



**safety glazing certification council**

**JANUARY 1, 1986**

**certified products directory**  
**safety glazing material used in buildings**



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**MEETINGS OF THE CERTIFICATION COMMITTEE**

The Certification Committee of the Safety Glazing Certification Council met on April 17 and 18, 1985 and October 24 and 25, 1985. Interested persons may obtain minutes of these meetings by writing to the Safety Glazing Certification Council.

\* \* \* \* \*

Certification in this directory is up-to-date as of January 1, 1986; however, products may be certified or certification removed from time to time. Please contact the SGCC office for the latest up-to-date information.

Requests for future copies of this directory, or any questions or comments should be directed to:

\* \* \* \* \*

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Administrative Manager  
Safety Glazing Certification Council  
C/O ETL Testing Laboratories, Inc.  
Industrial Park - Route 11  
Cortland, NY 13045

Telephone 607-753-6711

**ROSTER****SGCC BOARD OF DIRECTORS****Representing Public Interest**

Mario Cellarosi, NBS  
Mrs. Jean Cornwell, Consumer  
Phil Dykstra, Consumer  
George L. Graf, Jr., Consumer  
Mrs. Sylvia Lav, Consumer  
Joseph E. Minor,  
Texas Tech University

**Representing Industry**

Robert L. Brown, Virginia Glass Products Corp.  
William C. Cooke, AFG Industries, Inc.  
Hugh France, Texas Tempered Glass Company  
Henry Gorry, Guardian Industries Corp.  
Robert P. Randall, TRACO  
Paul S. Toltz, General Glass Corp.  
**Honorary Non-voting Member:**  
Norman Nitschke, Glasstech, Inc.

**SGCC Officers**

Richard L. Morrison, President  
Robert L. Brown, First Vice President  
George L. Graf, Jr., Second Vice President  
Joseph E. Minor, Secretary  
William C. Cooke, Treasurer

**NOTE:** Effective January 1, 1986 the operation of the SGCC program was transferred to ETL Testing Laboratories, Inc., P.O. Box 2040, Cortland, NY 13045. Telephone: 607-753-6711. All inquiries related to the program should now be directed to ETL.

**SGCC CERTIFICATION COMMITTEE**

Robert A. Moss, Chairman

Henry A. Gorry, Vice-Chairman

Licensee	Primary Member	First Alternate	Second Alternate
AFG Industries, Inc.	William C. Cooke	Billie G. Nichols	Thomas C. Carson
Advanced Coating Technology, Inc.	Paul Gripshover	James W. Seeser	William Watson
Ardco, Inc.	Andrew G. Menke		
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Downey Glass Company, Inc.	Jim Pinsky	Bernard Puttler	Joseph D. Pinsky
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Elgin Precision Glass Company, Inc.	Dan Cukierski	Rob Jaynes	
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Ford Motor Company	Richard L. Morrison	C. D. Goodman	
Fulton Glass Industries, Inc.	Paul F. Tumey	David Farley	Howard Bienenfeld
Gateway Industries	D. Mann	D. Pruitt	Henry A. Gorry
General Glass Corporation	Paul Toltz	Randy Toltz	
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Glasstemp, Inc.	Steve Lacey	Jim Johnson	Lannie Cunningham
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Hamilton Glass Products, Inc.	Robert A. Moss	Gary L. Tate	Ronald Purdue
Lear Siegler, Inc.	Garry Harris	Robert Avers	
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PPG Industries, Inc.	Richard T. McGuire	Charles R. Sutermeister	John M. Schlueter
PPG Industries Canada, Ltd.	D. A. Clarke	W. C. Clanahan	Richard T. McGuire
Rotuba Extruders, Inc.	Albert M. Bell	Eugene E. Drood	
Sheffield Plastics, Inc.	Thomas Kradel	Bernard W. Brooks	
Southern Wholesale Glass, Inc.		Douglas A. Long	Freddie Michael
Sunglas Products, Inc.	Richard L. Morrison	Bart Jones	
Tempered Glass Corporation	Paul F. Tumey		Howard Bienenfeld
Tempered Glass, Inc.	D. A. Sampsel	D. P. Singleton	W. A. Stone
Tempglass, Inc.	Irvin D. Fintel		
Tempglass Eastern, Inc.	John C. Mulvanerty		
Temp-Tech Industries, Inc.	Bart Semeraro		
Texas Tempered Glass Company	Hugh France	Robert D. Lauter	
TRACO	Robert P. Randall	John Kalakos	
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Virginia Mirror Company, Inc.	W. C. Beeler, Jr.	Robert L. Brown	

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 Consumer  
 Consumer  
 Consumer  
 Texas Tech University  
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Ernst &amp; Whinney

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### PROGRAM CONCEPT

The safety of the public is paramount. Manufacturers of safety glazing products, building code administrators and others responsible for the safety of the public, recognizing the need for a common standard for safety glazing materials, jointly established the Safety Glazing Certification Council (SGCC) in 1971.

The Safety Glazing Certification Council is a non-profit organization which has established and maintains a program to administer periodic testing as outlined in American National Standard Z97.1-1984, an internationally recognized standard for safety glazing in buildings. This standard subjects glazing materials to a practical test to determine that if they are broken by human contact, they break in a manner that would minimize the likelihood of cutting or piercing injury. SGCC's responsibilities are threefold: to assure a periodic testing program is maintained; to approve and register the form of the manufacturer's label; and to withdraw the manufacturer's authority to use that label if its products do not meet ANSI Z97.1-1984 standards.

Management and control of the program is vested in a board of directors, half representing industry and half representing public interest. The public interest representatives are empowered to veto any action regardless of the number present at a meeting. This insures against industry dominance of SGCC actions. The organization operates an independent third party certification and testing program.

The program uses independent testing laboratories under the supervision of a qualified administrator who is a professional engineer. He is unaffiliated with any manufacturer of safety glazing materials and is hired by and responsible to the Safety Glazing Certification Council. The manufacturer of the products listed herein has certified that the labeled materials comply with the safety characteristics established by ANSI Z97.1-1984. The compliance of the manufacturer with the requirements of that standard is being checked periodically by an independent testing laboratory under the supervision of SGCC.

Every manufacturer of safety glazing material is eligible and encouraged to apply for certification. However, his products are not accepted and certified until an independent laboratory test indicates compliance with the standard. Once certified, each product is assigned a SGCC certification number to identify it and the factory at which it is made. Then, at least twice a year, SGCC independently selects samples during unannounced visits to the manufacturing plant or randomly from the market place to ensure continued adherence to the standard. Based on these evaluation reports SGCC authorizes continued use of the certification label and the product listing published in this directory.

The directory is divided into three basic listings: the first is by numerical sequence of certified product numbers listing the manufacturer holding that number; the second is of manufacturers listed alphabetically by plants and the approved products manufactured at those plants; the third is by products listing all manufacturers and their plants approved for each product. There is also an alphabetical listing by manufacturers illustrating a typical label of that manufacturer. The table of contents lists various procedural and administrative information, as well as information as to where officers and directors may be located.

Information from SGCC concerning a statement of procedures or copies of the minutes are available to manufacturers, public interest groups and individuals, upon request.

CLASSIFIED TEMPERED GLASS PATTERNS1/8 inch shallow

(01) P-516	(02) Luxlite	(03) Factrolite	(09) Spraylite	(32) Muralex
(34) Velvex	(36) Ribbed	(37) Aquatex	(38) Finetex	(39) Industrex
(82) Pattern 62	(83) Pointex	(86) Showerlite	(87) Heliolite	(117) Solatex
(120) Sunadex	(147) Solatex I	(150) Solatex II	(160) Model 10	(163) Model 11
(164) Model 12	(165) Spotswood			

1/8 inch medium

(04) Rattan	(05) Cotswold	(06) Patchwork	(07) Burlap	(08) Smooth Rough
(11) Flemish	(31) Skytex	(33) Seashell	(35) Flax	(52) Pattern 73
(56) Syenite	(57) Pattern 229	(154) Rain		

1/8 inch deep

(10) Autumn
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5/32 inch deep

(59) Luxlite	(60) Factrolite	(64) Spraylite	(70) Muralex	(72) Velvex
(74) Ribbed	(75) Aquatex	(76) Finetex	(81) Pattern 6	(88) Pattern 100
(118) Solatex	(121) Sunadex	(123) P-516	(124) Heliolite	(126) Pattern 62
(127) Mistron Ace	(128) Showerlite	(148) Solatex I	(151) Solatex II	(153) Flax
(156) Clar 104	(157) Model 10	(158) Pontilhado	(161) Model 11	(162) Model 12

5/32 inch medium

(61) Cotswold	(62) Burlap	(63) Smooth Rough	(66) Flemish	(69) Skytex
(71) Seashell	(73) Flax	(77) Pattern 73	(78) Syenite	(79) Pattern 229
(80) Pattern 76	(130) Cathedral	(146) Pattern 28	(155) Rain	

5/32 inch deep

(65) Autumn	(67) Oceanic	(68) Roundel
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3/16 inch shallow

(50) Pattern 62	(51) P-516	(54) Showerlite	(116) Heliolite	(119) Solatex
(122) Sunadex	(125) Spraylite	(131) Industrex	(132) Velvex	(133) Aquatex
(134) Pattern 100	(135) Pattern 6	(136) Burlap	(137) Factrolite	(138) Satinlite
(139) Pluralite	(140) Flax	(141) Skytex	(142) Chinchilla	(149) Solatex I
(152) Solatex II	(159) Model 10			

3/16 inch medium

(58) Pattern 76	(143) Seashell	(144) Syenite	(145) Flemish
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3/16 inch deep

(12) Oceanic	(13) Roundel	(41) Lozenge
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210 Shallow

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

210 medium

(107) Seashell	(109) Beadex	(111) Syenite	(112) Flemish	(113) Textured Linex
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210 deep

(104) Lozenge	(114) Broadlite
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7/32 inch shallow

(14) Velvex	(15) Muralex	(16) Industrex	(17) Aquatex	(18) Pattern 100
(19) Pattern 6	(20) Pattern 62	(21) Spraylite	(22) Burlap	(23) Factrolite
(24) Satinlite	(25) Luxlite	(26) J-3	(27) P-516	(28) Smooth Rough
(30) Cascade	(42) Pluralite	(44) Flax	(46) Skytex	(55) Textured Plate
(84) Chinchilla	(129) Orange Peel			

7/32 inch medium

(43) Seashell	(45) Beadex	(47) Syenite	(48) Flemish	(49) Textured Linex
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7/32 inch deep

(29) Lozenge	(53) Boradlite
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<u>SGCC NO.</u>	<u>SGCC NO.</u>	<u>SGCC NO.</u>
12 Virgina Glass	391 Flex-Temp	933 Guardian Industries
14 Virgina Glass	392 Flex-Temp	934 Guardian Industries
19 LOF Glass	396 Ford Motor Company	935 Downey Glass
24 AFG Industries	397 Ford Motor Company	949 AFG Industries
28 AFG Industries	400 PPG Industries	952 PPG Industries
40 Guardian Industries	402 PPG Industries	955 AFG Industries
41 Guardian Industries	449 LOF Glass	968 Guardian Industries
54 Hamilton Glass	454 PPG Industries	969 Guardian Industries
57 Hamilton Glass	455 PPG Industries	970 Guardian Industries
60 PPG Industries	458 Guardian Industries	971 Guardian Industries
61 PPG Industries	464 LOF Glass	979 Tempglass Eastern
64 PPG Industries	471 Guardian Industries	981 Tempglass Eastern
70 PPG Industries	474 PPG Industries	982 Tempglass Eastern
89 AFG Industries	475 PPG Industries	986 Temp-Tech
90 AFG Industries	482 Tuf-flex Glass	999 Anglass Industries
93 Virginia Glass	483 Tuf-flex Glass	1000 Anglass Industries
94 Virginia Glass	487 Guardian Industries	1002 Downey Glass
95 Virginia Glass	514 Downey Glass	1004 Guardian Industries
102 PPG Industries	515 Downey Glass	1034 Shaw Glass
118 Flex-O-Glass	516 Downey Glass	1035 Shaw Glass
131 Guardian Industries	520 Anglass Industries	1036 Shaw Glass
137 Texas Tempered	544 LOF Glass	1037 Shaw Glass
150 LOF Glass	545 LOF Glass	1039 Tempglass
151 LOF Glass	562 Ohio Plate Glass	1041 Ardco
185 Ohio Plate Glass	586 Chamberlain	1042 Ardco
186 Ohio Plate Glass	587 AFG Industries	1044 Tempglass Eastern
188 Ohio Plate Glass	592 Tempglass	1045 Tempglass Southern
194 PPG Industries	593 Tempglass	1046 Tempglass Southern
195 PPG Industries	594 Tempglass	1049 Ardco
209 PPG Industries Canada	595 Tempglass	1050 Ohio Plate Glass
219 PPG Industries	598 AFG Industries	1058 Tempglass Eastern
220 AFG Industries	603 Downey Glass	1059 Tempglass Eastern
249 PPG Industries	604 Downey Glass	1062 Hehr International
250 PPG Industries	605 Downey Glass	1067 PPG Industries
251 PPG Industries Canada	606 Downey Glass	1071 Shaw Glass
295 PPG Industries	607 Downey Glass	1073 Spectrum Glass
300 Guardian Industries	608 Downey Glass	1074 Spectrum Glass
320 Tempered Glass, Inc.	609 Downey Glass	1075 Spectrum Glass
321 Tempered Glass, Inc.	630 Downey Glass	1076 Spectrum Glass
322 Tempered Glass, Inc.	631 Guardian Industries	1077 Spectrum Glass
323 Tempered Glass, Inc.	633 Guardian Industries	1078 Spectrum Glass
328 Ohio Plate Glass	638 ACI Glass Products	1079 Spectrum Glass
337 Tempered Glass	639 ACI Glass Products	1107 PPG Industries
338 Tempered Glass	640 ACI Glass Products	1108 PPG Industries
341 Ford Motor Company	654 Ohio Plate Glass	1110 PPG Industries
342 Ford Motor Company	662 Guardian Industries	1111 PPG Industries
348 Tempered Glass	669 Texas Tempered	1112 PPG Industries
350 LOF Glass	675 PPG Industries	1113 PPG Industries
351 LOF Glass	676 PPG Industries	1118 Tempered Glass
352 LOF Glass	678 Downey Glass	1120 PPG Industries Canada
373 LOF Glass	709 Falconer Glass	1123 Fulton Glass
374 LOF Glass	711 Falconer Glass	1124 Fulton Glass
375 LOF Glass	712 Falconer Glass	1125 Fulton Glass
382 PPG Industries	921 Flex-Temp	1126 Fulton Glass
390 Flex-Temp	927 PPG Industries	1127 Fulton Glass



SGCC  
NO.

1139 AFG Industries  
1143 AFG Industries  
1157 ACI Glass Products  
1159 Texas Tempered  
1161 Guardian Industries

1165 Colonial  
1166 Colonial  
1167 Colonial  
1173 Lear Siegler  
1180 General Glass

1181 General Glass  
1182 General Glass  
1192 Texas Tempered  
1200 Hamilton Glass  
1201 Gemtron

1204 Tuf-flex Glass  
1216 Guardian Industries  
1219 Tempglass Southern  
1221 PPG Industries  
1225 PPG Industries

1226 ACI Glass Products  
1230 Southern Wholesale  
1231 Southern Wholesale  
1232 Southern Wholesale  
1235 Guardian Industries

1236 Virginia Glass  
1238 Glass Tempering Service  
1241 Tuf-flex Glass  
1247 PPG Industries Canada  
1248 Guardian Industries

1249 Guardian Industries  
1250 Guardian Industries  
1251 Guardian Industries  
1252 Guardian Industries  
1253 Guardian Industries

1259 Tempglass Eastern  
1265 Howe-Martz  
1266 Howe-Martz  
1268 Howe-Martz  
1269 Howe-Martz

1270 Howe-Martz  
1275 Virginia Glass  
1277 Advanced Coating Tech.  
1280 Falconer Glass  
1281 Ohio Plate Glass

1282 Falconer-Lewistown  
1284 Falconer-Lewistown  
1286 Ohio Plate Glass  
1287 Ohio Plate Glass  
1292 San Jacinto

1293 San Jacinto  
1294 San Jacinto  
1295 San Jacinto  
1296 San Jacinto  
1298 PPG Industries

SGCC  
NO.

1299 Shaw Glass  
1301 Guardian Industries  
1303 Guardian Industries  
1304 Guardian Industries  
1308 Traco

1310 Traco  
1311 Traco  
1312 Traco  
1313 Traco  
1314 Guardian Industries

1315 Falconer-Lewistown  
1316 Falconer-Lewistown  
1318 Guardian Industries  
1321 Flex-Temp  
1323 Ardco

1324 Falconer Glass  
1325 PPG Industries  
1326 Fulton Glass  
1328 Tempered Glass  
1330 Falconer Glass

1332 Gemtron  
1334 Gemtron  
1336 PPG Industries  
1338 Tempglass Eastern  
1339 Falconer Glass

1340 Glass Tempering Service  
1341 Colonial  
1343 Lear Siegler  
1344 Howe-Martz  
1345 Accutemp Glass

1346 Asahi Glass  
1347 Dlubak Studios  
1348 Dlubak Studios  
1349 Dlubak Studios  
1350 Dlubak Studios

1352 Falconer Glass  
1355 Gateway Industries  
1356 Gateway Industries  
1357 Gateway Industries  
1358 Gateway Industries

1359 Gateway Industries  
1360 Lear Siegler  
1361 Sunglas Products  
1362 Sunglas Products  
1363 Sunglas Products

1369 Elgin Precision Glass  
1370 Elgin Precision Glass  
1371 Elgin Precision Glass  
1372 Elgin Precision Glass  
1374 Sunglas Products

1376 Chamberlain  
1377 Chamberlain  
1378 Chamberlain  
1379 Hordis Brothers  
1380 Hordis Brothers

SGCC  
NO.

1381 Glasstemp  
1382 Glasstemp  
1383 Glasstemp  
1384 Glasstemp  
1385 Hamilton Glass

1386 Hamilton Glass  
1387 Hamilton Glass  
1388 Ohio Plate Glass  
1389 Glass Tempering Service  
1390 AFG Industries

1393 Saint Gobain  
1394 Gateway Industries  
1395 Tempered Glass  
1397 Empire Glass  
1398 Empire Glass

1399 Empire Glass  
1400 Empire Glass  
1401 Empire Glass  
1402 Empire Glass  
1403 Viracon

1404 Viracon  
1413 Hankuk Glass  
1414 AFG Industries  
1415 Southern Wholesale  
1421 Hordis Bros.

1422 Gemtron  
1424 Gemtron  
1426 Gemtron  
1428 Southern Wholesale  
1429 O & W Glass

1430 O & W Glass  
1431 Guardian Industries  
1432 Guardian Industries  
1433 Guardian Industries  
1434 Guardian Industries

