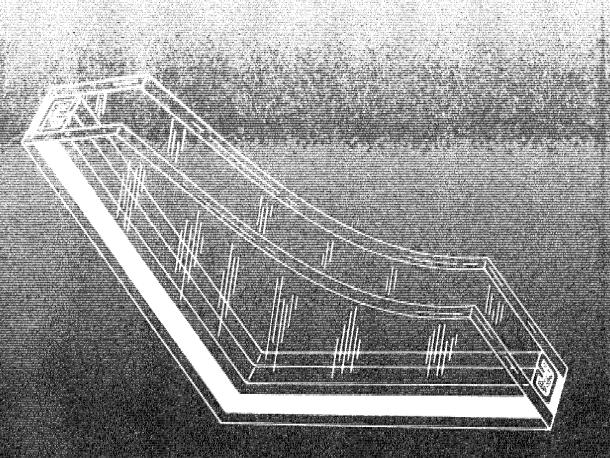
# CERTIFIED PRODUCTS DIRECTORY

SEALED INSULATING GLASS FEBRUARY 1, 1994



INSULATING GLASS

CERTIFICATION COUNCIL

CREDIBILITY IN INDUSTRY CERTIFICATION THROUGH ACTIVE PUBLIC PARTICIPATION

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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 E774-88 for Sealed Insulating Glass." This specification basically classifies sealed units into three categories; C, B, or A, 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 product 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 action, 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 E774-88. 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, American Society for Testing and Materials, The National Bureau of Standards, FHA, HUD, Public Interest Persons, the Industry, and particularly consumers. Without input from such a broad cross-section, this program would not be possible.

| Licensee   | IGCC<br>Number         |            | Corner<br>Construction  | Substrate  | Spacer     | Desiccant | Sealant          |
|--|------------------------|------------|-------------------------|------------|------------|-----------|------------------|
| ACI Glass Products<br>12900 Nicholson Rd<br>PO Box 815547<br>Dallas TX 75381-5547<br>214-484-3691<br>ACI 141 IGCC <sup>®</sup> CBA '94 | IGCC-703<br>IGCC-1106  | CBA<br>CBA | NYK<br>NYK              | u          | A A<br>A A | MS<br>MS  | PIB/S<br>PIB/HMB |
| ACI Glass Products<br>2765 Lafayette St<br>Santa Clara CA 95050<br>408-727-5432<br>ACI NORTH IGCC <sup>®</sup> CBA '94                 | IGCC-952               | СВА        | NYK                     | U          | AA         | MS        | PIB/S            |
| ACI Glass Products 3225 S 116th Ste 133 Seattle WA 98168 206-244-0727 ACI 147 IGCC® CBA '94  | IGCC- <b>9</b> 75      | СВА        | PLK                     | SCF        | ST         | MS/SG     | PU               |
| AFG Glass Inc 75 Doney Crescent Concord, Ontario L4K 1P6 CANADA 416-669-1930 AFG TOR SEALITE IGCC® CBA '94                             | IGCC-679<br>IGCC-999   | CBA<br>CBA | BC/ALJ/L<br>BC/NK/ALJ/L | U/C<br>U/C | МА<br>МА   | MS<br>MS  | PIB/S<br>PIB/MPS |
| Alpen Inc<br>5400 Spine Rd<br>Boulder CO 80301<br>303-530-1150<br>ALP IGCC <sup>®</sup> CBA '94  | IGCC-880               | СВА        | BC/PLK                  | SCF        | ST         | MS/SG     | PU               |
| Alside Window Co-Midwest<br>3820 44th Ave S W<br>Cedar Rapids IA 52401<br>319-390-4237<br>AWCMW IGCC <sup>®</sup> CBA '94              | IGCC-1064<br>IGCC-1133 | CBA<br>CBA | NYK<br>BC/NK            | U<br>U     | AA<br>TPS  | M/S<br>DM | HMB<br>HMB       |
| Alside Window Co S E<br>3800 Farmgate Rd<br>Kinston NC 28501<br>919-527-5050<br>AWCSE IGCC <sup>®</sup> CBA '94                        | IGCC-837               | CBA        | NYK                     | U          | AA         | MS        | нмв              |
| American Flat Glass Dist<br>1201 Hwy 67 E<br>Alvarado TX 76009<br>817-477-1144<br>AFGD 24 IGCC <sup>®</sup> CBA '94                    | IGCC-1025              | СВА        | NYK                     | U          | AA         | MS        | PIB/MPS          |

| Licensee   | IGCC<br>Number                   |                   | Corner<br>Construction | Substrate   | Spacer            | Desiccant      | Sealant                 |
|--|----------------------------------|-------------------|------------------------|-------------|-------------------|----------------|-------------------------|
| American Flat Glass Dist<br>3350 Ball St<br>Birmingham AL 35234<br>205-841-6785<br>AFGD 03 IGCC <sup>®</sup> CBA '94     | IGCC-951                         | СВА               | NYK                    | U           | AA                | MS             | MPS                     |
| AFGD 03 IGCC CBA 94  |                                  |                   |                        |             |                   |                |                         |
| American Flat Glass Dist<br>4905 Lima St<br>Denver CO 80239<br>303-371-1151  | IGCC-1021                        | СВА               | NYK                    | U           | AA                | MS             | PIB/HMB                 |
| AFGD 21 IGCC <sup>®</sup> CBA '94  |                                  |                   |                        |             |                   |                |                         |
| American Flat Glass Dist<br>575 Currant Rd<br>Fall River MA 02720<br>508-675-9220<br>AFGD 7 IGCC <sup>®</sup> CBA '94    | IGCC-1022<br>IGCC-1110           | CBA<br>CBA        | NYK<br>NYK             | U<br>U      | <b>AA AA</b>      | MS<br>MS       | MPS<br>PIB/MPS          |
|  |                                  |                   |                        |             |                   |                |                         |
| American Flat Glass Dist<br>4520 Willow Pkwy<br>Cuyahoga Heights OH 44125<br>216-341-2110                                | IGCC-625<br>IGCC-797<br>IGCC-798 | CBA<br>CB<br>CBA  | NYK<br>NYK<br>NYK      | U<br>U<br>U | M A<br>A A<br>A A | MS<br>MS<br>MS | PIB/S<br>MPS<br>PIB/MPS |
| AFGD 2 IGCC <sup>®</sup> CBA '94   |                                  |                   |                        |             |                   |                |                         |
| American Flat Glass Dist<br>9288 Sutton Pl<br>Hamilton OH 45011<br>513-874-5772<br>AFGD 06 IGCC <sup>®</sup> CBA '94     | IGCC-854                         | СВА               | NYK                    | U           | AA                | MS             | PS                      |
|  |                                  |                   |                        |             |                   |                |                         |
| American Flat Glass Dist<br>3200 Austell Rd<br>Marietta GA 30060<br>404-434-2041<br>AFGD 1 IGCC <sup>®</sup> CBA '94     | IGCC-141<br>IGCC-687<br>IGCC-808 | CBA<br>CBA<br>CBA | NYK<br>NYK<br>NYK      | U<br>U<br>U | A A<br>A A        | MS<br>MS<br>MS | MPS<br>PIB/MPS<br>PIB/S |
| American Flat Glass Dist<br>3740 Pampas Dr<br>Jacksonville FL 32207<br>904-398-8471<br>AFGD 02 IGCC <sup>®</sup> CBA '94 | IGCC-853                         | СВА               | NYK                    | U           | AA                | мs             | MPS                     |
| American Flat Glass Dist<br>2341 Beaver Creek Dr<br>Powell TN 37849<br>615-938-2020<br>AFGD 05 IGCC <sup>®</sup> CBA '94 | IGCC-819                         | СВА               | NYK                    | u           | AA                | MS             | MPS                     |

| L i cen see   | IGCC<br>Number                                  |                          | Corner<br>Construction       | Substrate   | Spacer            | Desiccant      | Sealant                           |
|---|---|--------------------------|------------------------------|-------------|-------------------|----------------|-----------------------------------|
| American Flat Glass Dist<br>6200 Gorman Rd<br>Richmond VA 23231<br>804-222-0120   | IGCC-957<br>IGCC-1085                           | CBA<br>CBA               | NYK<br>NYK                   | U<br>U      | A A<br>A A        | MS<br>MS       | MPS<br>PIB/MPS                    |
| AFGD 10 IGCC® CBA '94   |   |                          |                              |             |                   |                |                                   |
| American Flat Glass Dist<br>803 Prestige Pkwy<br>Scotia NY 12302<br>518-374-3812  | IGCC-861  | CBA                      | NYK                          | u           | AA                | MS             | PIB/MPS                           |
| AFGD 09 IGCC® CBA '94   |   |                          |                              |             |                   |                |                                   |
| Artistic Glass Products Co<br>2175 Kumry Rd<br>PO Box 70<br>Trumbauersville PA 18970<br>215-536-0333<br>AGP IGCC <sup>®</sup> CBA '94 | IGCC-1040                                       | СВА                      | BC/NK                        | U           | BSS               | -              | BSS/S                             |
| AGF IGCC - CBA 94   |   |                          |                              |             |                   |                |                                   |
| Assurance Glass Co<br>Selfield Ind Pk<br>PO Box 1452<br>Selma AL 36702<br>205-875-1900  | IGCC-420  | СВА                      | NYK                          | U           | мА                | MS/SG          | PIB/PS                            |
| AG IGCC® CBA '94  |   |                          |                              |             |                   |                |                                   |
| B & G Glass & Mirror Co Inc<br>11866 Hubbard<br>Livonia MI 48150<br>313-522-0300  | IGCC-466<br>IGCC-467                            | CBA<br>CBA               | NYK<br>NYK                   | u<br>u      | AA<br>AA          | WS<br>WS       | PIB/MPS<br>PIB/S                  |
| B&G IGCC® CBA '94   |   |                          |                              |             |                   |                |                                   |
| J E Berkowitz Inc<br>Delsea Dr & Harvard Ave<br>Route 47<br>Westville NJ 08093<br>609-456-7800  | IGCC-352<br>IGCC-1052<br>IGCC-1138<br>IGCC-1139 | CBA<br>CBA<br>CBA<br>CBA | NYK<br>NYK<br>BC/WL<br>BC/WL | U<br>U<br>U | A A<br>A A<br>A A | MS<br>MS<br>MS | PIB/MPS<br>PIB/S<br>PIB<br>PIB/PS |
| JEB IGCC® CBA '94   |   |                          |                              | U           | AA                | MS             | PIB/PS                            |
| Better Thermo Unit 2+2<br>1530 Landmeier Rd<br>PO Box 1446<br>Elk Grove Village IL 60007<br>708-593-2980<br>BTUM IGCC® CBA '94        | IGCC-164  | СВА                      | ALK/S                        | U           | MA                | MS/SG          | PIB/PS                            |
| Capitol Aluminum & Glass Corp<br>1276 W Main St<br>Bellevue OH 44811<br>419-483-7050<br>CAG-HM IGCC® CBA '94                          | IGCC-884  | СВА                      | NYK                          | SCF         | GS                | МS             | PU                                |

