 THOMPSON IG '99	1367 CBA	NYK	U	MA	MS	PIB/MPS
Tower Glass Products Corp. 95 Horton Avenue Lynbrook, NY 11563 (516) 887-3300 IGCC @ CBA '99	1470 CBA	PLK	U	AA	MS	PIB/SI
TRACO (Three Rivers Alum) 2400 Broadway Street Red Oak, IA 51566 (712) 623-5800 TRACO IGCC @ CBA '99	1307 CBA	BC/ASM	U	TPS	DM	HMB
TRACO (Three Rivers Alum) 71 Progress Ave. Cranberry Ind. Pk. Cranberry Township, PA 16066-3596 (724) 776-7000 TRACO IGCC @ CBA '99	439 CBA	BC/NK/W	U	MA	MS	PIB/SI
Vinylume Products 4021 Mahoning Ave. Youngstown, OH 44515 (330) 799-2000 IGCC @ 1369 V-L CBA '99	1369 CBA	BC	U	BSS		BSS
Viracon Inc. PO Box 990 800 Park Drive Owatonna, MN 55060 (507) 451-9555 VIRACON IGCC @ CBA '99	169 CBA 980 CBA	BC/ALK/S BC/ALK	U/C U/C	MA/AP AA/AP	MS MS	PIB/SI PIB/SI
W A Wilson Inc. PO Box 6712 6 Ind. Pk. Dr. Wheeling, WV 26003 (304) 232-2200 STARLITE IGCC @ CBA '99	1394 CBA 1395 CBA	NYK/ASM NYK/ASM	U U	AA AA	BL BL	PIB/PS PIB/SI
Weather Shield Mfg. Inc. Route 1 Box 103 2990 S. 8th W. Logan, UT 84321 (435) 753-6590 WS-U 12 IGCC @ CBA '99	557 CBA	NYK/ASM	U	AA	MS	PIB/PU
Weather Shield Mfg. Inc. PO Box 432 Ladysmith, WI 54848 (715) 748-2100 WS IGCC @ CBA '99	1368 CBA	BC/NYK/ASM	U	AA	MS	PUMS/PUMS
Weather Shield Mfg. Inc. PO Box 309 One Weather Shield Plaza Medford, WI 54451 (715) 748-2100 WS 02/03 IGCC @ CBA '99	408 CBA	NYK/ASM	U	AA	MS	PIB/PU
Weatherproof Inc. 385 Watts Rd. Jackson, MI 49203 (517) 764-1330 WEATHERPROOF IGCC @ CBA '99	1446 CBA	BC/NYJ/ASM	U/C	AA/AP	MS	EPU

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Western Glass/General Glass 11205 E. 37th Ave. PO Box 390711 Denver, CO 80239 (303) 371-5511 DUAL-PANE IGCC @ CBA '99	932 CBA 933 CBA	BC/NYK BC/NYK	U U	AA AA	BL BL	PIB/SI PIB/HMB
Winchester Industries Box 160 Route 286 E. Saltsburg, PA 15681 (724) 639-3551 WI IGCC @ CBA '99	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	Greensboro, NC
AFGD-Vancouver	Burnaby, BC, CANADA
American Flat Glass Dist.	Jacksonville, FL
Arch Aluminum & Glass L.C.	Youngsville, NC
JE Berkowitz Inc.	Westville, NJ
China Southern Glass	Shenzhen, CHINA
Coolidge Glass	Waukesha, WI
Coraglass	Reform, AL
Croft Metals Inc.	Lumber Bridge, NC
Glass Distributors Of America Inc.	Lithia Springs, GA
Glass Distributors Of America Inc.	Charolotte, NC
Glass Products Inc.	Bloomer, WI
Glenny Glass	Cincinnati, OH
HGP Industries Inc.	Louisville, KY
North American Glass	Bensenville, IL
Paramount Windows	Winnipeg, MB, CANADA
Philips Products	Cucamonga, CA
Poma Glass & Specialty Windows	Girard, OH
Pride Insulated Glass	Glendale Heights, IL
S N E Enterprises	Mosinee, WI
Solar Seal Co.	S. Easton, MA
Sunbelt Glass/AFGD	Lenexa, KS
Thermo-Twin Industries Inc.	Oakmont, PA
Thermoseal Glass Corp.	Gloucester City, NJ
Viracon Inc.	Owatonna, MN
Weather Shield Mfg. Inc.	Medford, WI
Weatherproof Inc.	Jackson, MI
Western Glass/General Glass	Denver, CO
Woodstone Co.	N. Walpole, NH