1435 Guardian Industries  
1436 AFG Industries  
1437 Flex-Temp., Inc.  
1439 Flex-Temp., Inc.  
2000 Gemtron

SGCC NO.	INCH	(MM)	TYPE	MAX. SIZE CERTIFIED	SGCC NO.	INCH	(MM)	TYPE	MAX. SIZE CERTIFIED
<b>ACI GLASS PRODUCTS, INC.; SANTA FE SPRINGS, CA</b>					<b>DOWNEY GLASS CO., INC.; DOWNEY, CA - CONT'D.</b>				
1157	3/16	( 5.0)	TTG	U	604	1/8	( 3.2)	TPG(S)	U
638	1/4	( 6.0)	TTG	U	605	1/8	( 3.2)	TPG(M)	U
639	3/8	(10.0)	TTG	U	607	3/16	( 4.8)	TPG(S)	U
640	1/2	(12.0)	TTG	U	608	7/32	( 5.6)	TPG(S)	U
1226	1/8	( 3.2)	TPG(S)	U	<b>DOWNEY GLASS CO., INC.; LOS ANGELES, CA</b>				
<b>AFG INDUSTRIES, INC.; BRIDGEPORT, WV</b>					630	3/16	( 5.0)	TTG	U
1436	1/8	( 3.2)	TTG	U	514	1/4	( 6.0)	TTG	U
<b>AFG INDUSTRIES, INC.; GREENLAND, TN</b>					515	3/8	(10.0)	TTG	U
598	1/8	( 3.0)	TTG	U	516	1/2	(12.0)	TTG	U
955	5/32	( 4.0)	TTG	U	935	3/16	( 4.8)	TPG(S)	U
220	3/16	( 5.0)	TTG	U	678	7/32	( 5.6)	TPG(S)	U
89	1/4	( 6.0)	TTG	U	<b>ELGIN PRECISION GLASS CO., INC.; ELGIN, IL</b>				
90	3/8	(10.0)	TTG	U	1369	1/8	( 3.0)	TTG	U
587	1/8	( 3.2)	TPG(S)	U	1370	5/32	( 4.0)	TTG	U
1139	3/16	( 4.8)	TPG(S)	U	1371	3/16	( 5.0)	TTG	U
<b>AFG INDUSTRIES, INC.; KINGSPORT, TN</b>					1372	1/4	( 6.0)	TTG	U
1390	1/8	( 3.0)	TTG	U	<b>EMPIRE GLASS, INC.; BRONX, NY</b>				
949	5/32	( 4.0)	TTG	U	1397	1/8	( 3.0)	TTG	U
28	3/16	( 5.0)	TTG	U	1398	3/16	( 5.0)	TTG	U
24	1/4	( 6.0)	TTG	U	1399	1/4	( 6.0)	TTG	U
1414	1/8	( 3.2)	TPG(S)	U	1400	3/8	(10.0)	TTG	U
1143	3/16	( 4.8)	TPG(S)	U	1401	1/2	(12.0)	TTG	U
<b>ADVANCED COATING TECHNOLOGY; FRANKLIN, TN</b>					1402	3/4	(19.0)	TTG	U
1277	1/4	( 6.0)	TTG	U	<b>FALCONER-LEWISTOWN, INC.; LEWISTOWN, PA</b>				
<b>ANGLASS INDUSTRIES, INC.; SAN FERNANDO, CA</b>					1282	7/32	( 5.5)	LG(0.015)	U
520	1/8	( 3.0)	TTG	U	1284	1/4	( 6.0)	LG(0.015)	U
999	3/16	( 5.0)	TTG	U	1315	3/8	(10.0)	LG(0.015)	U
1000	1/4	( 6.0)	TTG	U	1316	1/2	(12.0)	LG(0.015)	U
<b>ARDCO, INC.; CHICAGO, IL</b>					<b>FALCONER GLASS INDUSTRIES, INC.; FALCONER, NY</b>				
1041	1/8	( 3.0)	TTG	U	1339	5/32	( 4.0)	TTG	U
1323	5/32	( 4.0)	TTG	U	1352	3/16	( 5.0)	TTG	U
1042	3/16	( 5.0)	TTG	U	709	1/4	( 6.0)	TTG	U
1049	1/4	( 6.0)	TTG	U	1280	3/8	(10.0)	TTG	U
<b>ASHAI GLASS CO., LTD.; TOKYO, JAPAN</b>					711	1/2	(12.0)	TTG	U
1346	3/8	(10.0)	TTG	U	712	3/4	(19.0)	TTG	U
<b>CHAMBERLAIN MANUFACTURING CORPORATION; MALVERN, AR</b>					1330	3/16	( 4.0)	TPG(S)	U
586	1/8	( 3.0)	TTG	U	<b>FLEX-O-GLASS, INC.; DIXON, IL</b>				
1376	5/32	( 4.0)	TTG	U	118	0.080 inch through 0.125 inch			U
1377	3/16	( 5.0)	TTG	U	smooth extruded acrylic				
1378	1/4	( 6.0)	TTG	U	<b>FLEX-TEMP, INC.; IRVING, TX</b>				
<b>COLONIAL MIRROR AND GLASS CORP.; BROOKLYN, NY</b>					390	1/4	( 6.0)	TTG	U
1165	1/4	( 6.0)	TTG	U	391	3/8	(10.0)	TTG	U
1166	3/8	(10.0)	TTG	U	392	1/2	(12.0)	TTG	U
1167	1/2	(12.0)	TTG	U	1321	3/16	( 4.8)	TPG(S)	U
1341	3/4	(19.0)	TTG	U	1437	3/16	( 4.8)	TTG	U
<b>DLUBAK STUDIOS, INC.; FREEPORT, PA</b>					1439	7/32	( 5.5)	TPG(S)	U
1348	3/16	( 5.0)	LG(0.030)	34" by 48"	<b>FORD MOTOR COMPANY; DEARBORN, MI</b>				
1347	1/4	( 6.0)	LG(0.030)	U	341	1/8	( 3.0)	TTG	U
1349	3/8	(10.0)	LG(0.030)	U	396	5/32	( 4.0)	TTG	U
1350	1/2	(12.0)	LG(0.030)	U	342	3/16	( 5.0)	TTG	U
<b>DOWNEY GLASS CO., INC.; DOWNEY, CA</b>					397	1/4	( 6.0)	TTG	U
603	1/8	( 3.0)	TTG	U	<b>FULTON GLASS INDUSTRIES, INC.; RED OAK, GA</b>				
1002	5/32	( 4.0)	TTG	U	1123	5/32	( 4.0)	TTG	U
606	3/16	( 5.0)	TTG	U	1124	3/16	( 5.0)	TTG	U
609	1/4	( 6.0)	TTG	U	1125	1/4	( 6.0)	TTG	U

SGCC NO.	INCH	(MM)	TYPE	MAX. SIZE CERTIFIED	SGCC NO.	INCH	(MM)	TYPE	MAX. SIZE CERTIFIED
<b>FULTON GLASS INDUSTRIES, INC.; RED OAK, GA - CONT'D.</b>					<b>GUARDIAN INDUSTRIES CORP., KINGSBURG, CA</b>				
1126	3/8	(10.0)	TTG	U	968	1/8	(3.0)	TTG	U
1127	1/2	(12.0)	TTG	U	969	5/32	(4.0)	TTG	U
1326	3/16	(4.8)	TPG(S)	U	970	3/16	(5.0)	TTG	U
<b>GATEWAY INDUSTRIES; ROGERS, AR</b>					971	1/4	(6.0)	TTG	U
1355	1/8	(3.0)	TTG	U	1303	1/8	(3.2)	TPG(S)	U
1356	3/16	(5.0)	TTG	U	1301	5/32	(4.0)	TPG(M)	U
1357	1/4	(6.0)	TTG	U	1304	3/16	(4.8)	TPG(S)	U
1358	1/8	(3.2)	TPG(S)	U	<b>GUARDIAN INDUSTRIES CORP.; UPPER SANDUSKY, OH</b>				
1359	5/32	(4.0)	TPG(S)	U	458	7/32	(5.5)	LTG(O.030)	U
1394	3/16	(4.8)	TPG(S)	U	487	1/4	(6.0)	LTG(O.030)	U
<b>GEMTRON CORPORATION; SWEETWATER, NY</b>					<b>GUARDIAN INDUSTRIES CORP.; WEBSTER, MA</b>				
1422	1/8	(3.0)	TPG	U	300	1/8	(3.0)	TTG	U
1424	5/32	(4.0)	TPG	U	1216	3/16	(5.0)	TTG	U
1426	.169	(1.5)	TTG	U	662	1/4	(6.0)	TTG	U
2000	5/32	(4.0)	TPG	U	471	3/8	(10.0)	TTG	U
<b>GEMTRON CORPORATION; SWEETWATER, TN</b>					1235	1/2	(12.0)	TTG	U
1334	1/8	(3.0)	TTG	U	<b>HAMILTON GLASS PRODUCTS, INC.; VINCENNES, IN</b>				
1332	5/32	(4.0)	TTG	U	54	1/8	(3.0)	TTG	U
1201	3/16	(5.0)	TTG	U	1385	5/32	(4.0)	TTG	U
<b>GENERAL GLASS CORPORATION; DENVER, CO</b>					1200	3/16	(5.0)	TTG	U
1180	5/32	(4.0)	TTG	U	57	1/4	(6.0)	TTG	U
1181	3/16	(5.0)	TTG	U	1386	5/32	(4.0)	TPG(S)	U
1182	1/4	(6.0)	TTG	U	1387	3/16	(4.8)	TPG(S)	U
<b>GLASS TEMPERING SERVICE, INC.; DETROIT, MI</b>					<b>HANKUK GLASS INDUSTRY COMPANY, LTD.; SEOUL, KOREA</b>				
1389	1/8	(3.0)	TTG	30" by 76"	1413	1/4	(6.0)	TTG	U
1238	1/4	(6.0)	TTG	U	<b>HEHR INTERNATIONAL, INC.; CHESANING, MI</b>				
1340	3/16	(5.0)	TPG	U	1062	1/8	(3.0)	TTG	32" by 60"
<b>GLASSTEMP, INC.; BENSENVILLE, IL</b>					<b>HORDIS BROTHERS, INC.; WARRENTON, MO</b>				
1381	3/16	(5.0)	TTG	U	1379	1/8	(3.0)	TTG	U
1382	1/4	(6.0)	TTG	U	1380	5/32	(4.0)	TTG	U
1383	3/8	(10.0)	TTG	U	1421	3/16	(5.0)	TTG	U
1384	1/2	(12.0)	TTG	U	<b>HOWE-MARTZ GLASS COMPANY; DETROIT, MI</b>				
<b>GUARDIAN INDUSTRIES; AUBURN, IN</b>					1265	5/32	(4.0)	TTG	U
1431	1/8	(3.0)	TTG	U	1266	3/16	(5.0)	TTG	U
1432	5/32	(4.0)	TTG	U	1268	1/4	(6.0)	TTG	U
1433	3/16	(4.8)	TTG	U	1269	3/8	(10.0)	TTG	U
1434	7/32	(5.6)	TTG	U	1270	1/2	(12.0)	TTG	U
1435	1/4	(6.0)	TTG	U	1344	3/16	(4.8)	TPG(S)	U
<b>GUARDIAN INDUSTRIES CORP.; CARLETON, MI</b>					<b>LOF GLASS; LAURINBURG, NC</b>				
933	1/8	(3.0)	TTG	U	350	1/8	(3.0)	TTG	U
934	5/32	(4.0)	TTG	U	545	5/32	(4.0)	TTG	U
631	3/16	(5.0)	TTG	U	351	3/16	(5.0)	TTG	U
131	1/4	(6.0)	TTG	U	352	1/4	(6.0)	TTG	U
<b>GUARDIAN INDUSTRIES CORP., CORSICANA, TX</b>					373	5/16	(8.0)	TTG	U
1248	1/8	(3.0)	TTG	U	374	3/8	(10.0)	TTG	U
1249	5/32	(4.0)	TTG	U	375	1/2	(12.0)	TTG	U
1250	3/16	(5.0)	TTG	U	<b>LEAR-SIEGLER, INC.; WICHITA, KS</b>				
1251	1/4	(6.0)	TTG	U	1360	3/16	(5.0)	LTG(O.030)	U
1252	5/16	(8.0)	TTG	U	1173	7/32	(5.5)	LTG(O.015)	U
1253	3/8	(10.0)	TTG	U	1343	3/16	(5.0)	LPG(O.030)(S)	U
1314	5/32	(4.0)	TPG(S)	U	<b>NASHVILLE TEMPERED GLASS CORP., NASHVILLE, TN</b>				
<b>GUARDIAN INDUSTRIES CORP., FORT LAUDERDALE, FL</b>					1416	1/8	(3.0)	TTG	U
1161	1/8	(3.0)	TTG	U	1417	1/4	(6.0)	TTG	U
633	3/16	(5.0)	TTG	U	1419	3/16	(5.0)	TTG	U
40	1/4	(6.0)	TTG	U					
41	3/8	(10.0)	TTG	U					
1004	1/2	(12.0)	TTG	U					
1318	3/16	(4.8)	TPG(S)	U					

SGCC NO.	INCH	(MM)	TYPE	MAX. SIZE CERTIFIED	SGCC NO.	INCH	(MM)	TYPE	MAX. SIZE CERTIFIED
<b>OHIO PLATE GLASS COMPANY; JEFFERSON, TX</b>					<b>PPG IND. CANADA, LTD.; OWEN SOUND, ONTARIO, CANADA</b>				
1281	1/8	( 3.0)	TTG	U	251	1/8	( 3.0)	TTG	U
1286	3/16	( 5.0)	TTG	U	1120	5/32	( 4.0)	TTG	U
1287	1/4	( 6.0)	TTG	U	209	3/16	( 5.0)	TTG	U
1388	1/8	( 3.2)	TPG(M)	U	1247	1/4	( 6.0)	TTG	U
<b>OHIO PLATE GLASS COMPANY; LEWISBURG, OH</b>					<b>SAINT GOBAIN; GENT, NETHERLAND</b>				
1050	1/8	( 3.0)	TTG	U	1393	1/4	( 3.0)	TTG	U
185	3/16	( 5.0)	TTG	U	<b>SAN JACINTO GLASS COMPANY; HOUSTON, TX</b>				
186	1/4	( 6.0)	TTG	U	1292	1/8	( 3.0)	TTG	U
654	1/8	( 3.2)	TPG(M)	U	1293	3/16	( 5.0)	TTG	U
188	3/16	( 4.8)	TPG(S)	U	1294	1/4	( 6.0)	TTG	U
328	3/16	( 4.8)	TPG(D)	U	1295	3/8	(10.0)	TTG	U
562	7/32	( 5.6)	TPG(S)	U	1296	1/2	(12.0)	TTG	U
<b>O &amp; W GLASS; EVERETT, WA</b>					<b>SHAW GLASS COMPANY, INC.; SOUTH EASTON, MA</b>				
1429	1/8	( 3.0)	TTG	U	1034	3/16	( 5.0)	TTG	U
1430	2/16	( 5.0)	TTG	U	1035	1/4	( 6.0)	TTG	U
<b>PPG INDUSTRIES, INC.; CARLISLE, PA</b>					1036	3/8	(10.0)	TTG	U
250	1/8	( 3.0)	TTG	U	1037	1/2	(12.0)	TTG	U
675	5/32	( 4.0)	TTG	U	1299	3/16	( 4.8)	TPG(S)	U
249	3/16	( 5.0)	TTG	U	1071	7/32	( 5.6)	TPG(S)	U
382	1/4	( 6.0)	TTG	U	<b>SOUTHERN WHOLESALE GLASS, INC.; MARIETTA, GA</b>				
<b>PPG INDUSTRIES, INC.; CRESTLINE, OH</b>					1230	3/16	( 5.0)	TTG	U
60	1/8	( 3.0)	TTG	U	1231	1/4	( 6.0)	TTG	U
<b>PPG INDUSTRIES, INC.; DALLAS, TX</b>					1232	3/8	(10.0)	TTG	U
400	3/16	( 5.0)	TTG	U	1405	1/8	( 3.0)	TTG	U
402	1/4	( 6.0)	TTG	U	1415	3/16	( 5.0)	TTG	U
1107	3/8	(10.0)	TTG	U	1406	1/2	(12.0)	TTG	U
1108	1/2	(12.0)	TTG	U	<b>SPECTRUM GLASS COMPANY; CLINTON, NC</b>				
1225	3/4	(19.0)	TTG	U	1073	3/16	( 5.0)	TTG	U
<b>PPG INDUSTRIES, INC.; FORD CITY, PA</b>					1074	1/4	( 6.0)	TTG	U
61	3/16	( 5.0)	TTG	U	1075	5/16	( 8.0)	TTG	U
70	1/4	( 6.0)	TTG	U	1076	3/8	(10.0)	TTG	U
<b>PPG INDUSTRIES, INC.; FRESNO, CA</b>					1077	1/2	(12.0)	TTG	U
295	1/8	( 3.0)	TTG	U	1078	5/8	(16.0)	TTG	U
676	5/32	( 4.0)	TTG	U	1079	3/4	(19.0)	TTG	U
64	3/16	( 5.0)	TTG	U	<b>SUNGLAS PRODUCTS, INC.; CLAREMORE, OK</b>				
<b>PPG INDUSTRIES, INC.; HUNT VALLEY, MD</b>					1361	5/32	( 4.0)	TTG	U
454	3/16	( 5.0)	TTG	U	1362	3/16	( 5.0)	TTG	U
455	1/4	( 6.0)	TTG	U	1363	1/4	( 6.0)	TTG	U
474	3/8	(10.0)	TTG	U	1374	3/8	(10.0)	TTG	U
475	1/2	(12.0)	TTG	U	<b>TEMP-TECH INDUSTRIES, INC.; CHICAGO, IL</b>				
952	3/4	(19.0)	TTG	U	986	1/4	( 6.0)	TTG	U
1325	3/16	( 4.8)	TPG(S)	U	<b>TEMPERED GLASS, INC.; ATLANTA, GA</b>				
<b>PPG INDUSTRIES, INC.; MIAMI, FL</b>					320	3/16	( 5.0)	TTG	U
195	3/16	( 5.0)	TTG	U	321	1/4	( 6.0)	TTG	U
194	1/4	( 6.0)	TTG	U	322	3/8	(10.0)	TTG	U
1067	3/8	(10.0)	TTG	U	323	1/2	(12.0)	TTG	U
1336	1/2	(12.0)	TTG	U	<b>TEMPERED GLASS CORPORATION; TAMPA, FL</b>				
1298	3/16	( 4.8)	TPG(S)	U	1395	3/16	( 5.0)	TTG	U
219	7/32	( 5.6)	TPG(S)	U	337	1/4	( 6.0)	TTG	U
<b>PPG INDUSTRIES, INC.; WICHITA FALLS, TX</b>					348	3/8	(10.0)	TTG	U
1110	1/8	( 3.0)	TTG	U	338	1/2	(12.0)	TTG	U
1111	5/32	( 4.0)	TTG	U	1328	3/16	( 4.8)	TPG(S)	U
1112	3/16	( 5.0)	TTG	U	1118	7/32	( 5.6)	TPG(S)	U
1113	1/4	( 6.0)	TTG	U					

SGCC NO.	INCH	(MM)	TYPE	MAX. SIZE CERTIFIED	
TEMPERED GLASS INT'L, INC.; UNION CITY, CA					CERTIFIED PRODUCTS KEY
482	3/8	( 10.0)	TTG	U	
483	1/2	( 12.0)	TTG	U	
1241	3/16	( 5.0)	TTG	U	
1204	1/4	( 6.0)	TPG	U	TTG = TEMPERED TRANSPARENT GLASS
TEMPGLASS, INC.; PERRYSBURG, OH					TPG = TEMPERED PATTERN GLASS
1039	1/8	( 3.0)	TTG	U	LTG = LAMINATED TRANSPARENT GLASS
592	3/16	( 5.0)	TTG	U	LPG = LAMINATED PATTERN GLASS
594	3/8	( 10.0)	TTG	U	(S) = SHALLOW PATTERN
595	1/2	( 12.0)	TTG	U	(M) = MEDIUM PATTERN
1420	1/4	( 6.0)	TTG	U	(D) = DEEP PATTERN
TEMPGLASS EASTERN, INC.; NORCROSS, GA					U = UNLIMITED SIZE
979	1/8	( 3.0)	TTG	U	
1259	5/32	( 4.0)	TTG	U	
981	3/16	( 5.0)	TTG	U	
982	1/4	( 6.0)	TTG	U	
1058	3/8	( 10.0)	TTG	U	
1059	1/2	( 12.0)	TTG	U	
1338	3/16	( 4.8)	TPG(S)	U	
TEMPGLASS SOUTHERN, INC.; GRAND PRAIRIE, TX					
1219	3/16	( 5.0)	TTG	U	
1044	1/4	( 6.0)	TTG	U	
1045	3/8	( 10.0)	TTG	U	
1046	1/2	( 12.0)	TTG	U	
TEXAS TEMPERED GLASS COMPANY; HOUSTON, TX					
1192	3/16	( 5.0)	TTG	U	
137	1/4	( 6.0)	TTG	U	
669	1/2	( 12.0)	TTG	U	
1408	3/8	( 10.0)	TTG	U	
TRACO (THREE RIVERS ALUM. CO.); WARRENDALE, PA					
1308	1/8	( 3.0)	TTG	U	
1310	3/16	( 5.0)	TTG	U	
1311	1/4	( 6.0)	TTG	U	
1312	3/8	( 10.0)	TTG	U	
1313	1/2	( 12.0)	TTG	U	
VIDRIERIAS DELLODIO, SA; ALAVA, SPAIN					
1331	5/32	( 4.0)	TPG	U	
1407	1/8	( 3.0)	TPG	U	
VIRACON, INC.; OWATONNA, MN					
1403	3/16	( 5.0)	TTG	U	
1404	1/4	( 6.0)	TTG	U	
VIRGINIA GLASS PRODUCTS CORP.; MARTINSVILLE, VA					
1236	5/32	( 4.0)	TTG	U	
12	3/16	( 5.0)	TTG	U	
14	1/4	( 6.0)	TTG	U	
93	3/8	( 10.0)	TTG	U	
94	1/2	( 12.0)	TTG	U	
95	3/4	( 19.0)	TTG	U	
1275	3/16	( 4.8)	TPG(S)	U	