| Licensee   | IGCC<br>Number                |            | Corner<br>Construction | Substrate    | Spacer         | Desiccant   | Sealant         |
|--|-------------------------------|------------|------------------------|--------------|----------------|-------------|-----------------|
| Capitol Glass & Aluminum Corp<br>8017 Edith Blvd<br>Albuquerque NM 87113<br>505-898-1460 | IGCC-956                      | CBA        | NYK                    | U .          | MA             | MS/SG       | PIB/MPS         |
| CGAC-A IGCC® CBA '94   |                               |            |                        |              |                |             |                 |
| Capitol Glass & Aluminum Corp<br>3515 S 300 W<br>Salt Lake City UT 84115<br>801-268-2521 | IGCC-1093                     | СВ         | PLK                    | U            | МА             | MS/SG       | PIB/MPS         |
| CGAC IGCC® CB '94  |                               |            |                        |              |                |             |                 |
| Cardinal IG<br>Iowa 25 N<br>PO Box 99<br>Greenfield IA 50849<br>515-743-2134             | IGCC-311<br>IGCC-1030         | CBA<br>CBA | BC/ALK/S/<br>BC/PLK    | 'AP U/C<br>U | MA<br>SS/AP    | MS<br>MS/SG | PIB/S<br>PIB/S  |
| CARDINAL 2 IGCC® CBA '94   |                               |            |                        |              |                |             |                 |
| or<br>CIG 2 IGCC <sup>®</sup> CBA '94  |                               |            |                        |              |                |             |                 |
| Cardinal IG<br>7115 W Lake St<br>Minneapolis MN 55426<br>612-929-0317                    | IGCC-244<br>IGCC-1033         | CBA<br>CBA | BC/ALK/S/<br>BC/PLK    | /AP U/C<br>U | MA<br>SS/AP    | MS<br>MS/SG | PIB/S<br>PIB/S  |
| CARDINAL 1 IGCC® CBA '94  OF  CIG 1 IGCC® CBA '94  |                               |            |                        |              |                |             |                 |
| ora i rado obi. Vi   |                               |            |                        |              |                |             |                 |
| Cardinal IG<br>1011 E Madison St<br>Spring Green WI 53588<br>608-588-7415                | IGCC-32 <b>4</b><br>IGCC-1036 | CBA<br>CBA | BC/ALK/S<br>BC/PLK     | /AP U/C<br>U | MA<br>SS/AP    | MS<br>MS/SG | PIB/S<br>PIB/S  |
| CARDINAL 3 IGCC® CBA '94   |                               |            |                        |              |                |             |                 |
| CIG 3 IGCC® CBA '94  |                               |            |                        |              |                |             |                 |
| Cardinal IG<br>1620 Town Line Rd<br>Tomah WI 54660<br>608-372-3300                       | IGCC-756<br>IGCC-1039         |            | BC/ALK/S<br>BC/PLK     | /AP U<br>U   | MA<br>SS/AP    | MS<br>MS/SG | PIB/S<br>PIB/S  |
| CARDINAL 4 IGCC® CBA '94   |                               |            |                        |              |                |             |                 |
| CIG 4 IGCC® CBA '94  |                               |            |                        |              |                |             |                 |
| Classic Glass of Battle Creek<br>21472 M-37<br>Battle Creek MI 49017                     | Inc<br>IGCC-1004<br>IGCC-1010 |            |                        | U<br>U       | AA/AP<br>AA/AP | MS<br>MS    | PIB/PS<br>PIB/S |
| 616-968-2711   |                               |            |                        |              |                |             |                 |
| CLASSIC GLASS IGCC® CBA '94  |                               |            |                        |              |                |             |                 |

| Licensee   | IGCC<br>Number                       |            | Corner<br>Construction | Substrate | Spacer    | Desiccant | Sealant         |
|--|--------------------------------------|------------|------------------------|-----------|-----------|-----------|-----------------|
| Croft Metals Inc<br>Hwy 71<br>PO Drawer 90<br>Lumber Bridge NC 28357<br>919-843-3391<br>CMI 92-2 IGCC <sup>®</sup> CBA '94               | IGCC-818<br>IGCC-1069                | CBA<br>CBA | NYK<br>BC/NK           | U<br>U    | AA<br>BSS | MS<br>-   | HLE<br>BSS      |
| Croft Metals Inc<br>Hwy 51<br>Magnolia MS 39652<br>601-783-3188<br>CMI 92-1 IGCC <sup>®</sup> CBA '94                                    | IGCC-727<br>IGCC-1131                | CBA<br>CBA | NYK<br>BC/NK           | U         | AA<br>BSS | MS<br>-   | HMB<br>BSS      |
| Crystal Windows & Doors Inc<br>131-40 Maple Ave<br>Flushing NY 11353<br>718-961-7300<br>CRYSTAL W & D IGCC® CBA '94                      | IGCC-1062                            | СВА        | NYK                    | U         | AA        | MS        | MPS             |
| Curved Glass Distributors<br>72 Chappel St<br>Derby CT 06418<br>203-735-4665<br>CGD IGCC <sup>®</sup> CBA '94                            | IGCC~1063                            | СВА        | NYK                    | U         | AA        | MS        | PIB/PU          |
| Custom Glass Products Inc<br>5906 Mesker St<br>PO Box 590<br>Schofield WI 54476<br>715-359-2252<br>CGP IGCC <sup>®</sup> CBA '94         | IGCC-661<br>IGCC-745                 | CBA<br>CBA | BC/NYK<br>BC/NYK/AP    | U<br>U    | AA<br>AA  | MS<br>MS  | PU<br>PIB/PU    |
| Custom Glass Prod of Carolina<br>1475 Harrison Rd<br>PO Box 2049<br>Salisbury NC 28144<br>704-633-4946<br>CGPC IGCC <sup>®</sup> CBA '94 | Inc<br>IGCC-782<br>IGCC- <b>9</b> 18 | CBA<br>CBA | BC/NYK<br>BC/NYK       | U<br>U    | AA<br>AA  | MS<br>MS  | PU<br>PIB∕PU    |
| DeLuxe Insulated Glass Inc<br>4375 N Sellers St<br>Indianapolis IN 46226<br>317-547-3564<br>IGOI IGCC <sup>®</sup> CBA '94               | IGCC-101 <b>6</b>                    | СВА        | NYK                    | U         | AA        | MS        | PIB/PS          |
| Dykstra Brothers Glass Co<br>4257 30th St<br>Burnips MI 49314<br>616-896-8341<br>DYK IGCC <sup>®</sup> CBA '94                           | IGCC-729<br>IGCC-732                 | CBA<br>CBA | NYK<br>NYK             | U<br>U    | AA<br>AA  | MS<br>MS  | PIB/PS<br>PIB/S |

| Licensee   | IGCC<br>Number                   |                   | Corner<br>Construction | Substrate   | Spacer            | Desiccant      | Sealant               |
|--|----------------------------------|-------------------|------------------------|-------------|-------------------|----------------|-----------------------|
| Ecker Manufacturing Corp<br>4055 10th Ave<br>New York NY 10034<br>212-304-1300<br>ECKER IGCC <sup>®</sup> CBA '94                              | IGCC-889                         | CBA               | NYK                    | U           | AA                | MS             | PU                    |
| Edge Seal Technologies Inc<br>1 Industrial Dr<br>Bedford OH 44146<br>216-439-0980<br>EST IGCC <sup>®</sup> CBA '94                             | IGCC-1086                        | CBA               | BC/NK                  | U           | TPS/AP            | DM             | нмв                   |
| Floral Glass Ind Inc<br>224 Sandbank Rd<br>PO Box 882<br>Cheshire CT 06410<br>203-272-2211<br>INSULA 2 IGCC <sup>®</sup> CBA '94               | IGCC-801                         | СВА               | NYK/AP                 | U           | MA/AP             | MS             | PIB/S                 |
| Floral Glass & Mirror Inc<br>895 Motor Pkwy<br>Hauppauge NY 11787<br>516-234-2200<br>INSULA 1 IGCC <sup>®</sup> CBA '94                        | IGCC-881                         | СВА               | BC/NK/W                | U           | МА                | MS             | PIB/S                 |
| Flower City Glass Co<br>4 Alexander St<br>Rochester NY 14620<br>716-546-8646<br>FLOWER CITY GLASS IGCC <sup>®</sup> CBA '9                     | IGCC-992<br>IGCC-1127            | CBA<br>CBA        | NYK<br>NYK             | U/C<br>U/C  | AA<br>AA          | MS<br>MS       | PIB/S<br>PS           |
| Four Seasons Solar Products Corp<br>5005 Veterans Memorial Hwy<br>Holbrook NY 11741<br>516-563-4000<br>FSSP IGCC <sup>®</sup> CBA ' <b>9</b> 4 | IGCC- <b>96</b> 8                | СВА               | NYK                    | SCF         | GS                | MS             | PU                    |
| Galaxy Mfg Co of CNY Inc<br>109 Monarch Dr<br>Liverpool NY 13088<br>315-451-5353<br>GALAXY IGCC <sup>®</sup> CBA '94                           | IGCC-691                         | СВА               | NYK                    | U/C         | AA                | MS             | PU                    |
| Glasmont Corp<br>8111 Zionsville Rd<br>P O Box 68596<br>Indianapolis IN 46268<br>317-876-1155<br>GC IGCC <sup>®</sup> CBA '94                  | IGCC-653<br>IGCC-916<br>IGCC-917 | CBA<br>CBA<br>CBA | NYK                    | U<br>U<br>U | MA<br>MA<br>MA/AP | MS<br>MS<br>MS | PIB/S<br>PU<br>PIB/PU |

| Licensee   | IGCC<br>Number            |            | Corner<br>Construction | Substrate | Spacer   | Desiccant      | Sealant          |
|--|---------------------------|------------|------------------------|-----------|----------|----------------|------------------|
| Glass Dist of America Inc<br>2310 Sweetwater Industrial Blvd<br>Lithia Springs GA 30057-2882<br>404-732-2000 | IGCC-1143                 | СВА        | NYK                    | U         | AA       | MS             | MPS              |
| GDA IGCC® CBA '94  |                           |            |                        |           |          |                |                  |
| Glass Systems Inc<br>2000 W Eight Mile Rd<br>Ferndale MI 48220<br>313-548-7191                               | IGCC-1090                 | СВА        | NYK                    | U .       | AA       | MS             | PU               |
| GSI IGCC® CBA '94  |                           |            |                        |           |          |                |                  |
| Glasstemp Inc<br>1001 Foster Ave<br>Bensenville IL 60106<br>708-595-3750                                     | IGCC-538<br>IGCC-753      | CBA<br>CBA | NYK<br>NYK             | U<br>U    | MA<br>MA | MS/SG<br>MS/SG | PIB/MPS<br>PI8/S |
| GLASSTEMP IGCC® CBA '94  |                           |            |                        |           |          |                |                  |
| Glenny Glass Co<br>11310 Williamson Rd<br>Cincinnati OH 45262<br>513-489-2234                                | IGCC-1104                 | СВА        | NYK                    | U         | AA/AP    | MS             | PIB/PU           |
| GLENNY IGCC® CBA '94   |                           |            |                        |           |          |                |                  |
| Graham Architectural Products Cor<br>1551 Mt Rose Ave<br>York PA 17405<br>717-849-8100                       | p<br>IGCC-353             | СВА        | NYK                    | U         | AA       | MS/SG          | нмв              |
| GRAHAM IGCC® CBA '94   |                           |            |                        |           |          |                |                  |
| Guardian Fabrication Inc   |                           |            |                        |           |          |                |                  |
| 1412 S First St<br>Rogers AR 72756<br>501-636-0888   | IGCC-1108<br>IGCC-1109    | CBA<br>CBA | NYK<br>NYK             | U<br>U    | AA<br>AA | MS<br>MS       | MPS<br>PIB/MPS   |
| GRD-028 IGCC <sup>®</sup> CBA '94  |                           |            |                        |           |          |                |                  |
| Lewistown PA 17044   | t<br>IGCC-566<br>IGCC-613 | CBA<br>CBA | NYK<br>NYK             | U         | AA<br>AA | MS<br>Ms       | PIB/MPS<br>PIB/S |
| 717-242-2571<br>GRD-065 IGCC <sup>®</sup> CBA '94  |                           |            |                        |           |          |                |                  |
|  |                           |            |                        |           |          |                |                  |
| Harvey Inds Inc<br>725 Huse Rd<br>Manchester NH 03103<br>603-622-4232<br>HARVEY IGCC® CBA '94                | IGCC-937                  | СВА        | NYK                    | U         | AA       | MS             | НМВ              |
| El 1000 ODA 54   |                           |            |                        |           |          |                |                  |