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 Code</u>	<u>Plant Code</u>	<u>IGCC®</u>	<u>Rating Level</u>	<u>Year</u>
AMERICAN GLAZING COMPANY	*	IGCC®	CBA	'99

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

February 1, 1999

**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: 315-938-7444
Fax: 315-938-7453
E-mail: jgkent@gisco.net

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 Services (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 (including notarization of the Affidavit, Appendix A) 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.

February 1, 1999

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, the administration fee for the first year will be charged for participation and will include two inspections 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.

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 Services (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

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 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. (Adopted 9/11/96)

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).

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, provided the remaining connections utilize the same fastening technique as previously certified. (Adopted 10/18/89)

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 edge remains the same or is greater than the model tested. On units fabricated having 3/16-inch air spaces, provided the manufacturer maintains the same weight of desiccant per inch of edge or as close to that value as possible.

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 absorption 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 administrator's 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. (revised 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.

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

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. 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 4/17/91)

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 114-inch air space test unit since the moisture vapor transmission area in each of these units is identical. Filling 4 spacers of a 112-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 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. (Adopted 9/8/88) To accommodate this modification a nominal 1/2 inch \pm 1/16 inch gas or air space maybe tested under this guideline. (Modified 3/29/89)

CLASS 11 - 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)

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 licensee's products for failure to pay monies due to IGCC within 60 days of invoice date (reference License Agreement A. 1.3 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 authorized 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) 832-9693

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.

IGCC® APPROVED LABORATORIES PRESENTLY CONDUCTING TESTS

IN ACCORDANCE WITH ASTM E773 & E774

LABORATORIES

- | | | | |
|----|--|----|---|
| 30 | Architectural Testing Inc.
130 Derry Ct
York, PA 17402-9405
Attn: David Moyer
Telephone: 717-764-7700
Fax: 717-764-4129 | 45 | ETC; Jim Spetz Testing Division
29633 Lakeland Blvd.
Wickliffe, OH 44092
Attn: James L. Spetz, P.E.
Telephone: 440-944-3665
Fax: 440-944-3671 |
| 35 | Architectural Testing Inc.
2524 East Jensen Ave.
Fresno, CA 93706
Attn: Don Empey
Telephone: 209-233-8705
Fax: 209-233-8360 | 50 | ORTECH Corporation
2395 Speakman Drive
Mississauga, Ontario L5K 1B3 Canada
Attn: Allan Major or David Bailey
Telephone: 905-822-4111 X-585
Fax: 905-822-4076 |
| 40 | Architectural Testing Inc.
587 First Street S.W.
New Brighton, MN 55112
Attn: Dan Braun
Telephone: 651-636-3835
Fax: 651-636-3843 | 55 | Performance Testing, Inc.
4076 148th Ave. NE
Redmond, WA 98052
Attn: Jon DeRose
Telephone: 425-883-9788
Fax: 425-869-5266 |
| | | 60 | Intertek Testing Services
8431 Murphy Dr
Middleton, WI 53562
Attn: Rocco Moro
Telephone: 608-836-4400
Fax: 608-831-9279 |

**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 11

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



P.O. Box 9

Henderson Harbor, NY 13651

ADDRESS CORRECTION REQUESTED

BULK RATE
U.S. POSTAGE
PAID
HAZLETON, PA
PERMIT NO. 281