	<u>SGCC NO.</u>	<u>MAX. SIZE CERTIFIED</u>
<b>TEMPERED TRANSPARENT GLASS</b>		
<b>1/8 inch tempered transparent glass</b>		
AFG Industries, Inc.; Bridgeport, WV	1436	U
AFG Industries, Inc.; Greenland, TN	598	U
AFG Industries, Inc.; Kingsport, TN	1390	U
Anglass Industries, Inc.; San Fernando, CA	520	U
Ardco, Inc.; Chicago, IL	1041	U
Chamberlain Manufacturing Corp.; Malvern, AR	586	U
Downey Glass Company, Inc.; Downey, CA	603	U
Elgin Precision Glass Co., Inc.; Elgin, IL	1369	U
Empire Glass, Inc.; Bronx, NY	1397	U
Ford Motor Company; Dearborn, MI	341	U
Gateway Industries; Rogers, AR	1355	U
Gemtron Corp.; Sweetwater, TN	1334	U
Glass Tempering Service, Inc.; Detroit, MI	1389	32" by 76"
Guardian Industries Corp.; Carleton, MI	933	
Guardian Industries Corp.; Corsicana, TX	1248	U
Guardian Industries Corp.; Fort Lauderdale, FL	1161	U
Guardian Industries Corp.; Kingsburg, CA	968	U
Guardian Industries Corp.; Webster, MA	300	U
Hamilton Glass Products, Inc.; Vincennes, IN	54	U
Hehr International, Inc.; Chesaning, MI	1062	32" by 60"
Hordis Brothers, Inc.; Warrenton, MO	1379	
LOF Glass; Laurinburg, NC	350	U
Nashville Tempered Glass Corp.; Nashville, TN	1416	U
Ohio Plate Glass Company; Jefferson, TX	1281	U
Ohio Plate Glass Company; Lewisburg, OH	1050	U
PPG Industries, Inc.; Carlisle, PA	250	U
PPG Industries, Inc.; Crestline, OH	60	U
PPG Industries, Inc.; Fresno, CA	295	U
PPG Industries, Inc.; Wichita Falls, TX	1110	U
PPG Industries Canada, Ltd.; Owen Sound, Ontario, Canada	251	U
San Jacinto Glass Company; Houston, TX	1292	U
Southern Wholesale Glass, Inc.; Marietta, GA	1405	U
Tempglass, Inc.; Perrysburg, OH	1039	U
Tempglass Eastern, Inc.; Norcross, GA	979	U
Traco (Three Rivers Aluminum Company); Warrendale, PA	1308	U
<b>5/32 inch tempered transparent glass</b>		
AFG Industries, Inc.; Greenland, TN	955	U
AFG Industries, Inc.; Kingsport, TN	949	U
Ardco, Inc.; Chicago, IL	1323	U
Chamberlain Manufacturing Corp.; Malvern, AR	1376	U
Downey Glass Company, Inc.; Downey, PA	1002	U
Elgin Precision Glass Co., Inc.; Elgin, IL	1370	U
Falconer Glass Industries, Inc.; Falconer, NY	1339	U
Flex-Temp., Irving, TX	1437	U
Ford Motor Company; Dearborn, MI	396	U
Fulton Glass Industries, Inc.; Red Oak, GA	1123	U
Gemtron Corp.; Sweetwater, TN	1332	U
General Glass Corporation; Denver, CO	1180	U
Guardian Industries Corp.; Carleton, MI	934	U
Guardian Industries Corp.; Corsicana, TX	1249	U
Guardian Industries Corp.; Kingsburg, CA	969	U
Hamilton Glass Products, Inc.; Vincennes, IN	1385	U
Hordis Brothers, Inc.; Warrenton, MO	1380	U
Howe-Martz Glass Co.; Detroit, MI	1265	U
LOF Glass; Laurinburg, NC	545	U
PPG Industries, Inc.; Carlisle, PA	675	U
PPG Industries, Inc.; Fresno, CA	676	U
PPG Industries, Inc.; Wichita Falls, TX	1111	U
PPG Industries Canada, Ltd.; Owen Sound, Ontario, Canada	1120	U
Sunglas Products, Inc.; Claremore, OK	1361	U
Tempglass Eastern, Inc.; Norcross, GA	1259	U
Virginia Glass Products Corp.; Martinsville, VA	1236	U

	<u>SGCC NO.</u>	<u>MAX. SIZE CERTIFIED</u>
<b>TEMPERED TRANSPARENT GLASS</b>		
<b>3/16 inch tempered transparent glass</b>		
ACI Glass Products, Inc.; Santa Fe Springs, CA	1157	U
AFG Industries, Inc.; Greenland, TN	220	U
AFG Industries, Inc.; Kingsport, TN	28	U
Anglass Industries, Inc.; San Fernando, CA	999	U
Ardco, Inc.; Chichago, IL	1042	U
Chamberlain Manufacturing Corporation; Malvern, AR	1377	U
Downey Glass Company, Inc.; Downey, CA	606	U
Downey Glass Company, Inc.; Los Angeles, CA	630	U
Elgin Precision Glass Company, Inc.; Elgin, IL	1371	U
Empire Glass, Inc.; Bronx, NY	1398	U
Falconer Glass Industries, Inc.; Falconer, NY	1352	U
Ford Motor Company; Dearborn, MI	342	U
Fulton Glass Industries, Inc.; Red Oak, GA	1124	U
Gateway Industries; Rogers, AR	1356	U
Gemtron Corporation; Sweetwater, TN	1201	U
General Glass Corporation; Denver, CO	1181	U
Glasstemp, Inc.; Bensenville, IL	1381	U
Guardian Industries Corp.; Carleton, MI	631	32" by 60"
Guardian Industries Corp.; Corsicana, TX	1250	U
Guardian Industries Corp.; Fort Lauderdale, FL	633	U
Guardian Industries Corp.; Kingsburg, CA	970	U
Guardian Industries Corp.; Webster, MA	1216	U
Hamilton Glass Products, Inc.; Vincennes, IN	1200	U
Howe-Martz Glass Company; Detroit, MI	1266	U
LOF Glass; Laurinburg, NC	351	U
Nashville Tempered Glass Corp.; Nashville, TN	1419	U
Ohio Plate Glass Company; Jefferson, TX	1286	U
Ohio Plate Glass Company; Lewisburg, OH	185	U
PPG Industries, Inc.; Carlisle, PA	249	U
PPG Industries, Inc.; Dallas, TX	400	U
PPG Industries, Inc.; Ford City, PA	61	U
PPG Industries, Inc.; Fresno, CA	64	U
PPG Industries, Inc.; Hunt Valley, MD	454	U
PPG Industries, Inc.; Miami, FL	195	U
PPG Industries, Inc.; Wichita Falls, TX	1112	U
PPG Industries Canada, Ltd.; Owen Sound, Ontario, Canada	209	U
San Jacinto Glass Company; Houston, TX	1293	U
Shaw Glass Company, Inc.; South Easton, MA	1034	U
Southern Wholesale Glass, Inc.; Marietta, GA	1415	U
Spectrum Glass Company; Clinton, NC	1073	U
Sunglas Products, Inc.; Claremore, OK	1362	U
Tempered Glass, Inc.; Atlanta, GA	320	U
Tempered Glass Corporation; Tampa, FL	1395	U
Tempglass, Inc.; Perrysburg, OH	592	U
Tempglass Eastern, Inc.; Norcross, GA	981	U
Tempglass Southern, Inc.; Grand Prairie, TX	1219	U
Texas Tempered Glass Company; Houston, TX	1192	U
Traco (Three Rivers Aluminum Company); Warrendale, PA	1310	U
Tuf-flex Glass; Union City, CA	1241	U
Viracon, Inc.; Owatonna, MN	1403	U
Virginia Glass Products Corporation; Martinsville, VA	12	U
<b>1/4 inch tempered transparent glass</b>		
ACI Glass Products, Inc.; Santa Fe Springs, CA	638	
AFG Industries, Inc.; Greenland, TN	89	U
AFG Industries, Inc.; Kingsport, TN	24	U
Advance Coating Technology, Inc.; Franklin, TN	1277	U
Anglass Industries, Inc.; San Fernando, CA	1000	U

	<u>SGCC NO.</u>	<u>MAX. SIZE CERTIFIED</u>
<b>TEMPERED TRANSPARENT GLASS</b>		
<b>1/4 inch tempered transparent glass - continued</b>		
Ardco, Inc.; Chicago, IL	1049	U
Chamberlain Manufacturing Corporation; Malvern, AR	1378	U
Colonial Mirror and Glass Corporation; Brooklyn, NY	1165	U
Downey Glass Company, Inc.; Downey, CA	609	U
Downey Glass Company, Inc.; Los Angeles, CA	514	U
Elgin Precision Glass Company, Inc.; Elgin, IL	1372	U
Empire Glass, Inc.; Bronx, NY	1399	U
Falconer Glass Industries, Inc.; Falconer, NY	709	U
Flex-Temp, Inc.; Irving, TX	390	U
Ford Motor Company; Dearborn, MI	397	U
Fulton Glass Industries, Inc.; Red Oak, GA	1125	U
Gateway Industries; Rogers, AR	1357	U
General Glass Corporation; Denver, CO	1182	U
Glass Tempering Service, Inc.; Detroit, MI	1238	U
Glasstemp, Inc.; Bensenville, IL	1382	U
Guardian Industries Corp.; Carleton, MI	131	U
Guardian Industries Corp.; Corsicana, TX	1251	U
Guardian Industries Corp.; Fort Lauderdale, FL	40	U
Guardian Industries Corp.; Kingsburg, CA	971	U
Guardian Industries Corp.; Webster, MA	662	U
Hamilton Glass Products, Inc.; Vincennes, IN	57	U
Hankuk Glass Industry Co., LTD.; Seoul, Korea	1413	U
Howe-Martz Glass Company; Detroit, MI	1268	U
LOF Glass; Laurinburg, NC	352	U
Nashville Tempered Glass Corp.; Nashville, TN	1417	U
Ohio Plate Glass Company, Jefferson, TX	1287	U
Ohio Plate Glass Company, Lewisburg, OH	186	U
PPG Industries, Inc.; Carlisle, PA	382	U
PPG Industries, Inc.; Dallas, TX	402	U
PPG Industries, Inc.; Ford City, PA	70	U
PPG Industries, Inc.; Hunt Valley, MD	455	U
PPG Industries, Inc.; Miami, FL	194	U
PPG Industries, Inc.; Wichita Falls, TX	1113	U
PPG Industries Canada, Ltd.; Owen Sound, Ontario, Canada	1247	U
Saint Gobain; Gent, Netherland	1393	U
San Jacinto Glass Company; Houston, TX	1294	U
Shaw Glass Company, Inc.; South Easton, MA	1035	U
Southern Wholesale Glass, Inc.; Marietta, GA	1231	U
Spectrum Glass Company; Clinton, NC	1074	U
Sunglas Products, Inc.; Claremore, OK	1363	U
Temp-Tech Industries, Inc.; Chicago, IL	986	U
Tempered Glass, Inc.; Atlanta, GA	321	U
Tempered Glass Corporation; Tampa, FL	337	U
Tempglass Eastern, Inc.; Norcross, GA	982	U
Tempglass, Inc.; Perrysburg, OH	1420	U
Tempglass Southern, Inc.; Grand Prairie, TX	1044	U
Texas Tempered Glass Company; Houston, TX	137	U
Traco (Three Rivers Aluminum Company); Warrendale, PA	1311	U
Tuf-flex Glass; Union City, CA	1204	U
Viracon, Inc.; Owatonna, MN	1404	U
Virginia Glass Products Corporation; Martinsville, VA	14	U

**5/16 inch tempered transparent glass**

Guardian Industries Corp.; Corsicana, TX	1252	U
PPG Industries; Inc.; Dallas, TX	1221	U
Spectrum Glass Company; Clinton, NC	1075	U

	<u>SGCC NO.</u>	<u>MAX. SIZE CERTIFIED</u>
<b>TEMPERED TRANSPARENT GLASS</b>		
<b>3/8 inch tempered transparent glass</b>		
ACI Glass Products, Inc.; Santa Fe Springs, CA	639	U
AFG Industries, Inc.; Greenland, TN	90	U
Asahi Glass Company, Ltd.; Tokyo, Japan	1346	U
Colonial Mirror and Glass Corporation; Brooklyn, NY	1166	U
Downey Glass Company, Inc.; Los Angeles, CA	515	U
Empire Glass, Inc.; Bronx, NY	1400	U
Falconer Glass Industries, Inc.; Falconer, NY	1280	U
Flex-Temp, Inc.; Irving, TX	391	U
Fulton Glass Industries, Inc.; Red Oak, GA	1126	U
Glasstemp, Inc.; Bensenville, IL	1383	U
Guardian Industries Corp.; Corsicana, TX	1253	U
Guardian Industries Corp.; Fort Lauderdale, FL	41	U
Guardian Industries Corp.; Webster, MA	471	U
Howe-Martz Glass Company, Detroit, MI	1269	U
LOF Glass; Laurinburg, NC	374	U
PPG Industries, Inc.; Dallas, TX	1107	U
PPG Industries, Inc.; Hunt Valley, MD	474	U
PPG Industries, Inc.; Miami, FL	1067	U
San Jacinto Glass Company; Houston, TX	1295	U
Shaw Glass Company, Inc.; South Easton, MA	1036	U
Southern Wholesale Glass, Inc.; Marietta, GA	1232	U
Spectrum Glass Company; Clinton, NC	1076	U
Sunglas Products, Inc.; Claremore, OK	1374	U
Tempered Glass, Inc.; Atlanta, GA	322	U
Tempered Glass Corporation; Tampa, FL	348	U
Tempglass Eastern, Inc.; Norcross, GA	1058	U
Tempglass Southern, Inc.; Grand Prairie, TX	1045	U
Texas Tempered Glass Co.; Houston, TX	1408	U
Traco (Three Rivers Aluminum Company); Warrendale, PA	1312	U
Tuf-flex Glass; Union City, CA	482	U
Virginia Glass Products Corporation; Martinsville, VA	93	U
<b>1/2 inch tempered transparent glass</b>		
ACI Glass Products, Inc.; Santa Fe Springs, CA	640	U
Colonial Mirror and Glass Corporation; Brooklyn, NY	1167	U
Downey Glass Company, Inc.; Los Angeles, CA	516	U
Empire Glass, Inc.; Bronx, NY	1401	U
Falconer Glass Industries, Inc.; Falconer, NY	711	U
Flex-Temp, Inc.; Irving, TX	392	U
Fulton Glass Industries, Inc.; Red Oak, GA	1127	U
Glasstemp, Inc.; Bensenville, IL	1384	U
Guardian Industries Corp.; Fort Lauderdale, FL	1004	U
Guardian Industries Corp.; Webster, MA	1235	U
Howe-Martz Glass Company, Detroit, MI	1270	U
LOF Glass; Laurinburg, NC	375	U
PPG Industries, Inc.; Dallas, TX	1108	U
PPG Industries, Inc.; Hunt Valley, MD	475	U
PPG Industries, Inc.; Miami, FL	1336	U
San Jacinto Glass Company; Houston, TX	1296	U
Shaw Glass Company, Inc.; South Easton, MA	1037	U
Spectrum Glass Company; Clinton, NC	1077	U
Southern Wholesale Glass, Inc.; Marietta, GA	1406	U
Tempered Glass, Inc.; Atlanta, GA	323	U
Tempered Glass Corporation; Tampa, FL	338	U
Tempglass, Inc.; Perrysburg, OH	595	U
Tempglass Eastern, Inc.; Norcross, GA	1059	U
Tempglass Southern, Inc.; Grand Prairie, TX	1046	U

	<u>SGCC NO.</u>	<u>MAX. SIZE CERTIFIED</u>
<b>TEMPERED TRANSPARENT GLASS</b>		
<b>1/2 inch tempered transparent glass - continued</b>		
Texas Tempered Glass Company; Houston, TX	669	U
Traco (Three Rivers Aluminum Company); Warrendale, PA	1313	U
Tuf-flex Glass; Union City, CA	483	U
Virginia Glass Products Corporation; Martinsville, VA	94	U
<b>5/8 inch tempered transparent glass</b>		
Falconer Glass Industries, Inc.; Falconer, NY	1324	U
Spectrum Glass Company; Clinton, NC	1078	U
<b>3/4 inch tempered transparent glass</b>		
Colonial Mirror and Glass Corporation; Brooklyn, NY	1341	U
Empire Glass, Inc.; Bronx, NY	1402	U
Falconer Glass Industries, Inc.; Falconer, NY	712	U
PPG Industries, Inc.; Dallas, TX	1225	U
PPG Industries, Inc.; Hunt Valley, MD	952	U
Spectrum Glass Company; Clinton, NC	1079	U
Virginia Glass Products Corporation; Martinsville, VA	95	U
<b>TEMPERED PATTERN GLASS</b>		
<b>1/8 inch tempered pattern glass (shallow patterns)</b>		
ACI Glass Products, Inc.; Santa Fe Springs, CA	1226	U
AFG Industries, Inc.; Greenland, TN	587	U
AFG Industries, Inc.; Kingsport, TN	1414	U
Downey Glass Company, Inc.; Downey, CA	604	U
Gateway Industries; Rogers, AR	1358	U
Guardian Industries Corp.; Kingsburg, CA	1303	U
<b>1/8 inch tempered pattern glass (medium patterns)</b>		
Downey Glass Company, Inc.; Downey, CA	605	U
Ohio Plate Glass Company; Jefferson, TX	1388	U
Ohio Plate Glass Company; Lewisburg, OH	654	U
<b>5/32 inch tempered pattern glass (shallow patterns)</b>		
Gateway Industries; Rogers, AR	1359	U
Gemtron Corporation; Sweetwater, TN	2000	U
Guardian Industries Corp.; Corsicana, TX	1314	U
Hamilton Glass Products, Inc.; Vincennes, IN	1386	U
<b>5/32 inch tempered pattern glass (medium patterns)</b>		
Guardian Industries Corp.; Kingsburg, CA	1301	U
<b>3/16 inch tempered pattern glass (shallow patterns)</b>		
AFG Industries, Inc.; Greenland, TN	1139	U
AFG Industries, Inc.; Kingsport, TN	1143	U
Downey Glass Company, Inc.; Downey, CA	607	U
Downey Glass Company, Inc.; Los Angeles, CA	935	U
Falconer Glass Industries, Inc.; Falconer, NY	1330	U
Flex-Temp, Inc.; Irving, TX	1321	U
Fulton Glass Industries, Inc.; Red Oak, GA	1326	U



	<u>SGCC NO.</u>	<u>MAX. SIZE CERTIFIED</u>
<b>TEMPERED PATTERN GLASS - continued</b>		
<b>3/16 inch tempered pattern glass (shallow patterns)</b>		
Guardian Industries Corp.; Fort Lauderdale, FL	1318	U
Guardian Industries Corp.; Kingsburg, CA	1304	U
Hamilton Glass Products, Inc.; Vincennes, IN	1387	U
Howe-Martz Glass Company, Detroit, MI	1344	U
Ohio Plate Glass Company; Lewisburg, OH	188	U
PPG Industries, Inc.; Hunt Valley, MD	1325	U
PPG Industries, Inc.; Miami, FL	1298	U
Shaw Glass Company, Inc.; South Easton, MA	1299	U
Tempered Glass Corporation; Tampa, FL	1328	U
Tempglass Eastern, Inc.; Norcross, GA	1338	U
Virginia Glass Products Corporation; Martinsville, VA	1275	U
<b>3/16 inch tempered pattern glass (deep patterns)</b>		
Gateway Industries; Rogers, AR	1394	U
Ohio Plate Glass Company; Lewisburg, OH	328	U
<b>7/32 inch tempered pattern glass (shallow patterns)</b>		
Downey Glass Company, Inc.; Downey, CA	608	U
Downey Glass Company, Inc.; Los Angeles, CA	678	U
Flex-Temp., Inc.; Irving, TX	1439	U
Ohio Plate Glass Company; Lewisburg, OH	562	U
PPG Industries, Inc.; Miami, FL	219	U
Shaw Glass Company, Inc.; South Easton, MA	1071	U
Tempered Glass Corporation; Tampa, FL	1118	U
<b>LAMINATED GLASS</b>		
<b>3/16 inch laminated transparent glass</b>		
Dlubak Studios, Inc.; Freeport, PA	1348	34 by 48"
Lear Siegler, Inc.; Wichita, KS	1360	U
<b>7/32 inch laminated transparent glass</b>		
Falconer-Lewiston, Inc.; Lewistown, PA	1282	U
Guardian Industries Corp.; Upper Sandusky, OH	458	U
Lear Siegler, Inc.; Wichita, KS	1173	U
<b>1/4 inch laminated transparent glass</b>		
Dlubak Studios, Inc.; Freeport, PA	1347	U
Falconer-Lewiston, Inc.; Lewistown, PA	1284	U
Guardian Industries Corp.; Upper Sandusky, OH	487	U
<b>3/8 inch laminated transparent glass</b>		
Dlubak Studios, Inc.; Freeport, PA	1349	U
Falconer-Lewiston, Inc.; Lewistown, PA	1315	U
<b>1/2 inch laminated transparent glass</b>		
Dlubak Studios, Inc.; Freeport, PA	1350	U
Falconer-Lewiston, Inc.; Lewistown, PA	1316	U
<b>LAMINATED PATTERN GLASS</b>		
<b>3/16 inch laminated pattern glass (shallow patterns)</b>		
Lear Siegler, Inc.; Wichita, KS	1343	U
<b>0.080 through 0.125 inch acrylic</b>		
Flex-O-Glass, Inc.; Dixon, IL	118	U

## PROCEDURAL GUIDE

## FOREWORD

Acceptance of a certified product containing safety glazing materials comes with the conviction that such certification assures a high level of safety and quality and that the integrity of the identifying mark or certification label is being reliably maintained by a competent certifying agency.

The provisions of American National Standard Z97.1 provide a sound technical basis for the required high level of safety. With the addition of independent administration plus periodic, routine sampling and product evaluation, a program of product certification is developed that provides an independent third party certification and testing program. The Certification Program described here is predicated upon the concept of independent and impartial administration of the certification procedures which are incorporated in the SGCC 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 SGCC License Agreement is the governing document for operation of the Certification Program. This Procedural Guide, which is not an extension of that document, serves merely to describe the administrative procedure and routine operation of the Certification Program.

## GENERAL INFORMATION

## THE CERTIFICATION CONCEPT

The SGCC Certification Program is based on the conviction that no standard of safety or quality is good without the continuous adherence of the licensees to that standard.

To buyers, specifiers, code officials and users, the SGCC certification label offers the manufacturer's assurance that his safety glazing material has been produced in conformance to American National Standard Z97.1 covering safety glazing materials used in buildings.

Many state laws, municipal ordinances and building codes require that all glazing installed in certain pre-defined hazardous locations comply with the ANSI Standard.

## WHO CAN BECOME A LICENSEE?

Every manufacturer of safety glazing materials is eligible, on a voluntary basis, to participate.

## WHO CONDUCTS THE PROGRAM?

The Safety Glazing Certification Council, a non-profit corporation, is the sponsor of this certification program. SGCC supervises the certification program under which the administrator periodically checks and reports compliance of the manufacturers of products having the SGCC certification label with the requirements of ANSI Z97.1.

## ADMINISTRATION

Certification Services Corporation (CSC), is the independent Administrator of the certification program. CSC maintains the SGCC office of certification and handles the routine day to day business. All transactions are done in the name of SGCC.