| Licensee  | IGCC<br>Number                   |                   | Corner<br>Construction | Substrate     | Spacer         | Desiccant      | Sealant                   |
|---|----------------------------------|-------------------|------------------------|---------------|----------------|----------------|---------------------------|
| Hoffer's Inc<br>5103 Janice Ave<br>Schofield WI 54476<br>715-359-2432<br>H. I. IGCC <sup>®</sup> CBA '94                        | IGCC-899                         | СВА               | NYK                    | U             | <b>M</b> A/AP  | MS             | PIB/PU                    |
| HGP Industries Inc<br>5334 Barthel Dr<br>PO Box 130<br>Albertville MN 55301<br>612-497-3212<br>HGP 22 IGCC <sup>®</sup> CBA '94 | IGCC-317<br>IGCC-360<br>IGCC-621 | CBA<br>CBA<br>CBA | ALK/S<br>ALK/S<br>NYK  | U<br>U/C<br>U | MA<br>MA<br>MA | MS<br>MS<br>MS | PIB/PU<br>PIB/S<br>PIB/PU |
| HGP Industries Inc<br>2300 S 4th St<br>PO Box 458<br>Louisville KY 40201<br>502-637-2022<br>HGP 64 IGCC <sup>®</sup> CBA '94    | IGCC-1083                        | СВА               | NYK                    | U             | AA             | MS             | PIB/H <b>MB</b>           |
| HGP Industries Inc<br>1500 Glen Ave<br>Moorestown NJ 08057<br>609-234-9222<br>HGP 12 IGCC <sup>®</sup> CBA '94                  | IGCC- <b>494</b>                 | СВА               | NYK                    | U             | AA             | MS             | PIB/S                     |
| HGP Industries Inc<br>3404 W Papago St<br>Phoenix AZ 85009<br>602-253-6980<br>HGP 6 IGCC <sup>®</sup> CBA '94                   | IGCC-1102                        | СВА               | NYK/MB                 | U             | АА             | MS             | РІВ/НМВ                   |
| HGP Industries Inc<br>1900 Midland St<br>PO Box 11339<br>Rock Hill SC 29731<br>803-366-5167<br>HGP 44 IGCC <sup>®</sup> CBA '94 | IGCC- <b>49</b> 7<br>IGCC-1105   | CBA<br>CBA        | NYK<br>NYK             | U<br>U        | A A<br>A A     | MS<br>MS       | PIB/S<br>PIB/MPS          |
| HGP Industries Inc<br>1548 Stone Ridge Dr<br>Stone Mountain GA 30083<br>404-939-6900<br>HGP 42 IGCC <sup>®</sup> CBA '94        | IGCC-914<br>IGCC-1077            | CBA<br>CBA        |                        | U<br>U        | A A<br>A A     | MS<br>MS       | PIB/S<br>PIB/HMB          |
| HGP Industries Inc<br>PO Box 368<br>Warrenton MO 63383<br>314-456-3452<br>HGP 21 IGCC <sup>®</sup> CBA '94                      | IGCC-829                         | CBA               | ALK/S                  | U             | MA             | MS             | PIB/S                     |

| Licensee   | IGCC<br>Number                      |                   | Corner<br>Construction  | Substrate       | Spacer              | Desiccant      | Sealant         |
|--|-------------------------------------|-------------------|-------------------------|-----------------|---------------------|----------------|-----------------|
| Hurd Millwork Co<br>1815 Water St<br>Merrill WI 54452<br>715-536-5581<br>HURD IGCC <sup>®</sup> CBA '94  | IGCC-1011<br>IGCC-1013<br>IGCC-1014 | CBA<br>CBA<br>CBA | NYK<br>BC/NYK/AP<br>NYK | U<br>2/SCF<br>U | AA<br>GS/PF/P<br>AA | MS<br>MS<br>MS | PU<br>PU<br>MPS |
|  | IGCC-1095<br>IGCC-1096              | CBA<br>CBA        | BC/NYK<br>BC/NYK        | 2/SCF<br>SCF    | GS/PF/P<br>GS/PF    | MS<br>MS       | PU<br>PU        |
| Insulating Glass of Georgia Inc<br>520 Wharton Circle S W<br>PO Box 43444<br>Atlanta GA 30336<br>404-691-3300<br>Inde-Pane ATL IGCC <sup>®</sup> CBA '94 | IGCC-1003<br>IGCC-1123              | CBA<br>CBA        | NYK<br>NYK              | U<br>U          | MA<br>MA            | MS<br>MS       | PIB/S<br>PIB/PS |
| Insulpane of Connecticut Inc<br>30 Edmond St<br>Hamden CT 06517<br>203-865-8212  | IGCC-770                            | СВА               | NYK                     | U               | AA                  | MS             | PIB/PU          |
| INSULPANE OF CT IGCC <sup>®</sup> CBA '94  |                                     |                   |                         |                 |                     |                |                 |
| Interpane Glass Co<br>201 Interpane La<br>PO Box 26<br>Deerfield WI 53531<br>608-764-5461  | IGCC-842<br>IGCC-981                | CBA<br>CBA        | BC/PLK/AP<br>BC/PLK/AP  | U/C<br>U        | MA<br>MA            | MS<br>MS       | PIB/S<br>PIB/PU |
| INTERPANE IGCC <sup>®</sup> CBA '94  |                                     |                   |                         |                 |                     |                |                 |
| Interpane Glass Co<br>520 E Railroad St<br>Clinton NC 28328<br>919-592-7101<br>SPECTRUM GLASS PRODUCTS IGCC <sup>®</sup> C                               | IGCC-876<br>IGCC-984                | CBA<br>CBA        | BC/NK/WL<br>NYK         | U/C<br>U/C      | MA<br>AA            | MS<br>MS       | PIB/S<br>PIB/S  |
| Jersey Tempered Glass Inc<br>2035 Briggs Rd<br>PO Box 205<br>Mt Laurel NJ 08054<br>609-273-8700<br>JTG IGCC <sup>®</sup> CBA '94                         | IGCC-689<br>IGCC-750                | CBA<br>CBA        | NYK<br>NYK              | U<br>U          | AA<br>AA            | MS<br>MS       | PU<br>PIB/PU    |
| K C Company Inc<br>12100 Baltimore Ave<br>Beltsville MD 20705<br>301-419-2200<br>K.C. IGCC® CBA '94  | IGCC-638                            | CBA               | NYK                     | U               | AA                  | MS             | PIB/MPS         |

| Licensee   | IGCC<br>Number                     |                   | Corner<br>Construction      | Substrate   | Spacer                          | Desiccant               | Sealant                          |
|--|------------------------------------|-------------------|-----------------------------|-------------|---------------------------------|-------------------------|----------------------------------|
| Kuhl Glass Corp dba ThermaGlas<br>1930 S 23rd St<br>PO Box 1426<br>Saginaw MI 48605<br>517-754-7461<br>TG O1 IGCC <sup>®</sup> CBA '94               | IGCC-585<br>IGCC-586               | CBA<br>CBA        | NYK<br>NYK                  | U           | AA<br>AA                        | MS<br>MS                | PIB/PS<br>PIB/S                  |
| Labglas Inc<br>4625 S 32nd St<br>Phoenix AZ 85040<br>602-243-4277<br>LAB IGCC <sup>®</sup> CBA '94   | IGCC-856                           | СВА               | NYK                         | U           | МА                              | MS                      | PIB/S                            |
| Laminated Glass Corp<br>375 E Church Ave<br>PO Box 1003<br>Telford PA 18969-1003<br>215-721-0400<br>LGC IGCC <sup>®</sup> CBA '94                    | IGCC-857                           | CBA               | NYK                         | U           | AA                              | MS                      | PIB/S                            |
| LBL Inc<br>14041 N E Sandy Blvd<br>PO Box 20577<br>Portland OR 97220<br>503-253-6653<br>LBL 01 IGCC <sup>®</sup> CBA '94                             | IGCC-572                           | СВА               | BC/NK                       | IJ          | BSS                             | -                       | BSS                              |
| Marvin Windows<br>PO Box 100<br>Warroad MN 56763<br>218-386-1430<br>MARVIN 01 IGCC <sup>®</sup> CBA '94  | IGCC-303<br>IGCC-496<br>IGCC-1082  | CBA<br>CBA<br>CBA | NYK<br>NYK<br>BC/NK         | υ<br>υ<br>υ | AA<br>AA/AP<br>SFS/AP<br>TPS/AP | MS<br>MS<br>MS          | PU<br>PIB/PU<br>SFS/PU<br>PIB/PU |
| MGL Glass Div/Milco<br>Milco Apogee Wausau Group<br>7555 Stewart Ave PO Box 1366<br>Wausau WI 54402<br>715-842-0581<br>MGL IGCC <sup>®</sup> CBA '94 | IGCC-773<br>IGCC-1044<br>IGCC-1045 | CBA<br>CBA<br>CBA | ALK/S<br>BC/NYK<br>BC/ALK/S | υ<br>υ<br>υ | MA<br>MA<br>MA                  | MS/SG<br>MS/SG<br>MS/SG | PIB/S<br>PU<br>PIB/PU            |
| Mid-American Glass 147 N Sturdevant St PO Box 3428 Davenport IA 52802 319-326-6294 MAG IGCC® CBA '94   | IGCC-893                           | СВА               | BC/ALK/S                    | U           | MA                              | MS/SG                   | PIB/HMB                          |

| Licensee  | IGCC<br>Number         |            | Corner<br>Construction | Substrate  | Spacer     | Desiccant      | Sealant          |
|---|------------------------|------------|------------------------|------------|------------|----------------|------------------|
| Nashville Tempered Glass Corp<br>1860 Air Lane Dr<br>Nashville TN 37210<br>615-889-6350<br>NTGC IGCC <sup>®</sup> CBA '94 | IGCC-995<br>IGCC-1117  | CBA<br>CBA | BC/NK/WL<br>NYK        | U<br>U     | MA<br>AA   | MS<br>MS       | PIB/PU<br>PIB/PU |
| Norco Windows Inc<br>PO Box 140<br>Hawkins WI 54530<br>715-585-6311<br>NORCO IGCC <sup>®</sup> CBA '94                    | IGCC-1098<br>IGCC-1099 | CBA<br>CBA | NYK<br>NYK             | U<br>U     | A A<br>A A | MS/SG<br>MS/SG | PIB/PU<br>PU     |
| Northern Building Products Inc<br>One Remsen Pl<br>Ridgefield NJ 07657<br>201-943-6400<br>NBP IGCC® CBA '94               | IGCC-1051              | СВА        | BC/NK                  | u          | BSS        | -              | BSS              |
| Northwest Glass Inc<br>127 Regal St<br>PO Box 21258<br>Billings MT 59104<br>406-252-7196<br>NWG IGCC <sup>®</sup> CBA '94 | IGCC-865               | СВА        | NYK                    | U          | AA         | MS/SG          | PU               |
| Northwestern Inds Inc<br>2501 W Commodore Way<br>Seattle WA 98199<br>206-285-3140<br>NWI IGCC <sup>®</sup> CBA '94        | IGCC-940<br>IGCC-941   | CBA<br>CBA | BC/NYK<br>BC/NYK       | u/c<br>u/c | MA<br>MA   | MS<br>MS       | PIB/PS<br>PIB/S  |
| Oregon Glass<br>10450 S W Ridder Rd<br>PO Box 649<br>Wilsonville OR 97070<br>503-682-3846<br>OG IGCC® CBA '94             | IGCC-1122              | СВА        | PLK                    | U          | AA         | MS/SG          | PIB/PS           |
| Owens Corning Fiberglas<br>PO Box 5466<br>Martinsville VA 24115<br>703-638-6000<br>OCF IGCC® CBA '94                      | IGCC-1070              | СВА        | BC/NK                  | U          | BSS        | -              | BSS              |
| Patio Enclosures Inc<br>720 E Highland Rd<br>Macedonia OH 44056<br>216-468-0700<br>PEI IGCC <sup>®</sup> CBA '94          | IGCC-800               | СВА        | NYK                    | U          | AA/AP      | MS             | PIB/PU           |

| Licensee  | IGCC<br>Number         |            | Corner<br>Construction | Substrate | Spacer     | Desiccant      | Sealant          |
|---|------------------------|------------|------------------------|-----------|------------|----------------|------------------|
| Penn Pane Insulating Inc<br>705 Clinton Ave<br>PO Box 39<br>Reading PA 19603<br>215-375-2161<br>PPI IGCC® CBA '94               | IGCC-885               | СВА        | NYK .                  | U         | AA         | MS             | PIB/MPS          |
| Perilstein Distributing Corp<br>100 Business Ctr Dr<br>Cheswick PA 15024<br>412-274-9050<br>PERMA-PANE IGCC® CBA '94            | IGCC-765<br>IGCC-927   | CBA<br>CBA | NYK<br>NYK             | U<br>U    | A A<br>A A | MS/SG<br>MS/SG | PIB/MPS<br>PIB/S |
| Philips Products<br>9141 Arrow Hwy<br>Cucamonga CA 91730<br>909-987-4694<br>PPO3 IGCC <sup>®</sup> CBA '94                      | IGCC-1053              | СВА        | PLK/ <b>MB</b>         | u         | AA         | MS/SG          | нмв              |
| Philips Products 1620 Wilco Rd Stayton OR 97383 503-769-6321 PP28 IGCC® CBA '94   | IGCC-1054              | СВА        | NYK/ <b>M</b> B        | u         | ма         | WS/SG          | нмв              |
| Pride Insulated Glass Co Inc<br>75 N Brandon Dr<br>Glendale Heights IL 60139<br>708-351-1441<br>PRIDE IGCC <sup>®</sup> CBA '94 | IGCC-1048<br>IGCC-1050 | CBA        | NYK<br>NYK             | U<br>U    | AA<br>AA   | MS<br>MS       | PIB/MPS<br>PIB/S |
| REPCO<br>510 Station Ave<br>Bensalem PA 19020<br>215-639-5990<br>REPCO IGCC <sup>®</sup> CBA '94                                | IGCC-833               | СВА        | NYK                    | U         | AA         | MS             | MPS              |
| Rochester Insulated Glass Inc<br>Merrick St Ext<br>Manchester NY 14504<br>716-289-3611<br>RIG, INC. IGCC <sup>®</sup> CBA '94   | IGCC-451               | СВА        | BC/NYK                 | U         | AA         | MS             | PIB/S            |
| SIGCO Inc<br>299 Presumpscott St<br>Portland ME 04103<br>207-775-2676<br>SIGCO IGCC <sup>®</sup> CBA '94                        | IGCC- <b>654</b>       | СВА        | NYK                    | u         | AA         | MS             | PS               |

| Licensee  | IGCC<br>Number        |            | Corner<br>Construction | Substrate     | Spacer   | Desiccant      | Sealant          |
|---|-----------------------|------------|------------------------|---------------|----------|----------------|------------------|
| S N E Enterprises<br>1000 S View Dr<br>PO Box 700<br>Mosinee WI 54455-0700<br>715-693-7000<br>SNE M IGCC <sup>®</sup> CBA '94 | IGCC-553              | СВА        | BC/NYK/AP              | U             | АА       | MS             | PIB/PU           |
| S N E Enterprises Inc<br>2116 Wood St<br>Stevens Point WI 54481<br>715-344-4034<br>SNE P IGCC <sup>®</sup> CBA '94            | IGCC-1001             | СВА        | BC/NYK/AP              | U             | АА       | MS             | PIB/PU           |
| Solar Seal Co<br>55 Bristol Dr<br>South Easton MA 02375<br>508-238-0112<br>SOLAR SEAL IGCC <sup>®</sup> CBA '94               | IGCC-748<br>IGCC-1079 | CBA<br>CBA | NYK<br>NYK             | <b>u</b><br>u | AA<br>AA | MS<br>MS       | PIB/PS<br>PIB/S  |
| Superseal Mfg Inc<br>125 Helen St<br>S Plainfield NJ 07080<br>908-561-5910<br>SS IGCC <sup>®</sup> CBA '94                    | IGCC-920              | СВА        | NYK                    | u             | AA       | MS             | НМВ              |
| Syracuse Glass Co Inc<br>4019 New Court Ave<br>PO Box 381<br>Syracuse NY 13206<br>315-437-9971<br>SGC IGCC® CBA '94           | IGCC-823<br>IGCC-828  | CBA<br>CBA | NYK<br>NYK             | U/C<br>U/C    | AA<br>AA | MS/SG<br>MS/SG | PIB/MPS<br>PIB/S |
| Tempglass Inc<br>291 "M" St<br>Willis Day Industrial Park<br>Perrysburg OH 43551<br>419-666-2000<br>TEMPGLASS IGCC® CBA '94   | IGCC-722<br>IGCC-1084 | CBA<br>CBA | BC/NYK/AP<br>NYK/AP    | U<br>U        | MA<br>MA | MS<br>MS       | PIB/S<br>PIB/PS  |
| Tempglass Miami Inc<br>17851 N W Miami Inc<br>Miami Fl 33169<br>305-652-3350<br>Tempglass Miami IGCC® CBA '94                 | IGCC-1101             | СВА        | NYK                    | U             | AA       | MS             | PIB/S            |
| Tempglass Southern Inc<br>1101 Fountain Pkwy<br>Grand Prairie TX 75050<br>214-647-4028<br>TEMPGLASS S IGCC® CBA '94           | IGCC-862              | СВА        | NYK                    | U             | AA       | MS             | PIB/S            |

| Licensee   | IGCC<br>Number       |            | Corner<br>Construction   | Substrate | Spacer         | Desiccant | Sealant        |
|--|----------------------|------------|--|-----------|----------------|-----------|----------------|
| Tempglass Western Inc<br>48999 Kato Rd<br>Fremont CA 94539<br>510-651-2292   | IGCC-1111            | СВА        | NYK  | u         | AA             | MS        | PIB            |
| TGW IGCC <sup>®</sup> CBA '94  |                      |            |  |           |                |           |                |
| The Glass Factory Inc<br>5012 Expressway Dr S<br>Ronkonkoma LI NY 11779<br>516-588-4844<br>SUPER-SEAL II IGCC <sup>®</sup> CBA '94 | IGCC-790             | СВА        | NYK  | U         | МА             | MS        | PIB/S          |
|  |                      |            |  |           |                |           |                |
| Thermolite Inc<br>337 E Gibson St<br>Scranton PA 18509<br>717-969-1957   | IGCC-646<br>IGCC-873 | CBA<br>CBA | PLK<br>PLK   | U<br>U    | AA<br>AA       | MS<br>MS  | HMB<br>PIB/S   |
| THERMOLITE INC IGCC® CBA '94   |                      |            |  |           |                |           |                |
| Thermoseal Glass Corp<br>400 Water St<br>PO Box 360  | IGCC-890             | СВА        | DCK  | U         | AA             | MS        | MPS            |
| Gloucester City NJ 08030<br>60 <b>9-456</b> -3 <b>109</b>  |                      |            |  |           |                |           |                |
| TSG IGCC® CBA '94  |                      |            |  |           |                |           |                |
| Thompson IG Corp<br>3196 Thompson Rd<br>Fenton MI 48430<br>313-629-9558  | IGCC-939             | СВА        | NYK  | U         | AA             | MS        | PIB/PU         |
| Thompson IG Corp IGCC® CBA '94   | 1                    |            |  |           |                |           |                |
| TRACO (Three Rivers Aluminum Co<br>Cranberry Ind Pk<br>PO Box 805<br>Warrendale PA 15095<br>412-776-7000                           | )<br>IGCC-439        | СВА        | BC/NK/W  | U         | МА             | MS        | PIB/S          |
| TRACO IGCC® CBA '94  |                      |            |  |           |                |           |                |
| Vega Glass Center of Virginia I  |                      | 004        | NAME OF THE PROPERTY OF THE PR |           |                | Ме        | PIB/PU         |
| PO Box 59  Newington VA 22122  703-550-7982  | IGCC-868<br>IGCC-998 | CBA<br>CBA | NYK<br>NYK   | U         | AA<br>AA       | MS<br>MS  | PIB/S          |
| INSULVUE IGCC® CBA '94   |                      |            |  |           |                |           |                |
| Viracon Inc<br>800 Park Dr<br>PO Box 248<br>Owatonna MN 55060<br>507-451-9555  | IGCC-169<br>IGCC-980 | CBA<br>CBA |  | U/C<br>U  | MA/AP<br>AA/AP | MS<br>MS  | PIB/S<br>PIB/S |
| VIRACON IGCC® CBA '94  |                      |            |  |           |                |           |                |

| Licensee   | IGCC<br>Number                |            | Corner<br>Construction | Substrate | Spacer      | Desiccant      | Sealant          |
|--|-------------------------------|------------|------------------------|-----------|-------------|----------------|------------------|
| Weatherproof Inc<br>385 Watts Rd<br>Jackson MI 49203<br>517-764-1330<br>WEATHERPROOF IGCC® CBA '94   | IGCC-580<br>IGCC- <b>9</b> 23 | CBA<br>CBA | NYK<br>NYK             | U<br>U    | AA<br>AA/AP | MS<br>MS       | PU<br>PIB/PU     |
| Weather Shield Wfg Inc<br>2990 S 8th W<br>Route 1 Box 103<br>Logan UT 84321<br>801-753-6590<br>WS-U 12 IGCC <sup>®</sup> CBA '94               | IGCC-557                      | СВА        | NYK/MB                 | U         | АА          | MS             | PIB/PU           |
| Weather Shield Mfg Inc<br>675 E Allman St<br>PO Box 309<br>Medford WI 54451<br>715-748-2100<br>WS 02/03 IGCC <sup>®</sup> CBA '94              | IGCC-408                      | СВА        | NYK/WB                 | υ/с       | AA          | MS             | PIB/PU           |
| Western Glass / General Glass C<br>11205 E 37th Ave<br>PO Box 390711<br>Denver CO 80239<br>303-371-5511<br>DUAL-PANE IGCC <sup>®</sup> CBA '94 | orp<br>IGCC-932<br>IGCC-933   | CBA<br>CBA | BC/NYK<br>BC/NYK       | U         | AA<br>AA    | MS/SG<br>MS/SG | PIB/S<br>PIB/HMB |
| Winchester Industries<br>Route 286 E<br>Box 160<br>Saltsburg PA 15681<br>412-639-3551<br>WI IGCC <sup>®</sup> CBA '94                          | IGCC-928                      | СВА        | BC/NK                  | U         | BSS         | -              | BSS              |