## HOW CAN YOU BECOME A LICENSEE?

The following must be accomplished before SGCC can certify an item safety glazing material:

- a) The manufacturer signs two copies of the SGCC License Agreement (including notarization of the Affidavit, Appendix A) and sends these to SGCC. SGCC will countersign both copies and return one to the manufacturer.
- b) The manufacturer directs the testing laboratory to send to SGCC one copy of a valid test report from an official SGCC recognized testing laboratory indicating full and complete compliance with the specifications, namely ANSI Z97.1. (This is the "initial" or "prototype" testing and the sample is furnished by the manufacturer directly to any one of the SGCC recognized independent commercial testing laboratories, which the manufacturer selects.)
- c) The manufacturer sends to SGCC the six-month certification fee for each item which is to be certified.

After receipt of all of the above items, SGCC sends to the licensee a notice of product certification which includes a SGCC certification number. This number **must** be incorporated into the permanent label to be affixed on each piece of certified safety glazing material. The certified item will then be listed in the next published certified products directory.

#### HOW THE CERTIFICATION PROGRAM WORKS

The American National Standards Institute sets safety standards and safety glazing materials **must** meet or exceed applicable ANSI standards before they can be certified by SGCC. Specifications for safety glazing materials used in buildings are developed and reviewed at least every five years by ANSI.

SGCC recognized independent testing laboratories conduct all tests. All laboratories, whose test reports are utilized by this certification program, shall be approved by the SGCC certification committee. Initial or prototype tests are performed at the testing laboratory selected by the licensee. Routine evaluation samples are tested by the testing laboratory selected by the administrator.

#### ADMINISTRATOR AUTHORIZES CERTIFICATION

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

Licensees label safety glazing material within the limits of the product size tested. If 34 by 76 inches is the initial or prototype test size, then certification is extended to all sizes and the label contains a letter U, designating such unlimited size. The letter L, contained within the label, denotes that certification is limited to the width and length of the initial or prototype test size.

#### PRODUCTS LISTED IN CERTIFIED PRODUCTS DIRECTORY

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 products manufacturers, glazing contractors, home builders, architects, regulatory agencies and code-making groups, etc. Directory listings contain the licensee's name, plant location, product description and a copy of the actual label that is **permanently** marked upon each piece of certified safety glazing material.

The administrator samples certified glazing material from the licensee's inventory once every six months.

An approved testing laboratory determines compliance of these samples with the specifications. Tests are made either at the place of manufacture or at the laboratory selected by the administrator from the approved list. Results of each test are mailed promptly to the licensee by the administrator.

#### COMPLIANCE SAFEGUARDS

##### HOW IS COMPLIANCE ASSURED

Any certified product found in the course of routine sampling and evaluation not to be in compliance with the specifications, is subject to having certification removed. The licensee is given a 30-day grace period in which to demonstrate to the satisfaction of the administrator that his product is in compliance. If he does not, certification is **automatically terminated** at the end of the 30-day period.

##### CHALLENGING A CERTIFIED PRODUCT

Complaints of non-compliance from any source will be investigated promptly by SGCC upon receipt of the complaint in writing along with an appropriate surety deposit. A minimum surety deposit of \$1,000 will be required for each complaint of non-compliance. The surety deposit will be assessed at the rate of \$350 per man day **plus** the reasonable costs of travel and the maintenance 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 complainant'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.

##### WITHDRAWAL OF CERTIFIED PRODUCT

Any product which has been certified may be **voluntarily withdrawn** from the certification program by the licensee at any time.

**COSTS****WHAT DOES THE PROGRAM COST?**

The licensee pays all projected fees to SGCC on a six-month basis, in advance. A licensee is invoiced for each item that is certified and listed separately in the certified products Directory. The invoice will include the fees for future routine evaluation testing.

Initial certification for each item will be for a period of six months. However, the next invoice to a licensee will have the fees prorated to the nearest whole month in such a manner that participation in the certification program will be on a January 1 to July 1 and July 1 to January 1 basis.

**CERTIFICATION PROGRAM DOCUMENTS AND AGREEMENTS****LICENSE AGREEMENT**

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

Future amendments or revisions to the license agreement will be recommended by the SGCC certification committee and enacted by the SGCC board of directors.

**EFFECTIVE DATE, DURATION AND TERMINATION**

The license agreement becomes effective on the date of its execution; has an initial duration of six months (adjustable to a January 1 to July 1 or a July 1 to January 1 basis), and is automatically renewed for successive, additional periods of six months, unless either party gives notice at least sixty days prior to the date of expiration that cancellation is requested or unless revoked by SGCC for causes set forth in the document.

Upon proper execution and acceptance by SGCC the preissued certification number bond informs a licensee of the exact mark of an item to be certified in the future. Thus he can purchase the proper marking equipment before the item is actually certified. If the licensee marks this number upon production prior to actual certification the bond is forfeited to SGCC.

**ADMINISTRATIVE SERVICE AGREEMENT**

This agreement, entered into by SGCC and Certification Services Corporation, governs the relationship between SGCC and CSC, the independent administrator. In general, it provides that the administrator.

- a) samples certified products routinely
- b) has the right to witness any and all testing required by the program
- c) reviews all test reports in order to determine compliance of the certified product with the specifications
- d) inspects and approves all in-plant and test laboratory test facilities for use in this certification program (test laboratories are "recognized" or approved by the SGCC certification committee)
- e) publishes and mails the SGCC certified products directory on or about each January 1 and July 1
- f) handles all routine clerical duties of SGCC with respect to certification matters
- g) acts as SGCC treasurer, invoice licensees, maintaining a bank account and dispersing funds (fiscal reports are made to the SGCC certification committee)
- h) furnishes all testing except for prototype tests
- i) attends all scheduled meetings of the SGCC certification committee and
- j) in all of its actions acts in the name of SGCC

**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. It covers the steps to be taken in any given procedural situation in the interest of equitable and uniform treatment of licensees and the preservation of the integrity of the certification program.

**CERTIFIED PRODUCTS DIRECTORY**

This directory is the one document and publication that is normally in the public's eye and contains a listing of the certified safety glazing materials of each licensee.

**CERTIFICATION LABEL**

This certification mark is permanently affixed to each piece of certified safety glazing material by the licensee. It contains a number that refers to the listing in the certified products directory. The listing then provides a complete product description including the company name, plant location, etc.

**PROGRAM RESPONSIBILITY**

The SGCC board of directors has overall responsibility for the well being and acceptance of the certification program by the industry, building officials and the public. It also bears corporate legal responsibility.

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

**COMMUNICATIONS**

In all matters concerning the administration and implementation of the SGCC certification program, correspondence may be directed to any of the following:

Mr. Richard L. Morrison, SGCC President  
c/o Ford Motor Company Glass Division  
300 Renaissance Center; P.O. Box 43343  
Detroit, MI 48243  
Telephone: 716-665-6422

Mr. Robert A. Moss, Chairman  
SGCC Certification Committee  
c/o Hamilton Glass Products, Inc.  
2000 Chestnut Street  
P.O. Box 317  
Vincennes, IN 47591  
Telephone: 812-882-2680

Mr. Claude F. Robb  
Administrative Manager  
ETL Testing Laboratories, Inc  
Route 11 - Industrial Park  
P.O. Box 2040  
Cortland, NY 13045  
Telephone: 607-753-6711



**CERTIFICATION GUIDELINES AND INTERPRETATIONS**

For guidance in certifying safety glazing materials the SGCC certification committee has adopted the following:

**GENERAL****G.1**

Participation in the certification program will be on a January 1 to July 1 and July 1 to January 1 basis. Charges will be prorated to the nearest whole month based on the date of approval of certification.

**G.2**

Tests for initial compliance of safety glazing materials to ANSI Z97.1-1984 will be accepted from any testing laboratory approved by the SGCC certification committee.

**G.3**

Paragraph (1) Section 5.1.3 of ANSI Z97.1-1984 is intended to apply to laminated, wired and organic coated glass only. Paragraph (2) is intended to apply to tempered glass only. Paragraph (3) is intended to apply to plastics only. Paragraph (4) is intended to apply to any safety glazing material.

**G.4**

For insulating glass units to be considered safety glazing material, each light in the construction must be of safety glazing material.

**G.5**

The SGCC item number when used as part of a permanent label designates the name of the licensee (participant) and also the location of the manufacturing plant since the certified products directory which lists the item number and pertinent data is published twice a year.

**G.6**

a) All test specimens, except for prototype samples, must be marked with the correct SGCC permanent label prior to testing in order to be considered a valid sample. The administrator shall construe the absence of a correct permanent label as a failure to comply with the specifications. In such cases of noncompliance, Sections a, c, and e of G.11 shall be followed.

b) The laboratory shall verify that the label has the correct SGCC number, designation of the ANSI standard, nominal thickness, and certified size designation (U or L).

c) The testing laboratory is to advise the administrator of any specimen that does not in fact bear the correct SGCC permanent label and will be instructed by the administrator not to test but hold the sample.

d) The administrator will inform the licensee of the situation and direct (by letter) the testing laboratory to commence testing no later than 30 days hence. Until that time the testing laboratory is instructed to make these specimens available to the licensee at their convenience (the specimens are to remain at the testing laboratory) in order that the licensee may point out or show them that in fact the SGCC permanent label is correct or agree that in fact the correct SGCC permanent label is not present. In cases of any dispute between the licensee and the testing laboratory the decision of the administrator shall be final. The licensee shall not mark specimens after receipt at the testing laboratory.

e) As of July 1, 1985 the SGCC permanent label must contain ANSI Z97.1-1984 in order to be considered a correct permanent label for purposes of Guideline G.6.

**G.7**

Safety glazing materials for which certification is requested for indoor use only shall be subjected to the provisions of section 5.1 (impact tests) and 5.4 (aging tests) of ANSI Z97.1-1984 irrespective of the composition or construction of the glazing material. Like products and materials produced in the same manner as samples submitted for test shall be legibly and permanently marked in one corner with the words "Indoor Use Only" and the SGCC identification number.

**G.8**

After initial compliance with a sample size as stated in Table 1, testing of other sizes which represent the sizes manufactured may be allowed, provided however that all sizes produced up to the size provided by Table 1, ANSI Z97.1-1984 are exposed to selection for testing.

**G.9**

Specimen sizes up to 34 inches by 77 inches shall be valid samples when independently obtained by the administrator for purposes of routine evaluation.

## G.10

In cases where the administrator samples and identifies specimens for routine evaluation of the licensee's premises or requests licensee's samples when none are available at the time of sampling:

- a) The licensee be permitted 6 weeks in which to effect delivery of said specimens to the administrator's designated testing laboratory.
- b) Failure to act as specified above shall be construed by the administrator as failure of the said specimens to comply with the specifications and the administrator shall act as provided for in license agreement A.6.

## G.11

In cases where a routine evaluation sample fails to comply with the specifications:

- a) Written notice and an invoice shall be sent to the licensee by the administrator stating that within 30 days from the date of such notice the licensee must submit a retest sample to the testing laboratory designated by the administrator.

Certification shall be removed if the sample and payment are not received within the allotted 30 days or if the sample submitted fails to comply with the specifications.

- b) Within 3 months the administrator shall obtain an additional random sample for evaluation (in addition to the routine evaluation sample obtained twice a year). The administrator shall be certain that this additional sample is of recent production.

- c) At the option of the administrator, specimens submitted under a) above shall be either prototype size and pattern or identical to those previously sampled and of recent production.

- d) Certification shall be removed if the additional random sample obtained in b) above fails to comply with the Specifications.

- e) All costs related to G.11 are to be borne by the licensee.

## G.12

If a licensee who manufactures a certified product outside the 48 contiguous states feels that in a particular instance that he will be unable to act as provided for in paragraph a) of SGCC Guideline G.11, he should notify the administrator. The administrator will then contact the chairman of the certification committee for a decision as to what action is to be taken.

## G.13

In cases where a certified item is produced infrequently or in small quantities so as to make it difficult for the administrator to obtain routine evaluation samples, the licensee shall notify the administrator at least two weeks in advance of any production of such item.

## G.14

The administrator shall remove certification from all of any licensee's products for failure to pay any monies due to SGCC within 30 days of invoice date. (Reference license agreement A.2, A.12 and B.6.)

## G.15

In the situation where a licensee desires to recertify a product that previously had certification removed because of failure to comply with the specifications (label and thickness tolerances excepted), the product shall be routinely sampled four times during the first year. The costs involved shall be paid by the licensee.

## G.16

The nominal thickness designations in SGCC authorized permanent labels for safety glazing materials may be shown in metric units. The thickness will be expressed in millimeters, limited to two decimal places, and will have the suffix "mm".

## G.17

All safety glazing materials that are not symmetrical from surface to surface shall be impacted two specimens on one side and two specimens on the other side.

## G.18

Certified and permanently labeled safety glazing materials such as laminated glass, wired glass, rigid plastic or organic coated glass may be cut into smaller pieces by a distributor or installer after manufacture and it is not practical for each such smaller piece to bear a manufacturer's permanent label when finally installed in a building. When this is the case, then the distributor or installer shall apply a permanent label to each piece, which states his name and certifies that he cut the piece from material that was properly labeled in accordance with the requirements of SGCC.

For the purpose of this guideline, a permanent label is defined as one that will remain permanently legible and would be destroyed in attempts to remove it from the product.

#### G.19

The semi-annual invoicing date for certification fees shall be April 1 and October 1 of each year and the administrator is instructed to take those steps necessary to remove certification from licensees for failure of payment prior to closing date of the certified products directory.

#### G.20

For certification purposes a panel of glazing material composed of multiple components (such a leaded glass) may be tested and interpreted as a unit.

#### G.21

A preissued SGCC certification number shall be issued by the administrator upon receipt of a properly executed license agreement and a properly executed bond form in the amount of \$10,000. The preissued SGCC certification number, if not used by the licensee, will be terminated twelve months from the date of issue. The condition of the bond is such that if the licensee does not label any safety glazing material with the preissued certification number prior to formal certification then the bond shall be void.

#### G.22

In the case of wired glass, plastics and organic coated glass certification of a patterned product may be extended to cover other patterns provided:

- a) The nominal thickness of the proposed alternate and all aspects other than pattern are the same as the certified product.
- b) The administrator of the certification program is provided with a copy of a prototype test from an approved laboratory, showing satisfactory compliance with the impact requirements of ANSI Z97.1-1984 for each alternate pattern proposed.
- c) The certification committee is provided with a 6 by 6 inch sample of each proposed alternate for its record and file. This must be sent to the administrator of the certification program.

After admission under blanket certification covering patterned products, any such patterns available may be selected by the administrator for routine sampling and testing.

In the case where a routine evaluation sample covered under a blanket certification fails to comply with the specifications the situation requires that particular product be submitted for the retest sample required by Guideline G.11a and also that particular product be sampled by the administrator for the additional sample required by Guideline G.11b.

#### G.23

There may be instances when a production facility is temporarily inoperative. This could be caused by, but not limited to, equipment repair or replacement, labor difficulties, energy or material shortages or economic considerations. As a consequence, samples for routine testing may not be available for long periods. The licensee may desire to retain certification during the shutdown period. This shall be done as follows:

- a) Prior to or within 2 weeks after the shutdown, the licensee shall inform the SGCC administrator by certified mail.
- b) The SGCC administrator will immediately supply the licensee with test release bond forms for submission by the licensee. A separate bond shall be submitted for each certified product affected.
- c) Within 2 weeks after receipt of the bond forms, the licensee shall submit them to the SGCC administrator.
- d) During the period covered by the bond the licensee shall retain certification, contingent upon payment of normal certification fees and meeting all other licensee obligations. Bonds will terminate 90 days after acceptance by SGCC but may be renewed by the licensee any number of times. Renewal is an obligation of the licensee and requires all steps listed herein.
- e) Within one week after re-activation of the production facility the licensee shall 1) notify the SGCC administrator by certified mail and 2) submit samples from the first weeks production to an SGCC approved laboratory for testing. In cases where more than one certified product is produced with the same equipment, samples of each must be furnished for testing within the first months period during which they are submitted.

f) Failure of the licensee to comply with any of the preceding shall be the basis for removal of certification from the affected products.

#### G.24

When a licensee's production equipment will not produce a size of 34 by 76 inches and the licensee wishes to certify a) a size whose smaller dimension exceeds 34 inches, material shall be tested whose smaller dimension is 34 inches or b) a size whose larger dimension exceeds 76 inches, material shall be tested whose larger dimension is 76 inches.

#### G.25

When a licensee specifically and voluntarily desires to use a SGCC permanent label on their product that denotes compliance with ANSI Z97.1-1966, ANSI Z97.1-1972, ANSI Z97.1-1975 and ANSI Z97.1-1984 or combination thereof, that they notify SGCC in writing of the certified item that they desire to so mark. SGCC will, at the request of the licensee, conduct compliance tests to ANSI Z97.1-1966, ANSI Z97.1-1972, ANSI Z97.1-1975 and ANSI Z97.1-1984 or combination thereof. A single set of four test specimens will be impacted to determine impact test requirements of all standards. Upon successful completion of compliance tests the safety glazing materials are permanently labeled and listed in the SGCC certified products directory as having met the requirements of 1966, 1972, 1975 and 1984 versions or combination thereof the ANSI Z97.1 standard. Any costs involved shall be paid by the licensee.

#### G.26

Any label that can be removed intact shall not be considered permanent and is not acceptable to SGCC.

#### G.27

A licensee, by executing a supplementary license agreement, can elect to be in both 16 CFR 1201 and ANSI Z97.1-1984 programs under one SGCC number provided the licensee submits four specimens to be impact tested to ANSI Z97.1-1984 and one specimen to be impact tested to 16 CFR 1201 (all safety glazing materials that are not symmetrical from surface to surface, shall be impacted one specimen on one side and one specimen on the other side for 16 CFR 1201). If any one specimen of the composite sample will be considered to have failed to comply with both specifications.

#### G.28

The administrator shall construe noncompliance with thickness tolerances as a failure to comply with the specifications. In such cases of noncompliance, Sections a, c, and e of G.11 shall be followed.

#### G.29

For the purposes of certification, the thickness requirements of Federal Specification DD-G-451d shall apply.

#### G.30

For certification purposes, the minimum thickness shall be 0.092 and the maximum thickness shall be 0.108 inches for 0.100 inch glass.

#### G.31

For certification purposes, the nominal thickness of single strength pattern glass shall be 0.094 inches and thickness tolerances shall be plus 0.047 inches and minus 0.015 inches.

#### G.32

None

### TEMPERED TRANSPARENT GLASS

#### T.1

Certification of either flat glass or patterned glass will not cover the other except as noted in Guideline T.2. (Flat glass designates ground and polished plate, float and sheet glass.)

#### T.2

Polished plate glass and the rough glass blank from which it is produced will be considered to be of equal nominal thickness. Certification of tempered flat glass with therefore be interpreted as including tempered rough plate blank.

#### T.3

Certification of regular tempered glass will also cover tinted, heat absorbing and coated glasses of the same nominal thickness. Glasses of the same nominal thickness with a ceramic material applied as a continuous or partial coating to one or more surfaces prior to tempering are also covered.

#### T.4

In cases where certified glass is normally not available for sampling, the licensee may make an overrun (of four lights of prototype size that are to be marked with the date of production) when the item is in normal production and these will be accepted by the administrator if other samples are not available the administrator shall notify the licensee to submit prototype size samples to the administrator within six weeks.

## T.5

Certification of any nominal thickness of tempered safety plate, float or sheet glass will also cover the other two types. ANSI Z97.1 does not require the permanent label on tempered safety glass to specify which type of glass is used. Nor is it required that the test specimens be identified in this regard.

## T.6

Prototype test shall be conducted on bent specimens sampled from normal production run. The specimen size shall have a surface area of at least 50 percent of the maximum size for which certification is desired. Routine tests may be performed on bent specimens or flat specimens fabricated using the same tempering furnace. The test apparatus shall be modified to clamp the vertical straight edges and to support the concave side of the curved edges. Impact shall be on the convex surface.

**TEMPERED PATTERN GLASS**

## TP.1

For the purposes of certification, the nominal thickness of patterned, figured, or rough rolled glass are the common fractions found in DD-5-451d. The permanent label must contain this fraction or a metric or decimal dimension within the tolerance of this thickness as published in DD-5-451d.

The patterns in each thickness will be classified as to the ratio of minimum to maximum thickness as follows:

<u>Pattern depth class</u>	<u>Ratio</u>
Shallow pattern glass	0.90 or above
Medium pattern glass	0.80 through 0.89
Deep pattern glass	0.79 or below

Certification will be by nominal thickness and pattern depth class. Any pattern in a certified thickness and pattern depth class is certified.

New or unlisted patterns must be submitted to the pattern subcommittee for classification and file, prior to certification. After measurement, the new pattern will be assigned to a pattern depth class.

In the case of 5/32 inch tempered pattern glass refer to DD-G-1403b because this thickness is not included in DD-G-451d.

Certification of deep also covers medium and shallow patterns of the same nominal thickness.

Certification of medium also covers shallow patterns of the same nominal thickness.

## TP.2

The maximum thickness shall be recorded when measuring the thickness of pattern glass.

## TP.3

For tempered pattern glass, one specimen must be weighed and the weight of ten square inches determined from the weight, width and height of that specimen to use for test purposes.

## TP.4

For certification purposes, the nominal thickness of 210 tempered pattern glass shall be 0.210 inches and thickness tolerances shall be plus 0.031 inches and minus 0.016 inches.

## TP.5

When medium pattern glass is not available for routine sampling, the licensee submitted specimens must be a medium pattern (a shallow pattern is not acceptable).

## TP.6

When deep pattern glass is not available for routine sampling, the licensee submitted specimens must be a deep pattern (shallow or medium patterns are not acceptable).