#### CERTIFIED PRODUCTS KEY

| Sealant | t:                      | Desiccar   | nt:                        |
|---------|-------------------------|------------|----------------------------|
| BSS     | = Butyl sealant spacer  | MS         | = Molecular sieve          |
| HMB     | = Hot melt butyl        | SG         | = Silica gel               |
| MPS     | = Modified Polysulfide  | MS/SG      | = Blend of molecular sieve |
| PIB     | = Polyisobutylene       |            | and silica gel             |
| PS      | = Polysulfide           | D <b>M</b> | = Desiccated matrix        |
| PU      | = Polyurethane          |            |                            |
| S       | = Silicone              |            |                            |
| Corner  | :                       | Spacer k   | Material:                  |
| ALK     | = Aluminum key          | AA         | = Anodized aluminum        |
| DCK     | = Die cast key          | AC         | = Aluminum channel         |
| NYK     | = Nylon key             | AP         | = Aperture plug            |
| PLK     | = Plastic key           | BSS        | = Butyl Sealant Spacer     |
| NK      | = No key                | MA         | = Mill finish aluminum     |
| BC      | = Bent Corners          | SFS        | = Silicone foam system     |
| ΑP      | = Aperture plug         | GS         | = Galvanized steel         |
| MB      | = Muntin bars           | <b>S</b> S | = Stainless steel          |
|         |                         | TPS        | = Tinplate steel           |
| S       | = Soldered              |            |                            |
| W       | = Welded                |            |                            |
| В       | = Brazed                | Thermal    | Break:                     |
| J       | = Joiner                |            |                            |
| L       | = Leg                   | DP         | = Desiccated plastic       |
|         | _                       | PF         | = Plastic foam             |
|         |                         | Р          | = Plastic                  |
| Substra | ate:                    |            |                            |
| U       | = Uncoated              |            |                            |
| U/C     | = Uncoated/Coated       | Vapor Ba   | arrier:                    |
| SF      | = Suspended film        | ·          |                            |
| SCF     | = Suspended coated film | AF         | = Aluminum foil            |
|         | •                       | В          | = Butyl                    |
|         |                         | P          | = Plastic                  |
|         |                         |            |                            |

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.

<sup>\*</sup>UNDER EACH COMPANY'S NAME IS THEIR IGCC PERMANENT LABEL\*

#### "PROTOTYPE IN PROGRESS"

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

#### **MANUFACTURERS**

ACI GLASS PRODUCTS DALLAS, TX SEATTLE, WA ACI GLASS PRODUCTS QUINCY, MI ACORN WINDOW SYSTEMS RICHMOND, VA ALCAN BUILDING PRODUCTS KINSTON, NC ALSIDE WINDOW CO AMERICAN FLAT GLASS DIST HAMILTON, OH AMERICAN FLAT GLASS DIST SCOTIA, NY SALT LAKE CITY, UT CAPITOL GLASS & ALUMINUM CORP MINNEAPOLIS, MN CARDINAL IG BEDFORD, OH EDGE SEAL TECHNOLOGIES INC HGP INDUSTRIES INC TAMPA, FL WARRENTON, MO HGP INDUSTRIES INC SHAWNEE, OK HGP INDUSTRIES INC

ROCK HILL, SC

HGP INDUSTRIES INC

#### "PROTOTYPE IN PROGRESS"

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

#### **MANUFACTURERS**

HGP INDUSTRIES INC HOUSTON, TX

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TEMPGLASS SOUTHERN GRAND PRAIRIE, TX

#### 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 BOARD OF GOVERNORS

#### REPRESENTING PUBLIC INTEREST

W. Lynn Beason
Civil Engineering Department
Texas A & W University
College Station TX 77843-3136
Telephone: 409-845-4469
Fax: 409-845-6554

Arthur W Johnson
Arthur W Johnson & Associates
PO Box 2415
Gaithersburg MD 20879
Telephone: 301-948-6864

Dr. Joseph E. Minor, P.E. Department of Civil Engineering University of Missouri - Rolla Rolla MO 65401-0249 Telephone: 314-341-4461 Fax: 314-341-4729

Elaine S. Rodman
2300 Sample Rd
Allison Park PA 14101-2106
Telephone: 412-931-2300
Fax: 412-625-9009

Donald J. Vild PO Box 7514 Oregon OH 43616 Telephone: 419-693-8929 Fax: 419-693-8702

#### REPRESENTING INDUSTRY

Robert Spindler
Cardinal IG
12301 Whitewater Dr
Winnetonka MN 55343
Telephone: 612-935-1722
Fax: 612-935-5538

James Sorge
Hoffer's Inc
5103 Janice Ave
Schofield WI 54476
Telephone: 715-359-2432
Fax: 715-359-0598

Greg Carney
Interpane Glass Co
520 E Railroad St
Clinton NC 28328
Telephone: 919-592-7101
Fax: 919-592-7266

James Krahn Marvin Windows Hwy 11 W Warroad MN 56763 Telephone: 218-386-1430 Fax: 218-386-2925

Elizabeth Bellaver
Nichols-Homeshield Inc
1771 W Diehl Rd Ste 200
P0 Box 3038
Naperville IL 60566-7038
Telephone: 708-355-5400
Fax: 708-355-5490

#### COMMUNICATIONS

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

IGCC Board of Governors Robert Spindler, President Cardinal IG 12301 Whitewater Dr Minnetonka MN 55343 Telephone: 612-935-1722

Insulating Glass Certification Council
John G. Kent
Administrative Manager
ETL Testing Laboratories Inc
3933 US Route 11
PO Box 2040
Cortland NY 13045-0950
Telephone: 607-753-6711

IGCC Certification Committee James Krahn, Chairman Marvin Windows Highway 11 W Warroad MN 56763 Telephone: 218-386-1430

Insulating Glass Certification Council Cynthia L. Bush Administrative Staff Assistant ETL Testing Laboratories, Inc. 3933 US Route 11 PO Box 2040 Cortland NY 13045-0950 Telephone: 607-753-6711

#### **ROSTER**

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#### IGCC Officers

W. Lynn Beason, Texas A & M Univ. W. Lynn Beason, Texas A & M Univ.

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Elaine S Rodman James Krahn, Marvin Windows Donald J. Vild, Consultant

Robert Spindler, Cardinal IG Elizabeth Bellaver, Nichols

Robert Spindler, President W. Lynn Beason, VP and Treasurer Elizabeth Bellaver, Secretary

#### IGCC CERTIFICATION COMMITTEE

James Krahn, Chairman

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|--|---------------------------------------|---------------------|---------------------------|---------------------|
| Alside Window Co American Flat Glass Distributors Alside Window Co Assurance Glass Co  Assurance Glass Co  B & G Glass & Wirror Co Inc  J E Berkowitz Inc Better Thermo Unit 2 + 2 Captiol Aluminum & Glass Corp Captiol Glass & Aluminum Corp Captiol Glass & Aluminum Corp Cardinal IG Crystal Windows & Doors Inc Curved Glass Distributors Custom Glass Products Inc Cutved Glass Distributors Custom Glass Products Inc Custom Glass Products of Carolina Inc Deluxe Insulated Glass Inc Dykstra Brothers Glass Co Ecker Manufacturing Corp Edge Seal Technologies Inc Floral Glass & Inc Floral Glass & Co Four Seasons Solar Products Corp Galaxy Mrg Co of CNY Inc Glass Distributors of America Inc Glass Co Graham Architectural Products Corp Guardian Fabrication Inc Glass Co Graham Architectural Products Corp Guardian Inds Corp Lewistow Plant Harvey Industries Inc Hord Williams Potent Williams  |                                       |                     |                           |                     |
| Alside Window Co American Flat Glass Distributors Artistic Glass Products Co Assurance Glass Co  |                                       |                     |                           |                     |
| American Flat Glass Distributors Artistic Glass Products Co Assurance Glass Co B & G Glass & Mirror Co Inc J E Berkowitz Inc Better Thermo Unit 2 + 2 Capttol Aluminum & Glass Corp Capitol Glass & Aluminum Corp Cardinal IG Class Glass & Aluminum Corp Cardinal IG Class Glass of Battle Creek Inc Crystal Windows & Doors Inc Curved Glass Products Inc Cystal Windows & Doors Inc Curved Glass Products of Carolina Inc Detuxe Insulated Glass Inc Dykstra Brothers Glass Co Ecker Manufacturing Corp Edge Seal Technologies Inc Floral Glass Inc Floral Glass Mirror Floral Glass Inc Crost Windows & Mirror Floral Glass Inc Crost Windows & Mirror Floral Glass Inc Closs Glass Products of Carolina Inc Glass Glass Oc Four Seasons Solar Products Corp Galaxy Mfg Co of CNY Inc Glass Distributors of America Inc Glass Distributors of America Inc Glass Distributors of America Inc Glass Stems Inc Glass Inc Glass Co Graham Architectural Products Corp Guardian Inds Corp Lewistown Plant Harvey Industries Inc HOF Indust | •                                     |                     |                           |                     |
| Artistic Glass Products Co Assurance Glass Co B & G Glass & Mirror Co Inc J E Berkowitz Inc Better Thermo Unit 2 + 2 Capitol Aluminum & Glass Corp Capitol Glass & Aluminum Corp Cardinal IG Class Glass of Battle Creek Inc Croft Metals Inc Curved Glass Distributors Custom Glass Products of Carolina Inc Custom Glass Products of Carolina Inc Deluxe Insulated Glass Inc Cyksta Brothers Glass Co Ecker Manufacturing Corp Edge Seal Technologies Inc Floral Glass Industries Inc Floral Glass Co Four Seaons Solar Products Corp Galaxy Mfg Co of CNY Inc Glassnom Corp Glass Distributors of America Inc Glass Distributors of America Inc Glass Distributors of America Inc Glass Emp Inc Glass Co Graham Architectural Products Corp Galaxy Mfg Co of CNY Inc Glass Systems Inc Glass Co Graham Architectural Products Corp Guardian Inds Corp Lewistown Plant Harvey Industries Inc HGP I |                                       | J. Richard Orton    |                           |                     |
| B & G Glass & Mirror Co Inc J E Berkowitz Inc Better Thermo Unit 2 + 2 Better Thermo Unit 2 + 2 Capitol Aluminum & Glass Corp Capitol Glass & Aluminum Corp Cardinal IG Class Glass of Battle Creek Inc Croft Wetals Inc Croft Wetals Inc Croft Wetals Inc Crystal Windows & Doors Inc Curved Glass Distributors Custom Glass Products of Carolina Inc DeLuxe Insulated Glass Inc Dykstra Brothers Glass Co Ecker Manufacturing Corp Edge Seal Technologies Inc Floral Glass & Mirror Floral Glass & Mirror Floral Glass Industries Inc Floral Glass Industries Inc Glassont Corp Galaxy Mfg Co of CMY Inc Glassont Corp Glass Distributors of America Inc Glass Systems Inc Glass Systems Inc Glass Systems Inc Glass Systems Inc Glass Grand America Inc Glass Systems Inc Glass Co Granam Architectural Products Corp Guardian Inds Corp Lewistown Plant Harvey Industries Inc HOF Industries Inc |                                       | or krongra or con   |                           |                     |
| J E Berkowitz Inc  |                                       | Walt Myers          | Cheri Kellman             |                     |
| Better Thermo Unit 2 + 2 Capitol Aluminum & Glass Corp Capitol Glass & Aluminum Corp Capitol Glass & Aluminum Corp Cardinal IG Cardinal IG Class Glass of Battle Creek Inc Croft Wetals Inc Crystal Windows & Doors Inc Curyed Glass Distributors Custom Glass Products Inc Custom Glass Products Inc Custom Glass Products of Carolina Inc Dykstra Brothers Glass Co Ecker Manufacturing Corp Edge Seal Technologies Inc Floral Glass Industries Inc Floral Glass Mirror Flower City Glass Co Four Seasons Solar Products Corp Galaxy Mfg Co of CNY Inc Glass Systems Inc Glass Co Graham Architectural Products Corp Guardian Inds Corp Lewistown Plant Harvey Industries Inc HOF Industries Inc HORD Indus |                                       |                     |                           |                     |
| Capitol Aluminum & Glass Corp Capitol Glass & Aluminum Corp Cardinal IG Cardinal IG Cardinal IG Class Glass of Battle Creek Inc Crystal Windows & Doors Inc Curved Glass Distributors Custom Glass Products Inc Custom Glass Products of Carolina Inc Eluxe Insulated Glass Inc Douglas J Smith Dykstra Brothers Glass Co Ecker Manufacturing Corp Edge Seal Technologies Inc Floral Glass Industries Inc Floral Glass Oo Four Seasons Solar Products Corp Galaxy Mfg Co of CNY Inc Glass Distributors of America Inc Glass Systems Inc Glass Graham Architectural Products Corp Guardian Fabrication Inc Guardian Fabrication Inc Guardian Inds Corp Lewistown Plant Harvey Industries Inc HOf Midustries Inc HOf Midustries Inc HOf Midustries Inc HOf Industries Inc Hof Industries Inc Hof Industries Inc Hof Industries Inc Hof Midustries Inc Hord Millwork Co Insulpane of Connecticut Inc  Doug Brown II Robert G. Spindler Robert G. Sp |                                       | Alfred Chapire      | Pobost Wightman           |                     |
| Capitol Glass & Aluminum Corp Cardinal IG Cardinal IG Cardinal IG Class Glass of Battle Creek Inc Croft Metals Inc Crystal Windows & Doors Inc Curved Glass Distributors Custom Glass Products Inc Custom Glass Products Inc Custom Glass Products Inc Custom Glass Products of Carolina Inc Douglas J Smith D |                                       | Allied Shapiro      | Robert Wightman           |                     |
| Class Glass of Battle Creek Inc Croft Metals Inc Crystal Windows & Doors Inc Curved Glass Distributors Custom Glass Products Inc Custom Glass Products of Carolina Inc DeLuxe Insulated Glass Inc Dykstra Brothers Glass Co Ecker Manufacturing Corp Edge Seal Technologies Inc Floral Glass & Mirror Floral Glass & Mirror Flower City Glass Co Four Seasons Solar Products Corp Galaxy Mfg Co of CNY Inc Glass Distributors of America Inc Glass Distributors of America Inc Glass Systems Inc Glass Co Graham Architectural Products Corp Guardian Fabrication Inc Guardian Inds Corp Lewistown Plant Harvey Industries Inc HOF Connecticut Inc  Insulpane of Connecticut Inc   |                                       | Doug Brown II       | Dennis Mills              | Brad Hansen         |
| Crystal Windows & Doors Inc Curved Glass Distributors Custom Glass Products Inc Custom Glass Products of Carolina Inc Custom Glass Products of Carolina Inc Deluxe Insulated Glass Inc Dykstra Brothers Glass Co Ecker Manufacturing Corp Edge Seal Technologies Inc Floral Glass & Mirror Floral Glass & Mirror Floral Glass & Mirror Flower City Glass Co Four Seasons Solar Products Corp Galaxy Mfg Co of CNY Inc Glass and Corp Glass Distributors of America Inc Glass Systems Inc Glass Systems Inc Glass Systems Inc Glass Systems Inc Glass Co Graham Architectural Products Corp Guardian Inds Corp Lewistown Plant Harvey Industries Inc Hoffer's Inc Hoffer's Inc Hoffer's Inc Hoffer's Inc Hoffer's Inc Hoffer Millwork Co Insulating Glass of Georgia Inc Insulpane of Connecticut Inc   |                                       | Robert G. Spindler  | Roger D. O'Shaughnessy    | James Larsen        |
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| Curved Glass Distributors Custom Glass Products Inc Custom Glass Products of Carolina Inc Custom Glass Products of Carolina Inc Deluxe Insulated Glass Inc Dykstra Brothers Glass Co Ecker Manufacturing Corp Edge Seal Technologies Inc Floral Glass Industries Inc Floral Glass Mirror Flower City Glass Co Grassons Solar Products Corp Galaxy Mfg Co of CNY Inc Glass Distributors of America Inc Glass Systems Inc Glass Systems Inc Glass Systems Inc Gland Architectural Products Corp Guardian Fabrication Inc Guardian Inds Corp Lewistown Plant Harvey Industries Inc Hoffer's Inc HOffer's Inc HOffer's Inc Hoffer's Inc Hoffer Sinc Hoffer |                                       |                     |                           |                     |
| Custom Glass Products of Carolina Inc DeLuxe Insulated Glass Inc Dykstra Brothers Glass Co Ecker Manufacturing Corp Edge Seal Technologies Inc Floral Glass Industries Inc Floral Glass & Mirror Flower City Glass Co Four Seasons Solar Products Corp Galaxy Mfg Co of CNY Inc Glass Distributors of America Inc Glass Distributors of America Inc Glass Distributors of America Inc Glasstemp Inc Glenny Glass Co Graham Architectural Products Corp Guardian Fabrication Inc Guardian Inds Corp Lewistown Plant Harvey Industries Inc Hoffer's Inc Hoffer's Inc Hurd Millwork Co Insulating Glass of Georgia Inc Insulpane of Connecticut Inc   |                                       |                     |                           |                     |
| Deluxe Insulated Glass Inc Dykstra Brothers Glass Co Ecker Manufacturing Corp Edge Seal Technologies Inc Floral Glass Industries Inc Floral Glass & Mirror Floral Glass & Mirror Flower City Glass Co Four Seasons Solar Products Corp Galaxy Mfg Co of CNY Inc Glasmont Corp Glass Distributors of America Inc Glass Systems Inc Glass Systems Inc Glass Systems Inc Glass Co Graham Architectural Products Corp Guardian Inds Corp Lewistown Plant Harvey Industries Inc Hoffer's Inc HOffer's Inc HOffer's Inc Hoffer's Inc Hoffer Industries Inc Hurd Millwork Co Insulpane of Connecticut Inc  Douglas J Smith James Sorge Kevin Schulz  Kevin Schulz  Jim Sutterfield Kevin Schulz  Jim Barreira Jim Barreira Jim Barreira Jim Barreira Kevin Schulz  Ken Lancaster Keylon Schulz  Ken Lancaster  Kevin Schulz  Ken Lancaster  Robert Williams  Peter Nygaard  Joseph M. Scalzo  | Custom Glass Products Inc             |                     | Eric Reeder               | Joseph Oboikovitz   |
| Dykstra Brothers Glass Co Ecker Manufacturing Corp Edge Seal Technologies Inc Floral Glass Industries Inc Floral Glass & Mirror Flower City Glass Co Four Seasons Solar Products Corp Galaxy Mfg Co of CNY Inc Glasmont Corp Glass Distributors of America Inc Glass Systems Inc Glass Systems Inc Glass Systems Inc Glass Co Graham Architectural Products Corp Guardian Fabrication Inc Guardian Fabrication Inc Guardian Inds Corp Lewistown Plant Harvey Industries Inc Hoffer's Inc Hoffer's Inc Hurd Millwork Co Insulating Glass of Georgia Inc Insulpane of Connecticut Inc  | Custom Glass Products of Carolina Inc |                     |                           |                     |
| Ecker Manufacturing Corp Edge Seal Technologies Inc Michael McHugh Mike Bayer Susan Orr Floral Glass Industries Inc Floral Glass & Mirror Flower City Glass Co Four Seasons Solar Products Corp Galaxy Mfg Co of CNY Inc Glasmont Corp James Sorge Kevin Schulz Jim Sutterfield Glass Distributors of America Inc Glass Systems Inc Glass Systems Inc Glass Systems Inc Glass Systems Inc Glass Co Graham Architectural Products Corp Guardian Fabrication Inc Guardian Inds Corp Lewistown Plant Harvey Industries Inc Hoffer's Inc Hoffer's Inc Hoffer's Inc Hoffer's Inc Hoffer's Inc Glass Sorge Hop Industries Inc Hurd Millwork Co Insulpane of Connecticut Inc  |                                       | 2                   |                           |                     |
| Edge Seal Technologies Inc Floral Glass Industries Inc Floral Glass & Mirror Flower City Glass Co Four Seasons Solar Products Corp Galaxy Mfg Co of CNY Inc Glasmont Corp Glass Distributors of America Inc Glass Systems Inc Glass Systems Inc Glass Systems Inc Glass Systems Inc Glass Co Graham Architectural Products Corp Guardian Fabrication Inc Guardian Inds Corp Lewistown Plant Harvey Industries Inc Hoffer's Inc Hoffer's Inc Hoffer's Inc Hoffer's Inc Hoffer Industries Inc Hurd Millwork Co Insulpane of Connecticut Inc  Insulpane of Connecticut Inc  |                                       | James Sorge         | Kevin Schulz              | Lon Stetler         |
| Floral Glass Industries Inc Floral Glass & Mirror Flower City Glass Co Four Seasons Solar Products Corp Galaxy Mfg Co of CNY Inc Glasmont Corp Glass Distributors of America Inc Glass Systems Inc Glass Systems Inc Glass Systems Inc Glass Systems Inc Glasstemp Inc Glenny Glass Co Graham Architectural Products Corp Guardian Fabrication Inc Guardian Inds Corp Lewistown Plant Harvey Industries Inc Hoffer's Inc Hoffer Milliams Peter Nygaard Joseph M. Scalzo Insulpane of Connecticut Inc   |                                       | Michael McHugh      | Mike Baver                | Susan Orr           |
| Flower City Glass Co Four Seasons Solar Products Corp Galaxy Mfg Co of CNY Inc Glasmont Corp Glass Distributors of America Inc Glass Systems Inc Glass Systems Inc Glass Co Graham Architectural Products Corp Guardian Fabrication Inc Guardian Inds Corp Lewistown Plant Harvey Industries Inc Hoffer's Inc Hoffer's Inc Hoffer's Inc Hoffer Industries Inc Hoffer Sorge Industries Inc Hoffer Sorge Insulating Glass of Georgia Inc Insulpane of Connecticut Inc  |                                       | 5                   |                           |                     |
| Four Seasons Solar Products Corp Galaxy Mfg Co of CNY Inc Glasmont Corp Glasmont Corp Glass Distributors of America Inc Glass Distributors of America Inc Glass Systems Inc Glass Systems Inc Glasstemp Inc Glenny Glass Co Graham Architectural Products Corp Guardian Fabrication Inc Guardian Inds Corp Lewistown Plant Harvey Industries Inc Hoffer's Inc Hoffer's Inc Hoffer's Inc Hoffer Industries Inc Hoffer Michael Kelliher Home Sorge Hobert Williams Peter Nygaard Insulating Glass of Georgia Inc Joseph M. Scalzo Insulpane of Connecticut Inc   |                                       |                     |                           |                     |
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| Glass Distributors of America Inc Glass Systems Inc Glass Systems Inc Glenny Glass Co Graham Architectural Products Corp Guardian Fabrication Inc Guardian Inds Corp Lewistown Plant Harvey Industries Inc Hoffer's Inc Hoffer's Inc HGP Industries Inc Hurd Millwork Co Insulating Glass of Georgia Inc Insulpane of Connecticut Inc  James Sorge Kevin Schulz Jim Barreira Kevin Schulz Ken Lancaster Kevin Schulz Ken Lancaster James Sorge Kevin Schulz Jim Barreira James Sorge Kevin Schulz Jim Barreira James Sorge Kevin Schulz Ken Lancaster Sopert Williams Peter Nygaard Joseph M. Scalzo   | Galaxy Mfg Co of CNY Inc              |                     |                           |                     |
| Glass Distributors of America Inc Glass Systems Inc Glenny Glass Co Graham Architectural Products Corp Guardian Fabrication Inc Guardian Inds Corp Lewistown Plant Harvey Industries Inc Hoffer's Inc Hoffer's Inc Hoffer's Inc Hoffer Industries Inc Hoffer Robert Williams Hurd Millwork Co Insulating Glass of Georgia Inc Insulpane of Connecticut Inc   |                                       | James Sorge         | Kevin Schulz              | Jim Sutterfield     |
| Glasstemp Inc Glenny Glass Co Graham Architectural Products Corp Guardian Fabrication Inc Guardian Inds Corp Lewistown Plant Harvey Industries Inc Hoffer's Inc HGP Industries Inc Hurd Millwork Co Insulating Glass of Georgia Inc Insulpane of Connecticut Inc  Georges A. Thiret George |                                       | 2                   |                           |                     |
| Glenny Glass Co Graham Architectural Products Corp Guardian Fabrication Inc Guardian Inds Corp Lewistown Plant Harvey Industries Inc Hoffer's Inc Hoffer's Inc HGP Industries Inc Hurd Millwork Co Insulating Glass of Georgia Inc Insulpane of Connecticut Inc  Georges A. Thiret Jim Barreira James Sorge Kevin Schulz Ken Lancaster Hoffer Nygaard Joseph M. Scalzo Insulpane of Connecticut Inc  |                                       |                     |                           |                     |
| Graham Architectural Products Corp Guardian Fabrication Inc Guardian Inds Corp Lewistown Plant Harvey Industries Inc Hoffer's Inc HGP Industries Inc Hurd Millwork Co Insulating Glass of Georgia Inc Insulpane of Connecticut Inc  Georges A. Thiret Guardian Fabrication Inc   | •                                     |                     |                           |                     |
| Guardian Fabrication Inc Guardian Inds Corp Lewistown Plant Harvey Industries Inc Hoffer's Inc HGP Industries Inc Hurd Millwork Co Insulating Glass of Georgia Inc Insulpane of Connecticut Inc  |                                       | Georges A. Thiret   |                           |                     |
| Harvey Industries Inc Michael Kelliher Jim Barreira Hoffer's Inc James Sorge Kevin Schulz Ken Lancaster HGP Industries Inc Robert Williams Hurd Millwork Co Peter Nygaard Insulating Glass of Georgia Inc Joseph M. Scalzo Insulpane of Connecticut Inc  | Guardian Fabrication Inc              | door goo At Thin or |                           |                     |
| Hoffer's Inc James Sorge Kevin Schulz Ken Lancaster HGP Industries Inc Robert Williams Hurd Millwork Co Peter Nygaard Insulating Glass of Georgia Inc Joseph M. Scalzo Insulpane of Connecticut Inc  |                                       | John Jablonski      |                           |                     |
| HGP Industries Inc Robert Williams Hurd Millwork Co Peter Nygaard Insulating Glass of Georgia Inc Joseph M. Scalzo Insulpane of Connecticut Inc  |                                       |                     |                           |                     |
| Hurd Millwork Co Peter Nygaard Insulating Glass of Georgia Inc Joseph M. Scalzo Insulpane of Connecticut Inc   |                                       |                     | Kevin Schulz              | Ken Lancaster       |
| Insulating Glass of Georgia Inc Joseph M. Scalzo Insulpane of Connecticut Inc  |                                       |                     |                           |                     |
| Insulpane of Connecticut Inc   | Insulating Glass of Georgia Inc       |                     |                           |                     |
| Interpane Glass Co C. Greg Carney Tom W. Radloff   |                                       | ·                   |                           |                     |
|  | Interpane Glass Co                    | C. Greg Carney      | Tom W. Radloff            |                     |