**LAMINATED GLASS****L.1**

Certification of regular laminated glass will also cover tinted, heat absorbing and coated glasses, both flat and bent of the same nominal thickness.

**L.2**

In cases where certified laminated glass is normally not available for sampling the licensee may make an overrun (of four lights of prototype size that are to be marked with the date of production) when the item is in normal production and these will be accepted by the administrator if other samples are not available. Otherwise, when production samples are not available the administrator shall notify the licensee to submit prototype size samples to the administrator within six weeks.

**L.3**

Certification of 7/32 inch laminated glass also covers SS/DS and vice versa.

**L.4**

When a laminated glass is certified, other laminated glasses having the same thickness or thicknesses of glass and a greater thickness of plastic interlayer will be considered to be of equal nominal thickness and will be included in the certification.

**L.5**

Laminated safety glass need not be identified by type of base glass.

**L.6**

Thickness of the plastic interlayer shall be measured by the SGCC standard method.

**L.7**

For certification purposes the following thickness tolerances shall be used. Thickness tolerance shall apply only to the overall thickness. The plus tolerance shall be the sum of all the individual plus tolerances of each layer of the laminate. The minus tolerance shall be the sum of all of the individual minus tolerances of each layer of the laminate. Polyurethane interlayer shall have a thickness tolerance of plus or minus 0.015 inches.

The tolerance of the polyvinylbutyral (PVB) shall be based on the nominal thickness of the interlayer with a plus tolerance of 0.002 and a minus tolerance of 0.004 inches.

**L.8**

When a laminated annealed glass is certified, other laminated glasses having the same thickness or thicknesses of heat strengthened or tempered glass and the same or greater thickness of plastic interlayer of the same chemical composition will be considered to be included in the certification.

**L.9**

When laminated glass is not available for routine sampling, the licensee submitted specimens must contain the identical thickness plastic interlayer that was contained in the prototype specimens.

**WIRED GLASS****W.1**

Certification of one polished wired glass may be applied to other polished wired glasses provided:

- a) The glass thickness of the candidate glass is nominally equal to the thickness of the glass that is certified.
- b) The wire diameter of the candidate glass is at least as great as the wire diameter in the glass that is certified.
- c) The spacing of the wires in the candidate glass is no greater than the spacing of the wires in the glass that is certified.
- d) SGCC has been presented with a test report indicating compliance of the candidate glass with the impact test requirements of ANSI Z97.1-1984.

After admission under the blanket certification covering wired glasses all wired glasses so certified must be exposed to random sampling at each examination although only one will probably be selected for testing.

**PLASTICS - GENERAL****P.1**

Certification of one tint or color of rigid plastic will also cover other tints, colors, flat configurations or bent and formed configurations.

**P.2**

For certifying all plastics covering a range of thicknesses, prototype impact tests are required of the minimum thickness and also of the maximum thickness (except that 0.250 inch thickness would be tested if the maximum thickness exceeds 0.250 inches). Only one certification number will be issued and shall be marked upon all thicknesses. Routine evaluation samples are to be selected by the administrator from any of the certified thicknesses.

**P.3**

The following thickness tolerances shall be used for certification purposes:

Outdoor use plastic materials Class 1. Cast acrylic. (Including continuously cast sheet): As specified in Federal Specification LP-391, latest issue.

Outdoor use plastic materials Class 2. Extruded acrylic: As specified in Federal Specification LP-507, latest issue.

Outdoor use plastic materials Class 3. Extruded polycarbonate: As specified in Military Specification MIL-P-46144, latest issue.

Indoor use plastic materials Class 1: Plus or minus 10 percent of nominal thickness.

**P.4**

The maximum thickness shall be recorded when measuring the thickness of patterned plastics.

**P.5**

Certification of either smooth plastic or patterned plastic will not cover the other.

**PLASTICS - EXTERIOR USE****PE.1**

Sheet plastics for exterior use must comply with ANSI Z97.1-1984

**PE.2**

Certification of plastics for exterior use shall be permitted prior to completion of ANSI Z97.1-1984 weathering tests (paragraph 5.3) provided that a considered expert opinion states that the infrared spectrogram indicates that the plastic is an acrylic or UV inhibited polycarbonate of proven weatherability. Certification shall be removed if compliance with the weathering test is not demonstrated within six months of the certification date.

**PE.3**

For all plastics requiring UV weathering tests an infrared spectrogram shall be obtained of all prototype weathering specimens. An infrared spectrogram shall be obtained of all routine evaluation samples and shall be compared with that of the prototype in lieu of conducting weathering test. The spectral scan shall be made using a minimum film thickness of 0.002 inches or its equivalent.

**PE.4**

When initial Charpy unnotched specimens do not break, then notched specimens shall be used for both initial and exposed Charpy impact testing. The specimens shall be notched prior to UV exposure and the notched surface shall be exposed to the UV.

**PLASTICS - INDOOR USE ONLY****PI.1**

Sheet plastics used in indoor applications only, do not have to comply with paragraph 5.3 of ANSI Z97.1-1984 (UV Weathering) but must comply with paragraph 5.4.

**PI.2**

The permanent label authorized by SGCC must include "Indoor Use Only".

## PI.3

For all indoor plastics requiring aging tests, an infrared spectrogram shall be obtained of all prototype aging specimens. An infrared spectrogram shall be obtained of all routine re-evaluation samples and shall be compared with that of the prototype in lieu of conducting aging tests. The spectral scan shall be made using a minimum film thickness of 0.002 inches or its equivalent.

**LEADED PATTERNED ANNEALED GLASS**

## LG.1

Certification of one leaded patterned glass (annealed) may be extended to cover other patterns (on the glass surface) provided:

- a) The nominal thickness of the proposed alternate and all aspects other than pattern are the same as the certified product.
- b) The administrator of the certification program is provided with a copy of a prototype test from an approved laboratory, showing satisfactory compliance with the impact requirements of ANSI Z97.1-1984 for each alternate pattern proposed.
- c) The certification committee is provided with a 6 by 6 inch sample of each proposed alternate for its record and file. This must be sent to the administrator of the certification program.
- d) After admission under blanket certification covering leaded patterned glass (annealed), any such patterns available may be selected by the administrator for routine sampling.

## LG.2

Certification of one diamond shaped leaded patterned glass (annealed) may be extended to cover other sizes of diamonds provided:

- a) All aspects of the product except diamond size is the same as the certified product.
- b) The administrator of the certification program is provided with a copy of a prototype test from an approved laboratory, showing satisfactory compliance with the impact requirements of ANSI Z97.1-1984 for each alternate size diamond proposed.
- c) The certification committee is provided with a 6 by 6 inch or a proper and representative sample of each proposed alternate for its record and file. This must be sent to the administrator of the certification program.

After admission under blanket certification, any such size diamond available may be selected by the administrator for routine testing.

## LG.3

For leaded diamond patterned glass (annealed) the tolerance for diagonal came center dimensions shall be plus or minus 12 percent.

Prototype samples must have diagonal came center dimensions 10 percent greater than nominal. Diamond size listed in the certified products directory shall be nominal dimensions.

**ORGANIC COATED GLASS**

## AG.1

Thickness of the applied plastic coating shall be measured by the SGCC standard method.

## AG.2

The SGCC authorized permanent label, which complies with Guideline G.26 must be imprinted upon or applied to a surface of the plastic for all plastic coated annealed glasses.

Prototype test shall be conducted on bent specimens of the surface area at least 50 percent of the maximum size for which certification is desired. Routine tests may be conducted on flat or bent specimens. The test apparatus shall be modified to clamp the vertical straight edges and to support the concave side for the curved edges. Two specimens shall have organic coating on the concave surface and two on the convex surface. Impact shall be on the convex surface.

**ANSI Z97.1-1984 Safety Performance Specifications and Methods of Test  
for Safety Glazing Materials used in Buildings**

The purpose of ANSI Z97.1-1984 is to prescribe the functional properties of safety glazing materials so that they can be used in any place in buildings for which they possess the requisite characteristics. Intended to serve as a convenient reference for building officials, this important document is designed to provide a basis for standards that may be incorporated in federal, state and local regulations.

Copies of ANSI Z97.1-1984 may be obtained from:

American National Standards Institute  
1430 Broadway  
New York, NY 10018

\* \* \* \* \*

**SGCC LABEL REQUIREMENTS**

The SGCC certification label must be permanently marked on each piece of safety glazing material or else it is not covered by the SGCC certification program. The labels reproduced in this certified products directory are typical of those that you will find on each piece of safety glazing material.

The permanent label must contain the SGCC number, ANSI Z97.1-1984, the nominal thickness and the letter U or L indicating certified size.

For labeling purposes, a line of demarcation shall separate those standards covered by the SGCC number from any other standards the licensee wishes to reference.

For purposes of Guideline G.6 "SGCC-xxx/yyy" shall be the only correct designation other than "SGCC-xxx" and "SGCC-yyy" when an identical item is in both the ANSI and CPSC programs. (See examples below.)

"After having successfully passed the appropriate tests, like products and materials produced in the same manner as samples submitted per test shall be legibly and permanently marked in one corner with . . . the characters "ANSI Z97.1-1984 - INDOOR USE ONLY" and shall be marked also with the manufacturer's distinctive mark or designation." Quoted from ANSI Z97.1-1984.

"Organic-coated glass materials shall be permanently marked on the organic coating with a label, including the phrase, "GLAZE THIS SIDE IN" to indicate to the installer, inspector or user which side of the organic-coated glass should be exposed to the elements if there is a specific side that should be exposed." Quoted from ANSI Z97.1-1984.

The permanent label must contain identification of the plant in which the product was made and the name or trade mark of the licensee. (The SGCC number does this by reference to this certified products directory.)

The permanent label must be affixed to certified products only at the time and place of manufacture.

The permanent label must be affixed only to safety glazing materials of the licensee's own manufacture, which are certified in the SGCC program.

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 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.

**EXAMPLES:**

ANSI Z97.1-1984  
16 CFR 1201 II  
SGCC-123/691 1/4 U

ANSI Z97.1-1984 SGCC-123 1/4 U  
16 CFR 1201 II SGCC-691

**ACI GLASS PRODUCTS, INC.**  
9010 South Norwalk Boulevard  
Santa Fe Springs, CA 90670

**ARDCO, INC.** (ANSI ONLY)  
12400 South Laramie Avenue  
Chicago, IL 60658

**ardco**  
**TEMPER - GARD**  
**ANSI Z97.1-1984**  
**SGCC-1042 3/16 U**

**ADVANCED COATING TECHNOLOGY, INC.**  
306 Beasley Drive  
Franklin, TN 37064

**ASHAI GLASS COMPANY, LTD.** (ANSI ONLY)  
c/o Global Link, Inc.  
548 Rose Avenue  
Venice, CA 90291

**ASAHI**  
Tempered Safety Glass  
ANSI Z97.1-1984  
SGCC-1346 3/8 U

**ACT**  
ANSI Z97.1-1984  
16 CFR 1201 II  
SGCC-1277 1/4 U

**AFG INDUSTRIES, INC.**  
P.O. Box 929  
Kingsport, TN 37662

**CHAMBERLAIN MANUFACTURING CORPORATION**  
P.O. Box H  
Hot Springs, AR 71901

**CHAMBERLAIN**  
TEMPERED SAFETY GLASS  
MALVERN, ARKANSAS  
16CFR 1201 II  
ANSI Z97.1-1984  
SGCC-1377 3/16U

▲  
▲  
▲  
TEMPERED  
16 CFR 1201-II  
ANSI Z97.1-1984  
1/8U SGCC-1390  
AFG 006  
- - - - -  
BS 6206A

**ANGLASS INDUSTRIES, INC.**  
12364 Gladstone Avenue  
San Fernando, CA 91342

(ANSI ONLY)

TEMPERED  
SAFETY GLASS  
**ANGLASS**  
CALIFORNIA, USA  
ANSI Z97.1-1984  
SGCC-520 1/8U

**COLONIAL MIRROR AND GLASS CORPORATION**  
142 19th Street  
Brooklyn, NY 11232

**COLONIAL MIRROR & GLASS CORP.**  
SAFETY TEMPERED GLASS  
GLAS STEEL 3/4" U  
ANSI Z97.1-1984  
16 CFR 1201-I, II-SGCC-D166

UNLESS OTHERWISE DESIGNATED, ABOVE LOGO INDICATES PARTICIPATION IN BOTH ANSI AND CPSC PROGRAMS.

**DLUBAK STUDIOS, INC.**  
116 Sipes Road  
Freeport, PA 16229

(ANSI ONLY)

**DLUBAK STUDIOS  
LAMINATED GLASS  
ANSI Z97.1-1984  
SGCC-1350 1/2U**

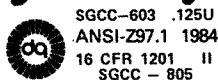
**FALCONER-LEWISTOWN, INC.**  
One Belle Avenue  
Lewistown, PA 17044

(ANSI ONLY)



**DOWNEY GLASS COMPANY, INC.**  
5631 Ferguson Drive  
Los Angeles, CA 90022

***ful-temp***



**FALCONER GLASS INDUSTRIES, INC.**  
500 South Work Street  
Falconer, NY 14733

**FALCONER  
Safety  
LAMINATED  
ANSI Z97.1-1984  
SGCC #1284 1/4U  
1-85**

**ELGIN PRECISION GLASS COMPANY, INC.**  
1200 Abbott Drive  
Elgin, IL 60120

**EPG  
ANSI Z97.1-1984  
16 CFR 1201 C11  
SGCC-1370 5/32U**

**FLEX-O-GLASS, INC.**  
1100 North Cicero Avenue  
Chicago, IL 60651

***Warp's*®  
FLEX-O-GLAZE™  
ACRYLIC SAFETY GLAZING  
16 CFR 1201 C11 100U  
ANSI Z97.1-84 SGCC-118**

**EMPIRE GLASS, INC.**  
608 East 133rd Street  
Bronx, NY 10454

**EMPIRE GLASS INC.  
EGI - SAFGLAS  
"ANSI Z 97.1 - 1984"  
16 CFR 1201 II  
SGCC - 1401 1/2 - U**

**FLEX-TEMP, INC.**  
2120 Vanco Drive  
Irving, TX 75061

**FLEX-TEMP  
Tempered Safety Glass  
ANSI Z97.1-1984  
SGCC-390 1/4 U**

UNLESS OTHERWISE DESIGNATED, ABOVE LOGO INDICATES PARTICIPATION IN BOTH ANSI AND CPSC PROGRAMS.

**FORD MOTOR COMPANY GLASS DIVISION**  
300 Renaissance Center; P.O. Box 43343  
Detroit, MI 48243



**FORD TEMPERED  
SAFETY GLASS**  
ANSI Z97.1-1984  
SGCC 341 1/8 U  
6E

**FULTON GLASS INDUSTRIES, INC.**  
5225 Welcome All Road  
Red Oak, GA 30272

**FULTONTEMP**  
SGCC 1134 1/2" U  
16 CFR 1201-II  
SGCC 1127  
ANSI Z97.1 1984

**GATEWAY INDUSTRIES**  
1414 South First Street  
Rogers, AR 72756

**GW**  
TEMPERED  
ANSI Z97.1-1984  
16CFR 1201-II  
SGCC-1355 1/8U  
DOT 272 AS2 MI

**GEMTRON CORPORATION**  
New Highway 68; P.O. Box 416  
Sweetwater, TN 37874

**TEMPERED**  
16CFR 1201 CII  
ANSI Z97.1-1984  
3/16 U - SGCC - 1201/1202  
GEMTRON 131 1985

**GENERAL GLASS CORPORATION**  
P.O. Box 38711  
Denver, CO 80238



**GENERAL GLASS CORP.**  
**FLATTEMP™**  
DENVER  
3/16"U SGCC-1181  
ANSI Z97 1-1984 16CFR1201-I,II

**GLASS TEMPERING SERVICE, INC.**  
14285 Wyoming Street  
Detroit, MI 48238

**gTs**  
SAFETY TEMPERED  
ANSI Z971-1984  
16 CFR 1201 II  
SGCC-1238 1/4 L

**GLASSTEMP, INC.**  
1001 Foster Avenue  
Bensenville, IL 60106

**GLASSTEMP**  
ANSI Z97.1-1984  
16 CFR 1201C II  
SGCC-1382  
1/4"U 69

**GUARDIAN INDUSTRIES CORP.**  
43043 West Nine Mile Road  
Northville, MI 48167

(ANSI ONLY)



**GUARDIAN**  
FORT LAUDERDALE, FL.  
ANSI Z97.1 1984  
SAFETY TEMPERED  
SGCC 41 3/8U  
16 CFR 1201 II

UNLESS OTHERWISE DESIGNATED, ABOVE LOGO INDICATES PARTICIPATION IN BOTH ANSI AND CPSC PROGRAMS.



**HAMILTON GLASS PRODUCTS, INC.**  
2000 Chestnut Street; P.O. Box 317  
Vincennes, IN 47591

**TEMPER-TUF**  
HAMILTON GLASS  
VINCENNES IN  
ANSI Z97.1-1984  
1/8 U SGCC-54  
16 CFR 1201 C II

**HOWE-MARTZ GLASS COMPANY**  
14291 Meyers Road  
Detroit, MI 48227

**FLO H TUF**  
TEMPERED SAFETY GLASS  
16 CFR 1201 CII  
ANSI Z97.1-1984 1/2U  
SGCC 1270



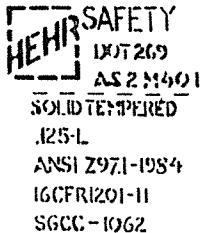
**HANKUK GLASS INDUSTRY, LTD.**  
451 Yeo U1 Do-Dong  
Young Deung Po-Ku  
Seoul, KOREA 150

(ANSI ONLY)



ANSI Z97.1-1984  
SGCC-1413 1/4U

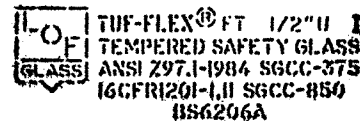
**HERH INTERNATIONAL, INC.**  
1103 West Pearl Street  
Chesaning, MI 48616



**HORDIS BROTHERS, INC.**  
P.O. Box 368  
Warrenton, MO 63383

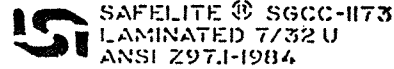
**HORDIS BROTHERS**  
Tempered Safety Glass  
ANSI Z97.1-1984  
16 CFR 1201 II  
SGCC-1379 1/8 U

**LOF GLASS**  
**LIBBEY-OWENS-FORD COMPANY**  
811 Madison Avenue  
P.O. Box 799  
Toledo, OH 43695

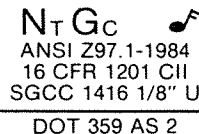


**LEAR SIEGLER, INC.**

P.O. Box 1879  
Wichita, KS 67201



**NASHVILLE TEMPERED GLASS CORP**  
1040 Cornelia Street  
Nashville, TN 37217



UNLESS OTHERWISE DESIGNATED ABOVE LOGO INDICATES PARTICIPATION IN BOTH ANSI AND CPSC PROGRAMS.

**OHIO PLATE GLASS COMPANY**

P.O. Box 671  
Lewisburg, OH 45338

**TEMPERED**  
**SGCC 185**  
**OHIO PLATE**  
**3/16"-U 16CFR1201-II**  
**ANSI Z97.1-1984**

**85 HL**

**SAN JACINTO GLASS CO.**

P.O. Box 5207  
Houston, TX 77262

**Starlite**

Tempered Safety Glass  
**ANSI Z97.1-1984**  
**16 CFR 1201 II**  
**SGCC 1292 1/8 U**  
SAN JACINTO GLASS CO.  
HOUSTON, TEXAS

**PPG INDUSTRIES, INC.**

1000 RIDC Plaza  
P.O. Box 2811  
Pittsburgh, PA 15230

**PPG** HERCULITE K  
TEMPERED SAFETY GLASS  
16CFR1201 CII  
.....  
ANSI Z-97.1-1984 1/4U  
SGCC-382 6 022585

**SHAW GLASS COMPANY, INC.**

55 Bristol Drive  
South Easton, MA 02375

**SOLAR TEMP.**

**16 CFR 1201 11**

**ANSI Z 97.1-1984**

**1/4 U SGCC 1035**

**PPG INDUSTRIES CANADA, LTD.**

1299 20th Street, East  
Owen Sound, Ontario, CANADA N4K 2C3

PPG HERCULITE • K  
TEMPERED TREMPÉ  
CAN 2-12.1 DOT 165  
.....  
16 CFR 1201-C11  
ANSI Z97.1-1984  
SGCC-251 1/8"U

**SOUTHERN WHOLESALE GLASS, INC.**

3200 Austell Road  
Marietta, GA 30060

*SWG*

**SOUTHERN TEMP.**

**ANSI Z97.1-1984**  
**16 CFR 1201-C11**  
**SGCC 1230 3/16" U**

**SAINT GOBAIN**

c/o Euroglass Corporation  
123 Main Street; Suite 920  
White Plains, NY 10601

**SAINT GOBAIN**

Tempered Safety Glass

**ANSI Z97.1-1984**

**SGCC-1393 1/4 U**

(ANSI ONLY)

**SPECTRUM GLASS COMPANY**

East Railroad Street; P.O. Box 408  
Clinton, NC 28328

TUF-FLEX® FT 1/4"U  
TEMPERED SAFETY GLASS  
**ANSI Z97.1-1984 SGCC-1074**  
**16 CFR 1201-1, 11 SGCC-1081**

**SPECTRUM**

UNLESS OTHERWISE DESIGNATED, ABOVE LOGO INDICATES PARTICIPATION IN BOTH ANSI AND CPSC PROGRAMS.