Jersey Tempered Glass Inc K C Co Inc Kuhl Glass Corp Labglas Inc Laminated Glass Corp

LBL Inc

Marvin Windows MGL Glass Div/Milco

Mid-American Glass

Nashville Tempered Glass Corp Norco Windows Inc

Northern Bldg Products Inc Northwest Glass Inc

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Patio Enclosures Inc Penn Pane Insulating Inc Perilstein Distributing Corp

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S N E Enterprises Inc

Solar Seal Co

Superseal Mfg Inc

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Tempglass Inc

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Thermolite Inc Thermoseal Glass Corp

Thompson IG Corp

TRACO (Three Rivers Aluminum Co)

Vega Glass Center of Virginia Inc

Viracon Inc

Weatherproof Inc

Weather Shield Mfg Inc

Western Glass/ General Glass Corp

Winchester Industries

Darrell Aldrich

Mike Lerner

James Krahn

Douglas Steinbring

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Jeff Nowell

James Levingston

John E. Colapietro

Henry Heiss

Bob Boger

Stanley Wolk Andy Soule

Frederic P. Shaw, Jr.

William Coddington

John E. Colapietro

Robert P. Randall

Lyle Krohnberg

Lvn Hartl

Peter Fillmore

Dan Wacek

Rick Voelker Steve Wright

Randy Runge

Robert Ripper

#### Members by virture of being a governor

Supplier Texas A & M Univ. University of Missouri - Rolla Public Interest

Elizabeth Bellaver W. Lynn Beason Joseph E. Minor Arthur W. Johnson Elaine S. Rodman Donald J. Vild

Legal Counsel:

Leland J. Badger Howe & Hutton Ltd 1899 L St N W Ste 500 Washington DC 20036 Telephone: 202-466-7252 Fax: 202-872-0896

Administrative Manager:

John G. Kent

Administrative Staff:

Cynthia L. Bush

#### PARTICIPANTS (SUPPLIERS)

Allmetal Inc 636 Thomas Dr Bensenville IL 60106 Dennis J. Raske Jeff Andreasen

Alumet Mfg Inc 3803 136th St Marysville WA 98271 Larry Peterson

Bostik Construction Products Boston St Middleton MA 01949 Rich Owens

Elf Atochem North Americas Inc 2000 Market St Philadelphia PA 19103-3222 Robert W. Soffel

Courtaulds Aerospace PO Box 1800 5430 San Fernando Rd Glendale CA 91209 Rich A. Giangiordano

Dow Corning Corporation Midland MI 48686-0994 Mark Maxwell Steve Block

H B Fuller Company 1200 Wolters Blvd Vandnais Heights MN 55110 Paul Meyer

General Electric Silicone Products Division 260 Hudson River Rd Waterford NY 12188 Paul Brahler

W R Grace and Company PO Box 2117 Baltimore MD 21203 George Alsfeld

Helvetion International 175 Spartangreen Blvd Duncan SC 29334-9424 Gary Johnson Hygrade Metal Moulding Mfg Corp 540 Smith St Farmingdale NY 11735 Richard Cole Kevin O'Connell

Morton International Inc 100 N Riverside Plaza Chicago IL 60606-1598 J. R. Marty North

Morton International Inc Woodstock Research Center 1275 Lake Ave Woodstock IL 60098-7499 Bruce Streeter

Nichols-Homeshield Inc 1771 W Diehl Rd Ste 200 PO Box 3038 Naperville IL 60566-7038 Elizabeth C. Bellaver

Rhone Poulenc Inc LSP Div - Silicones Group CN7500 Bldg A Cranbury NJ 08512-7500 Donald L. Swanson

Tremco Inc 3735 Green Rd Beachwood OH 44122 Lori Postak William J. Golla

UOP Molecular Sieve Dept 12399 Lewis St Ste 201 Garden Grove CA 92640 George H Rand Jr

Jim Walter Window Components 1500 N Dale Marby Tampa FL 33607 David C. Engbretson

Zeochem PO Box 35940 Louisville KY 40232 Thomas Shanley Kenneth Gustafson

#### PARTICIPANTS (NON SUPPLIERS)

Richard C. Elstner Elstner Pacific Ltd 224 Kulamanu Pl Honolulu HI 96816

Ronald D. Lowden, Jr. 314 Chestnut Ave Narberth PA 19072

Dr. Joseph E. Winor, P.E.
Department of Civil Engineering
University of Missouri - Rolla
Rolla MO 65401-0249

Richard E. Wright Richard E. Wright Associates 151 Fenwick Court Delran NJ 08075

Claude F. Robb Claude Robb & Associates 378 Cos Cob Dr Absecon NJ 08201 Robert A. Nance 700 Locust Ave Boulder CO 80304-0528

Robert Schwartz Skidmore Owings & Merrill 103 Hooverton Pl East Windsor NJ 08520

James L. Spetz Jim Spetz Testing Laboratory 29308 Armadale Ave Wickliffe OH 44092

Donald J. Vild PO Box 7514 Oregon OH 43616

Scott A. Warner Architectural Testing Inc 130 Derry Ct York PA 17402-9405

Jerry Wulf Andersen Corporation Bayport MN 55003

#### 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.  $IGCC^{\Theta}$ .

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 the ending of each period). Outdated spacers may be hand stamped to bring the label up to date. 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 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 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:

| Company Identification   | <u>Plant Code</u> | IGCC® | Rating Level | Year Code |
|--------------------------|-------------------|-------|--------------|-----------|
| AMERICAN GLAZING COMPANY | •                 | IGCC® | CBA          | '94       |

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AMERIPANE

or

AGC

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All 3 if desired but must be listed

Under each company's name is their IGCC permanent label.

#### 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 E. Minor    | University of Missouri | 1985 - 1989 |
| Mitchell D. Edwards    | SPI Glass Corp         | 1989 - 1992 |
| John Colapietro        | Tempglass Inc          | 1992 - 1993 |

#### MEETINGS OF THE

#### CERTIFICATION COMMITTEE

The Certification Committee of the Insulating Glass Certification Council met on September 28 and 29, 1993.

Interested persons may obtain minutes of these 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 February 1, 1994; 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 Administrative Manager 3933 US Route 11 PO Box 2040 Cortland NY 13045-0950

Telephone: 607-753-6711 Fax: 607-756-9891

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3933 US Route 11 Cortland NY 13045-0950 607-753-6711

## 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 or Licensee in the IGCC Certification Program, or 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.
- 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 virture of executing a License Agreement with IGCC. Any manufacturer of insulating glass may voluntarily enter into a license agreement with IGCC, provided it intends 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 E774-88 containing 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 Administrative Manager 3933 US Rt 11 PO Box 2040 Cortland NY 13045-0950

Telephone: 607-753-6711 Fax: 607-756-9891

CREDIBILITY IN INDUSTRY CERTIFICATION THROUGH ACTIVE PUBLIC PARTICIPATION.

#### 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 E774-88 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 visits 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 <u>license agreement</u> 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 <u>continuous adherence of the licensees</u> to that standard.

To buyers, specifiers, code officials and users, the IGCC certification label offers the manufacturer's assurance that his sealed insulating glass units  $\underline{\text{have been produced}}$  in conformance to the ASTM specification E774-88.

#### Who Can Participate?

Every manufacturer of sealed insulating glass is eligible, on a <u>voluntary basis</u>, 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.

#### <u>Administration</u>

ETL Testing Laboratories, Inc. (ETL) is the independent <u>administrator</u> of the certification program. ETL 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  $\mbox{ must}$  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 Licensee Agreement, contains a description of the model (prototype report attached) that will be authorized to use the IGCC permanent label.
- d) The licensee sends to IGCC the necessary certification fee.
- e) After receipt by IGCC of the above, the administrator validates 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 class 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 <u>must meet or exceed</u> the applicable specification before it can be certified.

<u>IGCC recognized independent testing laboratories</u> conduct all tests. All laboratories, whose test reports are utilized by this certification program, shall be approved by the IGCC certification committee.

#### Administrator Authorizes Certification

As a sole judge of compliance with the applicable specification, the administrator authorizes a product which has been approved to be listed in the certified products directory.

 $\underline{\text{Licensees label sealed insulating glass units}} \quad \text{in accordance with the labeling requirements established by the IGCC certification committee}.$ 

Approved products are listed in the certified products directory, which is published at least 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, results are mailed promptly to the licensee by the administrator.

#### 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, stating a retest fabrication is requested by paying all administrative and test fees. If there is no response within the 15 days, authorization to use the IGCC permanent label is <u>automatically terminated</u>. 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. All costs involved will be paid from the complaint's surety deposit, unless the investigation proves 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 compliant; responding to the consumer with a certified products directory and instructions on how to locate the IGCC label.

It will be the <u>consumer's responsibility</u> to identify the label, number, class and date code which appear on the spacer or 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 <u>no further responsibilities or options</u>.

Once the consumer has identified the label, number, 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 or 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 <u>compliance</u> 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 participation will be one-half the total yearly fee and will include one inspection prior to the February 1 date. If the authorization date is on or before July 31, the total 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.

#### CERTIFICATION PROGRAM DOCUMENTS AND AGREEMENTS

#### License Agreement

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

<u>Future amendments or revisions</u> 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 Feburary 1 to January 31 basis), and is automatically renewed for successive, additional periods of twelve months, 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 ETL Testing Laboratories, Inc., governs the relationship between IGCC and ETL, 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
- 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
- f) handles all routine clerical duties of IGCC with respect to certification matters
- g) acts as IGCC treasurer, invoicing licensees, maintaining a bank account and dispersing funds (fiscal reports are made to the IGCC 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.

#### <u>Certified Products Directory</u>

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

#### <u>Certification Label</u>

This certification mark is permanently affixed to each unit of certified sealed insulating glass by the licensee. It 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 "quidelines"
- 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 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.

#### **SPACER**

A.SP.1

Any change in air space dimension from that tested (one-quarter inch air space is required in test specimens).

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.

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 spaces 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% by weight. (Adopted 8/29/84)

#### 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 ending 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 different IGCC number.

N.SP.2

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

N.SP.

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.

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**

<u>Breather Tube</u> - Tube inserted into the I.G. spacer and intended to be sealed prior to  ${f glazing}$  of the unit.

 ${\color{red} \underline{\textbf{Capillary Tube}}}$  - Tube inserted into the I.G. spacer and intended to be left permanently open.

<u>Capillary Tube and How It Related to Membrane</u> - 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 <u>must</u> 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.4 - Coated Glass

Inorganically coated glass (i.e. pyrolytic-coated low E) may be used provided that the sealant or sealants contact the original glass substrate or contact silica or a glass-like material. (Modified 4/16/91)

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 - Coated Glass (Coated to Edge)

A coated insulating glass unit shall be considered equivalent to certified insulating glass units made with uncoated glass, providing the test level is the same for both sets of I.G. units. Tests shall be by IGCC approved laboratories. Only the lowest light transmission product for which equivalency is desired need be tested, provided the outermost metallic layer contacting the sealant is the same composition for all visible light transmission. 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 generic type (i.e. metal or metal compounds that can be glazed monolithically), regardless of the source of manufacture or whether or not the application is by a vacuum deposition or sputtering process. The coated glass pane of such units may be 1/4-inch (6 mm) thickness. Preparation of test specimens need <u>not</u> be witnessed. However, the test result must be reviewed and approved by the Administrator. (Adopted 8/14/85)

#### G.25 - 1/2-inch Air-Space Testing

The testing of 1/2-inch  $\pm$  1/16-inch air-space units will be allowed under conditions where a physical barrier to the production of 1/4-inch air-space test units exists and only with the approval of the Administrator. (This Guideline shall remain in effect until the ASTM EO6 committee entertains, or rejects, the concept of testing units with air spaces greater than 1/4-inch). (Adopted 8/28/86). (Modified 3/29/89).

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" 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 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 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 may be tested under this guideline. (Modified 3/29/89)

#### CLASS II - SPECIMEN

G.6 - Specimens - Quantity

A minimum of 12 specimens, up to a maximum of 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 unannounced inspection will be a check, to some degree, to determine whether a licensee is using an 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 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:

- 1) immediately notify the administrator with all details of the change and -
- 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 or
   demonstrate the equivalency of the change to the satisfaction of the certification committee or a subcommittee. (Specimens not required.)

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.

Testing done in house by a licensee must be done under the surveillance of the administrator.

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 within sixty days a test be initiated. The model must pass the same level of test as the original model and shall be treated as a routine retest except appeals, reviews and reconsiderations will not be available.

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

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, REVIEWS 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:

- Request for retest option is granted by IGCC only by receipt in full of any administrative and retest fees within 15 days of date of mailing of the notification of failure.
   IGCC will perform an inspection and witness fabrication of retest specimens within 45 days of payment of fees in 1) above.
   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.
- ${\tt G.22}$  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 Quick 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 Quick Action Subcommittee favorable to the Licensee shall be a final decision. A decision by the Quick 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 Quick 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.

# IGCC® APPROVED LABORATORIES PRESENTLY CONDUCTING TESTS IN ACCORDANCE WITH ASTM E773-88 & E774-88

#### LABORATORIES

Architectural Testing Inc 130 Derry Ct York PA 17402-9405 Attention: Scott A. Warner

Telephone 717-764-7700 Fax 717-764-4129

Architectural Testing Inc 587 First St S W New Brighton WN 55112 Attention: Daniel P. Braun

Telephone 612-636-3835 Fax 612-636-3843

SHIP TO: Jim Spetz Testing Laboratory

29633 Lakeland Blvd

Wickliffe OH 44092 Attention: James L. Spetz, P. E.

MAIL TO: Jim Spetz Testing Laboratory

29308 Armadale Ave

Wickliffe OH 44092 Attention: James L. Spetz, P. E.

Telephone 216-944-3665 Fax 216-944-3671

Inchcape Testing Services/ Warnock Hersey

8431 Murphy Dr Middleton WI 53562 Attention: Rick Curkeet

Telephone 608-836-4400 Fax 608-831-9279

Inchcape Testing Services/ Warnock Hersey International Inc 530 Garcia Ave

Pittsburg CA 94565 Attention: Vijay Ruikar, P. E.

> Telephone 510-432-7344 Fax 510-432-3576

#### FEBRUARY 1, 1994



3933 US ROUTE 11 P.O. BOX 2040 CORTLAND, N.Y. 13045-0950 PHONE 607-753-6711 FAX 607-756-9891

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

3933 U.S. Rt. 11 Cortland, NY 13045-0950 607-753-6711

#### 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 as 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:

- 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 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.

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3933 US ROUTE 11 P.O. BOX 2040 CORTLAND, N.Y. 13045-0950 PHONE 607-753-6711 FAX 607-756-9891

# IGCC DIRECTORY ORDER FORM

| PLEASE S | END       |           | copies | of   | IGCC® | Certi | fied |
|----------|-----------|-----------|--------|------|-------|-------|------|
| Products | Directory | at \$2.00 | 0/сору | = \$ |       |       | to:  |
|          |           |           |        |      |       |       |      |
|          |           | Name      | 9      |      |       |       |      |
|          |           |           |        |      |       |       |      |
|          |           | Compa     | any    |      |       |       |      |
|          |           |           |        |      |       |       |      |
|          |           | Addre     | ess    |      |       |       |      |
|          |           |           |        |      |       |       |      |
| City     |           | Stat      | te     |      | Zi    | p Cod | е    |

CHECK MUST ACCOMPANY ORDER AND BE MADE PAYABLE TO IGCC.

8/89 IGCC

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# SPECIFICATION USED FOR SEALED INSULATING GLASS

ASTM E774-88

Specification may be obtained by writing to . . .

ASTM
1916 Race St
Philadelphia PA 19103

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.



ADDRESS CORRECTION REQUESTED

IF NOT MAILED IN BINGHAMTON, NEW YORK U. S. POSTAGE
PAID
BULK BATE
PERMIT NO. 588
BINGHAMTON, N.Y.

POSTAGE MUST BE AFFIXED HERE