**SUNGLAS PRODUCTS, INC.**

c/o Ford Motor Company Glass Division  
300 Renaissance Center; P.O. Box 43343  
Detroit, MI 48243

**TEMPERED GLASS INTERNATIONAL, INC.**

700 Bradford Way  
Union City, CA 94587

- Tuf-flex Glass FT 1/4" U I •
- TEMPERED SAFETY GLASS •
- ANSI Z97.1-1984 16 CFR 1201.1&11
- SGCC-1204 SGCC-1205 •

**TEMP-TECH INDUSTRIES, INC.**

6166 South Sayre  
Chicago, IL 60638

**TEMPGLASS, INC.**

Ampoint  
291 M Street  
Perrysburg, OH 43551

**TEMPGLASS, INC.**

16 CFR 1201 CH  
ANSI Z97.1 - 1984  
SGCC 1420  
1/4 - U (1)

**TEMPERED GLASS, INC.**

7160 Delta Circle  
Austell, GA 30001

- Tuf-flex Glass FT 1/4" U I •
- TEMPERED SAFETY GLASS •
- ANSI Z97.1-1984 16 CFR 1201.1&11
- SGCC-321 SGCC-863 •

**TEMPGLASS EASTERN, INC.**

Blueridge Industrial Park  
P.O. Box 928  
Norcross, GA 30071

TEMPGLASS  
EASTERN  
ANSI Z97.1-1984  
16CFR 1201-II  
SGCC-979 3/8" U  
85

**TEMPERED GLASS CORPORATION**

6900 Adamo Drive  
Tampa, FL 33619

TEMPCO  
SGCC-337 .250 U  
SGCC-832  
16 CFR 1201-II  
ANSI Z97.1 1984

**TEMPGLASS SOUTHERN, INC.**

1101 Fountain Parkway  
Grand Prairie, TX 75050

TEMPGLASS SOUTHERN  
ANSI Z97.1 - 1984  
SGCC 1045 3/8" U  
16 CFR 1201 - II

UNLESS OTHERWISE DESIGNATED, ABOVE LOGO INDICATES PARTICIPATION IN BOTH ANSI AND CPSC PROGRAMS.

**TEXAS TEMPERED GLASS COMPANY**

1331 West Belt Drive North  
Houston, TX 77024

**TEXAS TEMPERED**

Tempered Safety Glass

ANSI Z97.1-1984

16 CFR 1201 II

SGCC-669 1/2 U

**VIRACON, INC.**

800 Park Drive; P.O. Box 248  
Owatonna, MN 55060

**VIRACON**

TEMPERED

16 CFR 1201 II  
SGCC 1404 1/4 U  
ANSI Z97.1 1984  
1 85

**TRACO (THREE RIVERS ALUM.)**

Cranberry Industrial Park  
P.O. Box 805  
Warrendale, PA 15095

**TRACO VIEW-SAFE**

TEMPERED GLASS

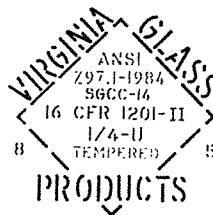
ANSI Z97.1-1984

16 CFR 1201 II

SGCC-1313 1/2U

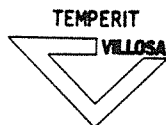
**VIRGINIA GLASS PRODUCTS CORPORATION**

P.O. Box 5431  
Martinsville, VA 24115

**VIDRIERIAS DELLODIO, S.A.**

(CPSC ONLY)

c/o Guardian Industries Corp.  
43043 West Nine Mile Road  
Northville, MI 48167



1/8 " U SGCC-1407

tempered glass

16 CFR 1201 II

LLODIO-SPAIN

UNLESS OTHERWISE DESIGNATED, ABOVE LOGO INDICATES PARTICIPATION IN BOTH ANSI AND CPSC PROGRAMS.

**SGCC LABEL REQUIREMENTS**

The SGCC certification label must be permanently marked on each piece of safety glazing material or else it is not covered by the SGCC certification program. The labels reproduced in this certified products directory are typical of those that you will find on each piece of safety glazing material.

The label shall contain the correct SGCC number, the nominal thickness and reference to the 16 CFR 1201 standard in the following minimum form: 16 CFR 1201 and the category to which it pertains. Acceptable examples include: 16 CFR 1201 I and II, 16 CFR 1201 I or II, 16 CFR 1201 I & II, 16 CFR 1201 CAT I & II, 16 CFR 1201 C I & II, 16 CFR 1201 C I and 16 CFR 1201 C II.

For labeling purposes, a line of demarcation shall separate those standards covered by the SGCC number from any other standards the licensee wishes to reference.

For purposes of Guideline G.6 "SGCC-xxx/yyy" shall be the only correct designation other than "SGCC-xxx" and "SGCC-yyy" when an identical item is in both the ANSI and CPSC programs. (See examples below.)

"Any glazing material that for accelerated environmental durability tests meets only the requirements of 1201.4 (e)(ii)(c) entitled "Plastic (indoor service)" shall bear the statement "INDOOR USE ONLY" as a part of the permanent label." Quoted from 16 CFR 1201.

"Organic-coated glass that has been tested for environmental exposure from one side only must bear a permanent label on the coating stating "GLAZE THIS SIDE IN" and shall bear in the central 50 percent of the surface in letters at least 1/4 inch high: "SEE PERMANENT LABEL FOR IMPORTANT MOUNTING INSTRUCTIONS". The latter message shall be attached to either side of the glazing by any means which shall ensure the message will remain in place until installation." Quoted from 16 CFR 1201.

The permanent label must contain identification of the plant in which the product was made and the name or trade mark of the licensee. (The SGCC number does this by reference to this certified products directory.)

The permanent label must be affixed to certified products only at the time and place of manufacture.

The permanent label must be affixed only to safety glazing materials of the licensee's own manufacture, which are certified in the SGCC program.

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 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.

**EXAMPLES:**

ANSI Z97.1-1984  
16 CFR 1201 II  
SGCC-123/691 1/4 U

ANSI Z97.1-1984 SGCC-123 1/4 U  
16 CFR 1201 II SGCC-691

### PROGRAM CONCEPT

The safety of the public is paramount. Manufacturers of safety glazing products, building code administrators and others responsible for the safety of the public, recognizing the need for a common standard for safety glazing materials, jointly established the Safety Glazing Certification Council (SGCC) in 1971.

The Safety Glazing Certification Council is a non-profit organization which has established and maintains a program to administer periodic testing to the 16 CFR 1201 standard, a recognized standard for safety glazing in buildings. This standard subjects glazing materials to a practical test to determine that if they are broken by human contact, they break in a manner that would minimize the likelihood of cutting or piercing injury. SGCC's responsibilities are threefold: to assure a periodic testing program is maintained; to approve and register the form of the manufacturer's label; and to withdraw the manufacturer's authority to use that label if its products do not meet 16 CFR 1201 standards.

Management and control of the program is vested in a board of directors, half representing industry and half representing public interest. The public interest representatives are empowered to veto any action regardless of the number present at a meeting. This insures against industry dominance of SGCC actions. The organization operates an independent third party certification and testing program.

The program uses independent testing laboratories under the supervision of a qualified administrator who is a professional engineer. He is unaffiliated with any manufacturer of safety glazing materials and is hired by and responsible to the Safety Glazing Certification Council. The manufacturer of the products listed herein has certified that the labeled materials comply with the safety characteristics established by 16 CFR 1201. The compliance of the manufacturer with the requirements of that standard is being checked periodically by an independent testing laboratory under the supervision of SGCC.

Every manufacturer of safety glazing material is eligible and encouraged to apply for certification. However, his products are not accepted and certified until an independent laboratory test indicates compliance with the standard. Once certified, each product is assigned a SGCC certification number to identify it and the factory at which it is made. Then, at least twice a year, SGCC independently selects samples during unannounced visits to the manufacturing plant or randomly from the market place to ensure continued adherence to the standard. Based on these evaluation reports SGCC authorizes continued use of the certification label and the product listing published in this directory.

The directory is divided into three basic listings: the first is by numerical sequence of certified product numbers listing the manufacturer holding that number; the second is of manufacturers listed alphabetically by plants and the approved products manufactured at those plants; the third is by products listing all manufacturers and their plants approved for each product. There is also an alphabetical listing by manufacturers illustrating a typical label of that manufacturer. The table of contents lists various procedural and administrative information, as well as information as to where officers and directors may be located.

Information from SGCC concerning a statement of procedures or copies of the minutes are available to manufacturers, public interest groups and individuals, upon request.

<u>SGCC NO.</u>	<u>SGCC NO.</u>	<u>SGCC NO.</u>
12 Virgina Glass	810 Downey Glass	1111 PPG Industries
14 Virgina Glass	811 Downey Glass	1112 PPG Industries
24 AFG Industries	812 Downey Glass	1114 Downey Glass
28 AFG Industries	813 Downey Glass	1120 PPG Industries
54 Hamilton Glass	814 Downey Glass	1130 Fulton Glass
57 Hamilton Glass	815 Downey Glass	1131 Fulton Glass
60 PPG Industries	817 Downey Glass	1132 Fulton Glass
61 PPG Industries	832 Tempered Glass	1134 Fulton Glass
64 PPG Industries	833 Tempered Glass	1139 AFG Industries
70 PPG Industries	834 Tempered Glass	1143 AFG Industries
89 AFG Industries	844 LOF Glass	1157 ACI Glass Products
90 AFG Industries	845 LOF Glass	1165 Colonial
93 Virginia Glass	846 LOF Glass	1166 Colonial
94 Virginia Glass	847 LOF Glass	1167 Colonial
95 Virginia Glass	848 LOF Glass	1180 General Glass
118 Flex-O-Glass	849 LOF Glass	1181 General Glass
137 Texas Tempered	850 LOF Glass	1182 General Glass
185 Ohio Plate Glass	862 Tempered Glass, Inc.	1192 Texas Tempered
186 Ohio Plate Glass	863 Tempered Glass, Inc.	1200 Hamilton Glass
194 PPG Industries	865 Tempered Glass, Inc.	1202 Gemtron
195 PPG Industries	866 Tempered Glass, Inc.	1205 Tuf-flex Glass
209 PPG Industries Canada	872 Flex-Temp	1210 Tempered Glass
220 AFG Industries	873 Flex-Temp	1212 Fulton Glass
249 PPG Industries	874 Flex-Temp	1219 Tempglass Southern
250 PPG Industries	879 Tuf-flex Glass	1226 ACI Glass Products
251 PPG Industries	881 Tuf-flex Glass	1230 Southern Wholesale
295 PPG Industries	882 Tuf-flex Glass	1231 Southern Wholesale
400 PPG Industries	949 AFG Industries	1232 Southern Wholesale
402 PPG Industries	955 AFG Industries	1236 Virginia Glass
454 PPG Industries Canada	979 Tempglass Eastern	1238 Glass Tempering Service
455 PPG Industries	981 Tempglass Eastern	1259 Tempglass Eastern
586 Chamberlain	982 Tempglass Eastern	1265 Howe-Martz
587 AFG Industries	986 Temp-Tech	1266 Howe-Martz
592 Tempglass	1003 Downey Glass	1268 Howe-Martz
594 Tempglass	1034 Shaw Glass	1269 Howe-Martz
595 Tempglass	1035 Shaw Glass	1270 Howe-Martz
598 AFG Industries	1036 Shaw Glass	1275 Virginia Glass
638 ACI Glass Products	1037 Shaw Glass	1277 Advanced Coating Technology
639 ACI Glass Products	1039 Tempglass	1280 Falconer Glass
640 ACI Glass Products	1044 Tempglass Southern	1281 Ohio Plate Glass
669 Texas Tempered	1045 Tempglass Southern	1286 Ohio Plate Glass
675 PPG Industries	1046 Tempglass Southern	1287 Ohio Plate Glass
676 PPG Industries	1050 Ohio Plate Glass	1292 San Jacinto
709 Falconer Glass	1058 Tempglass Eastern	1293 San Jacinto
711 Falconer Glass	1059 Tempglass Eastern	1294 San Jacinto
712 Falconer Glass	1062 Hehr International	1295 San Jacinto
727 Ford Motor Company	1071 Shaw Glass	1296 San Jacinto
728 Ford Motor Company	1080 Spectrum Glass	1299 Shaw Glass
729 Ford Motor Company	1081 Spectrum Glass	1308 Traco
730 Ford Motor Company	1082 Spectrum Glass	1310 Traco
805 Downey Glass	1083 Spectrum Glass	1311 Traco
806 Downey Glass	1084 Spectrum Glass	1312 Traco
807 Downey Glass	1085 Spectrum Glass	1313 Traco
808 Downey Glass	1086 Spectrum Glass	1327 Fulton Glass
809 Downey Glass	1110 PPG Industries	1329 Tempered Glass

<u>SGCC NO.</u>	<u>SGCC NO.</u>	<u>SGCC NO.</u>
1330 Falconer Glass	1377 Chamberlain	1407 Vidrierias De Llodio
1331 Vidrierias De Llodio	1378 Chamberlain	1408 Texas Tempered
1333 Gemtron	1379 Hordis Brothers	1414 AFG Industries
1335 Gemtron	1380 Hordis Brothers	1415 Southern Wholesale
1338 Tempglass Eastern	1381 Glasstemps	1416 Nashville Tempered
1339 Falconer Glass	1382 Glasstemp	1417 Nashville Tempered
1341 Colonial	1383 Glasstemp	1419 Nashville Tempered
1343 Lear Siegler	1384 Glasstemp	1420 Tempglass, Inc.
1344 Howe-Martz	1385 Hamilton Glass	1421 Hordis Bros.
1352 Falconer Glass	1386 Hamilton Glass	1423 Gemtron
1355 Gateway Industries	1387 Hamilton Glass	1425 Gemtron
1356 Gateway Industries	1389 Glass Tempering Service	1427 Gemtron
1357 Gateway Industries	1390 AFG Industries	1428 Southern Wholesale
1358 Gateway Industries	1394 Gateway Industries	1429 O & W Glass
1359 Gateway Industries	1396 Tempered Glass	1430 O & W Glass
1360 Lear Siegler	1397 Empire Glass	1436 AFG Industries
1365 Sunglas Products	1398 Empire Glass	1438 Flex-Temp., Inc.
1366 Sunglas Products	1399 Empire Glass	1440 Flex-Temp., Inc.
1367 Sunglas Products	1400 Empire Glass	2001 Gemtron
1369 Elgin Precision Glass	1401 Empire Glass	
1370 Elgin Precision Glass	1402 Empire Glass	
1371 Elgin Precision Glass	1403 Viracon	
1372 Elgin Precision Glass	1404 Viracon	
1375 Sunglas Products	1405 Southern Wholesale	
1376 Chamberlain	1406 Southern Wholesale	



SGCC NO.	INCH	(MM)	TYPE	MAX. SIZE CERTIFIED	SGCC NO.	INCH	(MM)	TYPE	MAX. SIZE CERTIFIED
ACI GLASS PRODUCTS, INC.; SANTA FE SPRINGS, CA					EMPIRE GLASS, INC.; BRONX, NY				
1157	3/16	( 5.0)	TTG	U	1397	1/8	( 3.0)	TTG	U
638	1/4	( 6.0)	TTG	U	1398	3/16	( 5.0)	TTG	U
639	3/8	(10.0)	TTG	U	1399	1/4	( 6.0)	TTG	U
640	1/2	(12.0)	TTG	U	1400	3/8	(10.0)	TTG	U
1226	1/8	( 3.2)	TPG(S)	U	1401	1/2	(12.0)	TTG	U
AFG INDUSTRIES, INC.; BRIDGEPORT, WV					1402	3/4	(19.0)	TTG	U
1436	1/8	( 3.0)	TTG	U	FALCONER GLASS INDUSTRIES, INC.; FALCONER, NY				
AFG INDUSTRIES, INC.; GREENLAND, TN					1339	5/32	( 4.0)	TTG	U
598	1/8	( 3.0)	TTG	U	1352	3/16	( 5.0)	TTG	U
955	5/32	( 4.0)	TTG	U	709	1/4	( 6.0)	TTG	U
220	3/16	( 5.0)	TTG	U	1280	3/8	(10.0)	TTG	U
89	1/4	( 6.0)	TTG	U	711	1/2	(12.0)	TTG	U
90	3/8	(10.0)	TTG	U	712	3/4	(19.0)	TTG	U
587	1/8	( 3.2)	TPG(S)	U	1330	3/16	( 4.0)	TPG(S)	U
1139	3/16	( 4.8)	TPG(S)	U	FLEX-O-GLASS, INC.; DIXON, IL				
AFG INDUSTRIES, INC.; KINGSPORT, TN					118	0.080 inch through 0.125 inch smooth extruded acrylic			U
1390	1/8	( 3.0)	TTG	U	FLEX-TEMP, INC.; IRVING, TX				
949	5/32	( 4.0)	TTG	U	872	1/4	( 6.0)	TTG	U
28	3/16	( 5.0)	TTG	U	873	3/8	(10.0)	TTG	U
24	1/4	( 6.0)	TTG	U	874	1/2	(12.0)	TTG	U
1414	1/8	( 3.2)	TPG(S)	U	1438	3/16	( 4.0)	TTG	U
1143	3/16	( 4.8)	TPG(S)	U	1440	7/32	( 5.6)	TPG	U
ADVANCED COATING TECHNOLOGY,; FRANKLIN, TN					FORD MOTOR COMPANY; DEARBORN, MI				
1277	1/4	( 6.0)	TTG	U	727	1/8	( 3.0)	TTG	U
CHAMBERLAIN MANUFACTURING CORPORATION; MALVERN, AR					728	5/32	( 4.0)	TTG	U
586	1/8	( 3.0)	TTG	U	729	3/16	( 5.0)	TTG	U
1376	5/32	( 4.0)	TTG	U	730	1/4	( 6.0)	TTG	U
1377	3/16	( 5.0)	TTG	U	FULTON GLASS INDUSTRIES, INC.; RED OAK, GA				
1378	1/4	( 6.0)	TTG	U	1130	5/32	( 4.0)	TTG	U
COLONIAL MIRROR AND GLASS CORP.; BROOKLYN, NY					1131	3/16	( 5.0)	TTG	U
1165	1/4	( 6.0)	TTG	U	1132	1/4	( 6.0)	TTG	U
1166	3/8	(10.0)	TTG	U	1212	3/8	(10.0)	TTG	U
1167	1/2	(12.0)	TTG	U	1134	1/2	(12.0)	TTG	U
1341	3/4	(19.0)	TTG	U	1327	3/16	( 4.8)	TPG(S)	U
DOWNEY GLASS CO., INC.; DOWNEY, CA					GATEWAY INDUSTRIES; ROGERS, AR				
805	1/8	( 3.0)	TTG	U	1355	1/8	( 3.0)	TTG	U
1003	5/32	( 4.0)	TTG	U	1356	3/16	( 5.0)	TTG	U
806	3/16	( 5.0)	TTG	U	1357	1/4	( 6.0)	TTG	U
807	1/4	( 6.0)	TTG	U	1358	1/8	( 3.2)	TPG(S)	U
808	1/8	( 3.2)	TPG(S)	U	1359	5/32	( 4.0)	TPG(S)	U
809	1/8	( 3.2)	TPG(M)	U	1394	3/16	( 4.8)	TPG(S)	U
810	3/16	( 4.8)	TPG(S)	U	GEMTRON CORPORATION; SWEETWATER, TN				
811	7/32	( 5.6)	TPG(S)	U	1335	1/8	( 3.0)	TTG	U
DOWNEY GLASS CO., INC.; LOS ANGELES, CA					1333	5/32	( 4.0)	TTG	U
812	3/16	( 5.0)	TTG	U	1202	3/16	( 5.0)	TTG	U
813	1/4	( 6.0)	TTG	U	1423	1/8	( 3.0)	TPG	U
814	3/8	(10.0)	TTG	U	1425	5/32	( 4.0)	TPG	U
815	1/2	(12.0)	TTG	U	1427	.169	( 3.6)	TTG	U
1114	3/16	( 4.8)	TPG(S)	U	2001	5/32	( 4.0)	TPG	U
817	7/32	( 5.6)	TPG(S)	U	GENERAL GLASS CORPORATION; DENVER, CO				
ELGIN PRECISION GLASS CO., INC.; ELGIN, IL					1180	5/32	( 4.0)	TTG	U
1369	1/8	( 3.0)	TTG	U	1181	3/16	( 5.0)	TTG	U
1370	5/32	( 4.0)	TTG	U	1182	1/4	( 6.0)	TTG	U
1371	3/16	( 5.0)	TTG	U	GLASS TEMPERING SERVICE, INC.; DETROIT, MI				
1372	1/4	( 6.0)	TTG	U	1389	1/8	( 3.0)	TTG	30" by 76"
					1238	1/4	( 6.0)	TTG	U
					1340	3/16	( 5.0)	TPG	34" by 72"

SGCC NO.	INCH	(MM)	TYPE	MAX. SIZE CERTIFIED	SGCC NO.	INCH	(MM)	TYPE	MAX. SIZE CERTIFIED
<b>GLASSTEMP, INC.; BENSENVILLE, IL</b>					<b>O &amp; W GLASS; EVERETT, IN</b>				
1381	3/16	( 5.0)	TTG	U	1429	1/8	( 3.0)	TTG	U
1382	1/4	( 6.0)	TTG	U	1430	3/16	( 5.0)	TTG	U
1383	3/8	(10.0)	TTG	U	<b>PPG INDUSTRIES, INC.; CARLISLE, PA</b>				
1384	1/2	(12.0)	TTG	U	250	1/8	( 3.0)	TTG	U
<b>HAMILTON GLASS PRODUCTS, INC.; VINCENNES, IN</b>					675	5/32	( 4.0)	TTG	U
54	1/8	( 3.0)	TTG	U	249	3/16	( 5.0)	TTG	U
1385	5/32	( 4.0)	TTG	U	<b>PPG INDUSTRIES, INC.; CRESTLINE, OH</b>				
1200	3/16	( 5.0)	TTG	U	60	1/8	( 3.0)	TTG	U
57	1/4	( 6.0)	TTG	U	<b>PPG INDUSTRIES, INC.; DALLAS, TX</b>				
1386	5/32	( 4.0)	TPG(S)	U	400	3/16	( 5.0)	TTG	U
1387	3/16	( 4.8)	TPG(S)	U	402	1/4	( 6.0)	TTG	U
<b>HEHR INTERNATIONAL, INC.; CHESANING, MI</b>					<b>PPG INDUSTRIES, INC.; FORD CITY, PA</b>				
1062	1/8	( 3.0)	TTG	32" by 60"	61	3/16	( 5.0)	TTG	U
<b>HORDIS BROTHERS, INC.; WARRENTON, MO</b>					70	1/4	( 6.0)	TTG	U
1379	1/8	( 3.0)	TTG	U	<b>PPG INDUSTRIES, INC.; FRESNO, CA</b>				
1380	5/32	( 4.0)	TTG	U	295	1/8	( 3.0)	TTG	U
1421	3/16	( 5.0)	TTG	U	676	5/32	( 4.0)	TTG	U
<b>HOWE-MARTZ GLASS COMPANY; DETROIT, MI</b>					64	3/16	( 5.0)	TTG	U
1265	5/32	( 4.0)	TTG	U	<b>PPG INDUSTRIES, INC.; HUNT VALLEY, MD</b>				
1266	3/16	( 5.0)	TTG	U	454	3/16	( 5.0)	TTG	U
1268	1/4	( 6.0)	TTG	U	455	1/4	( 6.0)	TTG	U
1269	3/8	(10.0)	TTG	U	<b>PPG INDUSTRIES, INC.; MIAMI, FL</b>				
1270	1/2	(12.0)	TTG	U	195	3/16	( 5.0)	TTG	U
1344	3/16	( 4.8)	TPG(S)	U	194	1/4	( 6.0)	TTG	U
<b>LOF GLASS; LAURINBURG, NC</b>					<b>PPG INDUSTRIES, INC.; WICHITA FALLS, TX</b>				
844	1/8	( 3.0)	TTG	U	1110	1/8	( 3.0)	TTG	U
845	5/32	( 4.0)	TTG	U	1111	5/32	( 4.0)	TTG	U
846	3/16	( 5.0)	TTG	U	1112	3/16	( 5.0)	TTG	U
847	1/4	( 6.0)	TTG	U	<b>PPG IND. CANADA, LTD.; OWEN SOUND, ONTARIO, CANADA</b>				
848	5/16	( 8.0)	TTG	U	251	1/8	( 3.0)	TTG	U
849	3/8	(10.0)	TTG	U	1120	5/32	( 4.0)	TTG	U
850	1/2	(12.0)	TTG	U	209	3/16	( 5.0)	TTG	U
<b>LOF GLASS; ROSSFORD, OH</b>					<b>SAN JACINTO GLASS COMPANY; HOUSTON, TX</b>				
855	1/4	( 6.0)	TTG	U	1292	1/8	( 3.0)	TTG	U
856	5/16	( 8.0)	TTG	U	1293	3/16	( 5.0)	TTG	U
857	3/8	(10.0)	TTG	U	1294	1/4	( 6.0)	TTG	U
858	1/2	(12.0)	TTG	U	1295	3/8	(10.0)	TTG	U
859	5/8	(16.0)	TTG	U	1296	1/2	(12.0)	TTG	U
860	3/4	(19.0)	TTG	U	<b>SHAW GLASS COMPANY, INC.; SOUTH EASTON, MA</b>				
<b>LEAR-SIEGLER, INC.; WICHITA, KS</b>					1034	3/16	( 5.0)	TTG	U
1360	3/16	( 5.0)	LTG(0.030)	U	1035	1/4	( 6.0)	TTG	U
1343	3/16	( 5.0)	LPG(0.030)(S)	U	1036	3/8	(10.0)	TTG	U
<b>NASHVILLE TEMPERED GLASS CORP.; NASHVILLE, TN</b>					1037	1/2	(12.0)	TTG	U
1416	1/8	( 3.0)	TTG	U	1299	3/16	( 4.8)	TPG(S)	U
1417	1/4	( 6.0)	TTG	U	1071	7/32	( 5.6)	TPG(S)	U
1419	3/16	( 4.8)	TTG	U	<b>SOUTHERN WHOLESALE GLASS, INC.; MARIETTA, GA</b>				
<b>OHIO PLATE GLASS COMPANY; JEFFERSON, TX</b>					1230	3/16	( 5.0)	TTG	U
1281	1/8	( 3.0)	TTG	U	1231	1/4	( 6.0)	TTG	U
1286	3/16	( 5.0)	TTG	U	1232	3/8	(10.0)	TTG	U
1287	1/4	( 6.0)	TTG	U	1428	5/32	( 4.0)	TPG	U
<b>OHIO PLATE GLASS COMPANY; LEWISBURG, OH</b>					1405	1/8	( 3.0)	TTG	U
1050	1/8	( 3.0)	TTG	U	1415	3/16	( 5.0)	TTG	U
185	3/16	( 5.0)	TTG	U	1406	1/2	(12.0)	TTG	U
186	1/4	( 6.0)	TTG	U	1428	5/32	( 4.0)	TPG(62)	U

SGCC NO.	INCH	(MM)	TYPE	MAX. SIZE CERTIFIED	SGCC NO.	INCH	(MM)	TYPE	MAX. SIZE CERTIFIED
<b>SPECTRUM GLASS COMPANY; CLINTON, NC</b>					<b>TRACO (THREE RIVERS ALUM. CO.); WARRENDALE, PA</b>				
1080	3/16	( 5.0)	TTG	U	1308	1/8	( 3.0)	TTG	U
1081	1/4	( 6.0)	TTG	U	1310	3/16	( 5.0)	TTG	U
1082	5/16	( 8.0)	TTG	U	1311	1/4	( 6.0)	TTG	U
1083	3/8	(10.0)	TTG	U	1312	3/8	(10.0)	TTG	U
1084	1/2	(12.0)	TTG	U	1313	1/2	(12.0)	TTG	U
1085	5/8	(16.0)	TTG	U	<b>VIDRIERIAS DE LLODIO, S.A.; ALAVA, SPAIN</b>				
1086	3/4	(19.0)	TTG	U	1407	1/8	( 3.2)	TPG(S)	U
<b>SUNGLAS PRODUCTS, INC.; CLAREMORE, OK</b>					1331	5/32	( 4.0)	TPG(S)	U
1365	5/32	( 4.0)	TTG	U	<b>VIRACON, INC.; OWATONNA, MN</b>				
1366	3/16	( 5.0)	TTG	U	1403	3/16	( 5.0)	TTG	U
1367	1/4	( 6.0)	TTG	U	1404	1/4	( 6.0)	TTG	U
1375	3/8	(10.0)	TTG	U	<b>VIRGINIA GLASS PRODUCTS CORP.; MARTINSVILLE, VA</b>				
<b>TEMP-TECH INDUSTRIES, INC.; CHICAGO, IL</b>					1236	5/32	( 4.0)	TTG	U
986	1/4	( 6.0)	TTG	U	12	3/16	( 5.0)	TTG	U
<b>TEMPERED GLASS, INC.; ATLANTA, GA</b>					14	1/4	( 6.0)	TTG	U
862	3/16	( 5.0)	TTG	U	93	3/8	(10.0)	TTG	U
863	1/4	( 6.0)	TTG	U	94	1/2	(12.0)	TTG	U
865	3/8	(10.0)	TTG	U	95	3/4	(19.0)	TTG	U
866	1/2	(12.0)	TTG	U	1275	3/16	( 4.8)	TPG(S)	U
<b>TEMPERED GLASS CORPORATION; TAMPA, FL</b>					<b>CERTIFIED PRODUCTS KEY</b>				
1396	3/16	( 5.0)	TTG	U					
832	1/4	( 6.0)	TTG	U					
833	3/8	(10.0)	TTG	U					
834	1/2	(12.0)	TTG	U	<b>TTG = TEMPERED TRANSPARENT GLASS</b>				
1329	3/16	( 4.8)	TPG(S)	U	<b>TPG = TEMPERED PATTERN GLASS</b>				
1210	7/32	( 5.6)	TPG(S)	U	<b>LTG = LAMINATED TRANSPARENT GLASS</b>				
<b>TEMPERED GLASS INT'L, INC.; UNION CITY, CA</b>					<b>LPG = LAMINATED PATTERN GLASS</b>				
881	3/16	( 5.0)	TTG	U	<b>(S) = SHALLOW PATTERN</b>				
882	1/4	( 6.0)	TTG	U	<b>(M) = MEDIUM PATTERN</b>				
879	3/8	(10.0)	TTG	U	<b>(D) = DEEP PATTERN</b>				
1205	7/32	( 5.6)	TTG	U	<b>U = UNLIMITED SIZE</b>				
<b>TEMPGLASS, INC.; PERRYSBURG, OH</b>									
1039	1/8	( 3.0)	TTG	U					
592	3/16	( 5.0)	TTG	U					
594	3/8	(10.0)	TTG	U					
595	1/2	(12.0)	TTG	U					
1420	1/4	( 6.0)	TTG	U					
<b>TEMPGLASS EASTERN, INC.; NORCROSS, GA</b>									
979	1/8	( 3.0)	TTG	U					
1259	5/32	( 4.0)	TTG	U					
981	3/16	( 5.0)	TTG	U					
982	1/4	( 6.0)	TTG	U					
1058	3/8	(10.0)	TTG	U					
1059	1/2	(12.0)	TTG	U					
1338	3/16	( 4.8)	TPG(S)	U					
<b>TEMPGLASS SOUTHERN, INC.; GRAND PRAIRIE, TX</b>									
1219	3/16	( 5.0)	TTG	U					
1044	1/4	( 6.0)	TTG	U					
1045	3/8	(10.0)	TTG	U					
1046	1/2	(12.0)	TTG	U					
<b>TEXAS TEMPERED GLASS COMPANY; HOUSTON, TX</b>									
1192	3/16	( 5.0)	TTG	U					
37	1/4	( 6.0)	TTG	U					
669	1/2	(12.0)	TTG	U					
1159	7/32	( 5.5)	LTG(0.030)	U					

	<u>SGCC NO.</u>	<u>MAX. SIZE CERTIFIED</u>
<b>TEMPERED TRANSPARENT GLASS</b>		
<b>1/8 inch tempered transparent glass</b>		
AFC Industries, Inc.; Bridgeport, WV	1436	U
AFG Industries, Inc.; Greenland, TN	598	U
AFG Industries, Inc.; Kingsport, TN	1390	U
Chamberlain Manufacturing Corp.; Malvern, AR	586	U
Downey Glass Company, Inc.; Downey, CA	805	U
Elgin Precision Glass Co., Inc.; Elgin, IL	1369	U
Empire Glass, Inc.; Bronx, NY	1397	U
Ford Motor Company; Dearborn, MI	727	U
Gateway Industries; Rogers, AR	1355	U
Gemtron Corp.; Sweetwater, TN	1335	U
Glass Tempering Service, Inc.; Detroit, MI	1389	30" by 76"
Hamilton Glass Products, Inc.; Vincennes, IN	54	U
Hehr International, Inc.; Chesaning, MI	1062	32" by 60"
Hordis Brothers, Inc.; Warrenton, MO	1379	U
LOF Glass; Laurinburg, NC	844	U
Nashville Tempered Glass Corp.; Nashville, TN	1416	U
Ohio Plate Glass Company; Jefferson, TX	1281	U
Ohio Plate Glass Company; Lewisburg, OH	1050	U
PPG Industries, Inc.; Carlisle, PA	250	U
PPG Industries, Inc.; Crestline, OH	60	U
PPG Industries, Inc.; Fresno, CA	295	U
PPG Industries, Inc.; Wichita Falls, TX	1110	U
PPG Industries Canada, Ltd.; Owen Sound, Ontario, Canada	251	U
San Jacinto Glass Company; Houston, TX	1292	U
Southern Wholesale Glass, Inc.; Marietta, GA	1405	U
Tempglass, Inc.; Perrysburg, OH	1039	U
Tempglass Eastern, Inc.; Norcross, GA	979	U
Traco (Three Rivers Aluminum Company); Warrendale, PA	1308	U
<b>5/32 inch tempered transparent glass</b>		
AFG Industries, Inc.; Greenland, TN	955	U
AFG Industries, Inc.; Kingsport, TN	949	U
Chamberlain Manufacturing Corp.; Malvern, AR	1376	U
Downey Glass Company, Inc.; Downey, CA	1003	U
Elgin Precision Glass Co., Inc.; Elgin, IL	1370	U
Falconer Glass Industries, Inc.; Falconer, NY	1339	U
Ford Motor Company; Dearborn, MI	728	U
Fulton Glass Industries, Inc.; Red Oak, GA	1130	U
Gemtron Corp.; Sweetwater, TN	1333	U
General Glass Corporation; Denver, CO	1180	U
Hamilton Glass Products, Inc.; Vincennes, IN	1385	U
Hordis Brothers, Inc.; Warrenton, MO	1380	U
Howe-Martz Glass Co.; Detroit, MI	1265	U
LOF Glass; Laurinburg, NC	845	U
PPG Industries, Inc.; Carlisle, PA	675	U
PPG Industries, Inc.; Fresno, CA	676	U
PPG Industries, Inc.; Wichita Falls, TX	1111	U
PPG Industries Canada, Ltd.; Owen Sound, Ontario, Canada	1120	U
Sunglas Products, Inc.; Claremore, OK	1365	U
Tempglass Eastern, Inc.; Norcross, GA	1259	U
Virginia Glass Products Corp.; Martinsville, VA	1236	U
<b>TEMPERED TRANSPARENT GLASS</b>		
<b>3/16 inch tempered transparent glass</b>		
ACI Glass Products, Inc.; Santa Fe Springs, CA	1157	U
AFG Industries, Inc.; Greenland, TN	220	U
AFG Industries, Inc.; Kingsport, TN	28	U
Chamberlain Manufacturing Corporation; Malvern, AR	1377	U
Downey Glass Company, Inc.; Downey, CA	806	U
Downey Glass Company, Inc.; Los Angeles, CA	812	U
Elgin Precision Glass Company, Inc.; Elgin, IL	1371	U
Empire Glass, Inc.; Bronx, NY	1398	U

	<u>SGCC NO.</u>	<u>MAX. SIZE CERTIFIED</u>
<b>TEMPERED TRANSPARENT GLASS - continued</b>		
<b>3/16 inch tempered transparent glass</b>		
Falconer Glass Industries, Inc.; Falconer, NY	1352	U
Flex-Temp., Inc.; Irving, TX	1438	U
Ford Motor Company; Dearborn, MI	729	U
Fulton Glass Industries, Inc.; Red Oak, GA	1131	U
Gateway Industries; Rogers, AR	1356	U
Gemtron Corporation; Sweetwater, TN	1202	U
General Glass Corporation; Denver, CO	1181	U
Glasstemp, Inc.; Bensenville, IL	1381	U
Hamilton Glass Products, Inc.; Vincennes, IN	1200	U
Howe-Martz Glass Company; Detroit, MI	1266	U
LOF Glass; Laurinburg, NC	846	U
Nashville Tempered Glass Corp.; Nashville, TN	1419	U
Ohio Plate Glass Company; Jefferson, TX	1286	U
Ohio Plate Glass Company; Lewisburg, OH	185	U
PPG Industries, Inc.; Carlisle, PA	249	U
PPG Industries, Inc.; Dallas, TX	400	U
PPG Industries, Inc.; Ford City, PA	61	U
PPG Industries, Inc.; Fresno, CA	64	U
PPG Industries, Inc.; Hunt Valley, MD	454	U
PPG Industries, Inc.; Miami, FL	195	U
PPG Industries, Inc.; Wichita Falls, TX	1112	U
PPG Industries Canada, Ltd.; Owen Sound, Ontario, Canada	209	U
San Jacinto Glass Company; Houston, TX	1293	U
Shaw Glass Company, Inc.; South Easton, MA	1034	U
Southern Wholesale Glass, Inc.; Marietta, GA	1415	U
Spectrum Glass Company; Clinton, NC	1080	U
Sunglas Products, Inc.; Claremore, OK	1366	U
Tempered Glass, Inc.; Atlanta, GA	862	U
Tempered Glass Corporation; Tampa, FL	1396	U
Tempglass, Inc.; Perrysburg, OH	592	U
Tempglass Eastern, Inc.; Norcross, GA	981	U
Tempglass Southern, Inc.; Grand Prairie, TX	1219	U
Texas Tempered Glass Company; Houston, TX	1192	U
Traco (Three Rivers Aluminum Company); Warrendale, PA	1310	U
Tuf-flex Glass; Union City, CA	879	U
Viracon, Inc.; Owatonna, MN	1403	U
Virginia Glass Products Corporation; Martinsville, VA	12	U
<b>1/4 inch tempered transparent glass</b>		
ACI Glass Products, Inc.; Santa Fe Springs, CA	638	
AFG Industries, Inc.; Greenland, TN	89	U
AFG Industries, Inc.; Kingsport, TN	24	U
Advance Coating Technology, Inc.; Franklin, TN	1277	U
Chamberlain Manufacturing Corporation; Malvern, AR	1378	U
Colonial Mirror and Glass Corporation; Brooklyn, NY	1165	U
Downey Glass Company, Inc.; Downey, CA	807	U
Downey Glass Company, Inc.; Los Angeles, CA	813	U
Elgin Precision Glass Company, Inc.; Elgin, IL	1372	U
Empire Glass, Inc.; Bronx, NY	1399	U
Falconer Glass Industries, Inc.; Falconer, NY	709	U
Flex-Temp, Inc.; Irving, TX	872	U
Ford Motor Company; Dearborn, MI	730	U
Fulton Glass Industries, Inc.; Red Oak, GA	1132	U
Gateway Industries; Rogers, AR	1357	U
General Glass Corporation; Denver, CO	1182	U
Glass Tempering Service, Inc.; Detroit, MI	1238	U
Glasstemp, Inc.; Bensenville, IL	1382	U
Hamilton Glass Products, Inc.; Vincennes, IN	57	U
Howe-Martz Glass Company; Detroit, MI	1268	U
LOF Glass; Laurinburg, NC	847	U
Nashville Tempered Glass Corp.; Nashville, TN	1417	U

	<u>SGCC NO.</u>	<u>MAX. SIZE CERTIFIED</u>
<b>TEMPERED TRANSPARENT GLASS</b>		
<b>1/4 inch tempered transparent glass - continued</b>		
Ohio Plate Glass Company, Jefferson, TX	1287	U
Ohio Plate Glass Company, Lewisburg, OH	186	U
PPG Industries, Inc.; Dallas, TX	402	U
PPG Industries, Inc.; Ford City, PA	70	U
PPG Industries, Inc.; Hunt Valley, MD	455	U
PPG Industries, Inc.; Miami, FL	194	U
San Jacinto Glass Company; Houston, TX	1294	U
Shaw Glass Company, Inc.; South Easton, MA	1035	U
Southern Wholesale Glass, Inc.; Marietta, GA	1231	U
Spectrum Glass Company; Clinton, NC	1081	U
Sunglas Products, Inc.; Claremore, OK	1367	U
Temp-Tech Industries, Inc.; Chicago, IL	986	U
Tempered Glass, Inc.; Atlanta, GA	863	U
Tempered Glass Corporation; Tampa, FL	832	U
Tempglass Eastern, Inc.; Norcross, GA	982	U
Tempglass, Inc.; Perrysburg, OH	1420	U
Tempglass Southern, Inc.; Grand Prairie, TX	1044	U
Texas Tempered Glass Company; Houston, TX	137	U
Traco (Three Rivers Aluminum Company); Warrendale, PA	1311	U
Tuf-flex Glass; Union City, CA	1205	U
Viracon, Inc.; Owatonna, MN	1404	U
Virginia Glass Products Corporation; Martinsville, VA	14	U
<b>5/16 inch tempered transparent glass</b>		
LOF Glass; Laurinburg, NC	848	U
Spectrum Glass Company; Clinton, NC	1082	U
<b>TEMPERED TRANSPARENT GLASS</b>		
<b>3/8 inch tempered transparent glass</b>		
ACI Glass Products, Inc.; Santa Fe Springs, CA	639	U
AFG Industries, Inc.; Greenland, TN	90	U
Colonial Mirror and Glass Corporation; Brooklyn, NY	1166	U
Downey Glass Company, Inc.; Los Angeles, CA	814	U
Empire Glass, Inc.; Bronx, NY	1400	U
Falconer Glass Industries, Inc.; Falconer, NY	1280	U
Flex-Temp, Inc.; Irving, TX	873	U
Fulton Glass Industries, Inc.; Red Oak, GA	1212	U
Glasstemp, Inc.; Bensenville, IL	1383	U
Howe-Martz Glass Company, Detroit, MI	1269	U
LOF Glass; Laurinburg, NC	849	U
San Jacinto Glass Company; Houston, TX	1295	U
Shaw Glass Company, Inc.; South Easton, MA	1036	U
Southern Wholesale Glass, Inc.; Marietta, GA	1232	U
Spectrum Glass Company; Clinton, NC	1083	U
Sunglas Products, Inc.; Claremore, OK	1375	U
Tempered Glass, Inc.; Atlanta, GA	865	U
Tempered Glass Corporation; Tampa, FL	833	U
Tempglass, Inc.; Perrysburg, OH	594	U
Tempglass Eastern, Inc.; Norcross, GA	1058	U
Tempglass Southern, Inc.; Grand Prairie, TX	1045	U
Texas Tempered Glass Co.; Houston, TX	1408	U
Traco (Three Rivers Aluminum Company); Warrendale, PA	1312	U
Tuf-flex Glass; Union City, CA	881	U
Virginia Glass Products Corporation; Martinsville, VA	93	U

SGCC NO.                      MAX. SIZE  
CERTIFIED

**TEMPERED TRANSPARENT GLASS****1/2 inch tempered transparent glass**

ACI Glass Products, Inc.; Santa Fe Springs, CA	640	U
Colonial Mirror and Glass Corporation; Brooklyn, NY	1167	U
Downey Glass Company, Inc.; Los Angeles, CA	815	U
Empire Glass, Inc.; Bronx, NY	1401	U
Falconer Glass Industries, Inc.; Falconer, NY	711	U
Flex-Temp, Inc.; Irving, TX	874	U
Fulton Glass Industries, Inc.; Red Oak, GA	1134	U
Glasstemp, Inc.; Bensenville, IL	1384	U
Howe-Martz Glass Company, Detroit, MI	1270	U
LOF Glass; Laurinburg, NC	850	U
San Jacinto Glass Company; Houston, TX	1296	U
Shaw Glass Company, Inc.; South Easton, MA	1037	U
Southern Wholesale Glass, Inc.; Marietta, GA	1406	U
Spectrum Glass Company; Clinton, NC	1084	U
Tempered Glass, Inc.; Atlanta, GA	866	U
Tempered Glass Corporation; Tampa, FL	834	U
Tempglass, Inc.; Perrysburg, OH	595	U
Tempglass Eastern, Inc.; Norcross, GA	1059	U
Tempglass Southern, Inc.; Grand Prairie, TX	1046	U
Texas Tempered Glass Company; Houston, TX	669	
Traco (Three Rivers Aluminum Company); Warrendale, PA	1313	U
Tuf-flex Glass; Union City, CA	882	U
Virginia Glass Products Corporation; Martinsville, VA	94	U

**5/8 inch tempered transparent glass**

Spectrum Glass Company; Clinton, NC	1085	U
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**3/4 inch tempered transparent glass**

Colonial Mirror and Glass Corporation; Brooklyn, NY	1341	U
Empire Glass, Inc.; Bronx, NY	1402	U
Falconer Glass Industries, Inc.; Falconer, NY	712	U
Spectrum Glass Company; Clinton, NC	1086	U

**TEMPERED PATTERN GLASS****1/8 inch tempered pattern glass (shallow patterns)**

ACI Glass Products, Inc.; Santa Fe Springs, CA	1226	U
AFG Industries, Inc.; Greenland, TN	587	U
AFG Industries, Inc.; Kingsport, TN	141	U
Downey Glass Company, Inc.; Downey, CA	808	U
Gateway Industries; Rogers, AR	1358	U
Vidrierias De Llodio, S. A.; Alava, Spain	1407	U

	<u>SGCC NO.</u>	<u>MAX. SIZE CERTIFIED</u>
<b>TEMPERED PATTERN GLASS</b>		
<b>1/8 inch tempered pattern glass (medium patterns)</b>		
Downey Glass Company, Inc.; Downey, CA	809	U
<b>1/8 inch tempered pattern glass (shallow patterns)</b>		
AFG Industries, Inc.; Kingsport, TN	1414	U
<b>5/32 inch tempered pattern glass (shallow patterns)</b>		
Gateway Industries; Rogers, AR	1359	U
Gemtron Corporation; Sweetwater, TN	2001	U
Hamilton Glass Products, Inc.; Vincennes, IN	1386	U
Southern Wholesale; Marietta, GA	1428	U
Vidrierias De Llodio, S. A.; Alava, Spain	1331	U
<b>3/16 inch tempered pattern glass (shallow patterns)</b>		
AFG Industries, Inc.; Greenland, TN	1139	U
AFG Industries, Inc.; Kingsport, TN	1143	U
Downey Glass Company, Inc.; Downey, CA	810	U
Downey Glass Company, Inc.; Los Angeles, CA	1114	U
Falconer Glass Industries, Inc.; Falconer, NY	1330	U
Fulton Glass Industries, Inc.; Red Oak, GA	1327	U
Hamilton Glass Products, Inc.; Vincennes, IN	1387	
Howe-Martz Glass Company, Detroit, MI	1344	U
Shaw Glass Company, Inc.; South Easton, MA	1299	U
Tempered Glass Corporation; Tampa, FL	1329	U
Tempglass Eastern, Inc.; Norcross, GA	1338	U
Virginia Glass Products Corporation; Martinsville, VA	1275	U
<b>3/16 inch tempered pattern glass (deep patterns)</b>		
Gateway Industries; Rogers, AR	1394	U
<b>7/32 inch tempered pattern glass (shallow patterns)</b>		
Downey Glass Company, Inc.; Downey, CA	811	U
Downey Glass Company, Inc.; Los Angeles, CA	817	U
Flex-Temp., Inc.; Irving, TX	1440	U
Shaw Glass Company, Inc.; South Easton, MA	1071	U
Tempered Glass Corporation; Tampa, FL	1210	U
<b>LAMINATED GLASS</b>		
<b>3/16 inch laminated transparent glass</b>		
Lear Siegler, Inc.; Wichita, KS	1360	U
<b>LAMINATED PATTERN GLASS</b>		
<b>3/16 inch laminated pattern glass (shallow patterns)</b>		
Lear Siegler, Inc.; Wichita, KS	1343	U
<b>0.080 through 0.125 inch acrylic</b>		
Flex-O-Glass, Inc.; Dixon, IL	118	U



## PROCEDURAL GUIDE

## FOREWORD

Acceptance of a certified product containing safety glazing materials comes with the conviction that such certification assures a high level of safety and quality and that the integrity of the identifying mark or certification label is being reliably maintained by a competent certifying agency.

The provisions of Federal Standard 16 CFR 1201 provide a sound technical basis for the required high level of safety. With the addition of independent administration plus periodic, routine sampling and product evaluation, a program of product certification is developed that provides an independent third party certification and testing program. The Certification Program described here is predicated upon the concept of independent and impartial administration of the certification procedures which are incorporated in the SGCC 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 SGCC License Agreement is the governing document for operation of the Certification Program. This Procedural Guide, which is **not** an extension of that document, serves merely to describe the administrative procedure and routine operation of the Certification Program.

## GENERAL INFORMATION

## THE CERTIFICATION CONCEPT

The SGCC Certification Program is based on the conviction that no standard of safety or quality is good without the continuous adherence of the licensees to that standard.

To buyers, specifiers, code officials and users, the SGCC certification label offers the manufacturer's assurance that his safety glazing material has been **produced in conformance** to Federal Standard 16 CFR 1201 covering safety glazing materials used in buildings.

These regulations are covered in a separate certified products directory.

## WHO CAN BECOME A LICENSEE?

Every manufacturer of safety glazing materials is eligible, **on a voluntary basis**, to participate.

## WHO CONDUCTS THE PROGRAM?

The Safety Glazing Certification Council, a non-profit corporation, is the sponsor of this certification program. SGCC supervises the certification program under which the administrator periodically checks and reports compliance of the manufacturers of products having the SGCC certification label with the requirements of 16 CFR 1201.

## ADMINISTRATION

Certification Services Corporation (CSC), is the independent **Administrator** of the certification program. CSC maintains the SGCC office of certification and handles the routine day to day business. All transactions are done in the name of SGCC.

## HOW CAN YOU BECOME A LICENSEE?

The following must be accomplished before SGCC can certify an item safety glazing material:

a) The manufacturer signs two copies of the SGCC License Agreement (including notarization of the Affidavit, Appendix A) and sends these to SGCC. SGCC will countersign both copies and return one to the manufacturer.

b) The manufacturer directs the testing laboratory to send to SGCC one copy of a valid test report from an official SGCC recognized testing laboratory indicating full and complete compliance with the specifications, namely 16 CFR 1201. (This is the "initial" or "prototype" testing and the sample is furnished by the manufacturer directly to any one of the SGCC recognized independent commercial testing laboratories, which the manufacturer selects.)

c) The manufacturer sends to SGCC the six-month certification fee for each item which is to be certified.

After receipt of all of the above items, SGCC sends to the licensee a notice of product certification which includes a SGCC certification number. This number **must** be incorporated into the permanent label to be affixed on each piece of certified safety glazing material. The certified item will then be listed in the next published certified products directory.

#### HOW THE CERTIFICATION PROGRAM WORKS

The American National Standards Institute sets safety standards and safety glazing materials **must** meet or exceed applicable ANSI standards before they can be certified by SGCC. Specifications for safety glazing materials used in buildings are developed and reviewed at least every five years by ANSI.

SGCC recognized independent testing laboratories conduct all tests. All laboratories, whose test reports are utilized by this certification program, shall be approved by the SGCC certification committee. Initial or prototype tests are performed at the testing laboratory selected by the licensee. Routine evaluation samples are tested by the testing laboratory selected by the administrator.

#### ADMINISTRATOR AUTHORIZES CERTIFICATION

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

Licensees label safety glazing material with the assigned SGCC number.

#### PRODUCTS LISTED IN CERTIFIED PRODUCTS DIRECTORY

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 products manufacturers, glazing contractors, home builders, architects, regulatory agencies and code-making groups, etc. Directory listings contain the licensee's name, plant location, product description and a copy of the actual label that is permanently marked upon each piece of certified safety glazing material.

The administrator samples certified glazing material from the licensee's inventory once every six months.

An approved testing laboratory determines compliance of these samples with the specifications. Tests are made either at the place of manufacture or at the laboratory selected by the administrator from the approved list. Results of each test are mailed promptly to the licensee by the administrator.

#### COMPLIANCE SAFEGUARDS

##### HOW IS COMPLIANCE ASSURED?

Any certified product found in the course of routine sampling and evaluation not to be in compliance with the specifications, is subject to having certification removed. The licensee is given a 30-day grace period in which to demonstrate to the satisfaction of the administrator that his product is in compliance. If he does not, certification is **automatically terminated** at the end of the 30-day period.

##### CHALLENGING A CERTIFIED PRODUCT

Complaints of non-compliance from any source will be investigated promptly by SGCC upon receipt of the complaint in writing along with an appropriate surety deposit. A minimum surety deposit of \$1,000 will be required for each complaint of non-compliance. The surety deposit will be assessed at the rate of \$350 per man day **plus** the reasonable costs of travel and the maintenance 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 complainant'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.

##### WITHDRAWAL OF CERTIFIED PRODUCT

Any product which has been certified may be **voluntarily withdrawn** from the certification program by the licensee at any time.

**COSTS****WHAT DOES THE PROGRAM COST?**

The licensee pays all projected fees to SGCC on a six-month basis, in advance. A licensee is invoiced for each item that is certified and listed separately in the certified products Directory. The invoice will include the fees for future routine evaluation testing.

Initial certification for each item will be for a period of six months. However, the next invoice to a licensee will have the fees prorated to the nearest whole month in such a manner that participation in the certification program will be on a January 1 to July 1 and July 1 to January 1 basis.

**CERTIFICATION PROGRAM DOCUMENTS AND AGREEMENTS****LICENSE AGREEMENT**

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

Future amendments or revisions to the license agreement will be recommended by the SGCC certification committee and enacted by the SGCC board of directors.

**EFFECTIVE DATE, DURATION AND TERMINATION**

The license agreement becomes effective on the date of its execution; has an initial duration of six months (adjustable to a January 1 to July 1 or a July 1 to January 1 basis), and is automatically renewed for successive, additional periods of six months, unless either party gives notice at least sixty days prior to the date of expiration that cancellation is requested or unless revoked by SGCC for causes set forth in the document.

Upon proper execution and acceptance by SGCC the **preissued certification number bond** informs a licensee of the exact mark of an item to be certified in the future. Thus he can purchase the proper marking equipment before the item is actually certified. If the licensee marks this number upon production prior to actual certification the bond is **forfeited to SGCC**.

Upon proper execution and acceptance by SGCC the **test release bond** permits the continuation of certification of an item even though the production facilities are shut down. If the licensee does not notify SGCC within one week of the resumption of production the bond is forfeited to SGCC.

**ADMINISTRATIVE SERVICE AGREEMENT**

This agreement, entered into by SGCC and Certification Services Corporation, governs the relationship between SGCC and CSC, the independent administrator. In general, it provides that the administrator.

- a) samples certified products routinely
- b) has the right to witness any and all testing required by the program
- c) reviews all test reports in order to determine compliance of the certified product with the specifications
- d) inspects and approves all in-plant and test laboratory test facilities for use in this certification program (test laboratories are "recognized" or approved by the SGCC certification committee)
- e) publishes and mails the SGCC certified products directory on or about each January 1 and July 1
- f) handles all routine clerical duties of SGCC with respect to certification matters
- g) acts as SGCC treasurer, invoice licensees, maintaining a bank account and dispersing funds (fiscal reports are made to the SGCC certification committee)
- h) furnishes all testing except for prototype tests
- i) attends all scheduled meetings of the SGCC certification committee and
- j) in all of its actions acts in the name of SGCC

**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. It covers the steps to be taken in any given procedural situation in the interest of equitable and uniform treatment of licensees and the preservation of the integrity of the certification program.

**CERTIFIED PRODUCTS DIRECTORY**

This directory is the one document and publication that is normally in the public's eye and contains a listing of the certified safety glazing materials of each licensee.

**CERTIFICATION LABEL**

This certification mark is permanently affixed to each piece of certified safety glazing material by the licensee. It contains a number that refers to the listing in the certified products directory. The listing then provides a complete product description including the company name, plant location, etc.

**PROGRAM RESPONSIBILITY**

The SGCC board of directors has overall responsibility for the well being and acceptance of the certification program by the industry, building officials and the public. It also bears corporate legal responsibility.

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

**COMMUNICATIONS**

In all matters concerning the administration and implementation of the SGCC certification program, correspondence may be directed to any of the following:

Mr. Richard L. Morrison, SGCC President  
c/o Ford Motor Company Glass Division  
300 Renaissance Center; P.O. Box 43343  
Detroit, MI 48243  
Telephone: 716-665-6422

Mr. Robert A. Moss, Chairman  
SGCC Certification Committee  
c/o Hamilton Glass Products, Inc.  
2000 Chestnut Street  
P.O. Box 317  
Vincennes, IN 47591  
Telephone: 812-882-2680

Mr. Claude F. Robb  
Administrative Manager  
ETL Testing Laboratories, Inc.  
Route 11 - Industrial Park  
P.O. Box 2040  
Cortland, NY 13045  
Telephone: 607-753-6711

**CERTIFICATION GUIDELINES AND INTERPRETATIONS**

For guidance in certifying safety glazing materials the SGCC certification committee has adopted the following:

**GENERAL****G.1**

Participation in the certification program will be on a January 1 to July 1 and July 1 to January 1 basis. Charges will be prorated to the nearest whole month based on the date of approval of certification.

**G.2**

Tests for initial compliance of safety glazing materials to 16 CFR 1201 will be accepted from any testing laboratory approved by the SGCC certification committee.

**G.3**

None

**G.4**

For insulating glass units to be considered safety glazing material, each light in the construction must be of safety glazing material.

**G.5**

The SGCC item number when used as part of a permanent label designates the name of the licensee (participant) and also the location of the manufacturing plant since the certified products directory which lists the item number and pertinent data is published twice a year.

**G.6**

a) All test specimens, except for prototype samples, must be marked with the correct SGCC permanent label prior to testing in order to be considered a valid sample. The administrator shall construe the absence of a correct permanent label as a failure to comply with the specifications. In such cases of noncompliance, Sections a, c, and e of G.11 shall be followed.

b) The label shall contain the correct SGCC number, the nominal thickness, and reference to the 16 CFR 1201 standard in the following minimum form: 16 CFR 1201 and the category to which it pertains.

For labeling purposes, a demarcation line shall separate those standards covered by the SGCC number from any other standards the licensee wishes to reference.

c) The testing laboratory is to advise the administrator of any specimen that does not in fact bear the correct SGCC permanent label and will be instructed by the administrator not to test but hold the sample.

d) The administrator will inform the licensee of the situation and direct (by letter) the testing laboratory to commence testing no later than 30 days hence. Until that time the testing laboratory is instructed to make these specimens available to the licensee at their convenience (the specimens are to remain at the testing laboratory) in order that the licensee may point out or show them that in fact the SGCC permanent label is correct or agree that in fact the correct SGCC permanent label is not present. In cases of any dispute between the licensee and the testing laboratory the decision of the administrator shall be final. The licensee shall not mark specimens after receipt at the testing laboratory.

**G.7**

None

**G.8**

After initial compliance with a sample size as stated in Table 1, testing of other sizes which represent the sizes manufactured may be allowed, provided however that all sizes produced up to the size provided in the standard 16 CFR 1201 are exposed to selection for testing.

**G.9**

Specimen sizes up to 34 inches by 77 inches shall be valid samples when independently obtained by the administrator for purposes of routine evaluation.

## G.10

In cases where the administrator samples and identifies specimens for routine evaluation on the licensee's premises or requests licensee's samples when none are available at the time of sampling:

- a) The licensee be permitted 6 weeks in which to effect delivery of said specimens to the administrator's designated testing laboratory.
- b) Failure to act as specified above shall be construed by the administrator as failure of the said specimens to comply with the specifications and the administrator shall act as provided for in license agreement A.6.

## G.11

In cases where a routine evaluation sample fails to comply with the specifications:

- a) Written notice and an invoice shall be sent to the licensee by the administrator stating that within 30 days from the date of such notice the licensee must submit a retest sample to the testing laboratory designated by the administrator.

Certification shall be removed if the sample and payment are not received within the allotted 30 days or if the sample submitted fails to comply with the specifications.

- b) Within 3 months the administrator shall obtain an additional random sample for evaluation (in addition to the routine evaluation sample obtained twice a year). The administrator shall be certain that this additional sample is of recent production.

- c) At the option of the administrator, specimens submitted under a) above shall be either prototype size and pattern or identical to those previously sampled and of recent production.

- d) Certification shall be removed if the additional random sample obtained in b) above fails to comply with the Specifications.

- e) All costs related to G.11 are to be borne by the licensee.

## G.12

If a licensee who manufactures a certified product outside the 48 contiguous states feels that in a particular instance that he will be unable to act as provided for in paragraph a) of SGCC Guideline G.11, he should notify the administrator. The administrator will then contact the chairman of the certification committee for a decision as to what action is to be taken.

## G.13

In cases where a certified item is produced infrequently or in small quantities so as to make it difficult for the administrator to obtain routine evaluation samples, the licensee shall notify the administrator at least two weeks in advance of any production of such item.

## G.14

The administrator shall remove certification from all of any licensee's products for failure to pay any monies due to SGCC within 30 days of invoice date. (Reference license agreement A.2, A.12 and B.6.)

## G.15

In the situation where a licensee desires to recertify a product that previously had certification removed because of failure to comply with the specifications (label and thickness tolerances excepted), the product shall be routinely sampled four times during the first year. The costs involved shall be paid by the licensee.

## G.16

The nominal thickness designations in SGCC authorized permanent labels for safety glazing materials may be shown in metric units. The thickness will be expressed in millimeters, limited to two decimal places, and will have the suffix "mm".

## G.17

All safety glazing materials that are not symmetrical from surface to surface shall be impacted two specimens on one side and two specimens on the other side.

## G.18

Certified and permanently labeled safety glazing materials such as laminated glass, rigid plastic or organic coated glass may be cut into smaller pieces by a distributor or installer after manufacture and it is not practical for each such smaller piece to bear a manufacturer's permanent label when finally installed in a building. When this is the case, then the distributor or installer shall apply a permanent label to each piece, which states his name and certifies that he cut the piece from material that was properly labeled in accordance with the requirements of SGCC.

For the purpose of this guideline, a permanent label is defined as one that will remain permanently legible and would be destroyed in attempts to remove it from the product.

#### G.19

The semi-annual invoicing date for certification fees shall be April 1 and October 1 of each year and the administrator is instructed to take those steps necessary to remove certification from licensees for failure of payment prior to closing date of the certified products directory.

#### G.20

For certification purposes a panel of glazing material composed of multiple components (such a leaded glass) may be tested and interpreted as a unit.

#### G.21

A preissued SGCC certification number shall be issued by the administrator upon receipt of a properly executed license agreement and a properly executed bond form in the amount of \$10,000. The preissued SGCC certification number, if not used by the licensee, will be terminated twelve months from the date of issue. The condition of the bond is such that if the licensee does not label any safety glazing material with the preissued certification number prior to formal certification then the bond shall be void.

#### G.22

In the case of plastics and organic coated glass certification of a patterned product may be extended to cover other patterns provided:

- a) The nominal thickness of the proposed alternate and all aspects other than pattern are the same as the certified product.
- b) The administrator of the certification program is provided with a copy of a prototype test from an approved laboratory, showing satisfactory compliance with the test requirements of 16 CFR 1201 for each alternate pattern proposed.
- c) The certification committee is provided with a 6 by 6 inch sample of each proposed alternate for its record and file. This must be sent to the administrator of the certification program.

After admission under blanket certification covering patterned products, any such patterns available may be selected by the administrator for routine sampling and testing.

In the case where a routine evaluation sample covered under a blanket certification fails to comply with the specifications the situation requires that particular product be submitted for the retest sample required by Guideline G.11a and also that particular product be sampled by the administrator for the additional sample required by Guideline G.11b.

#### G.23

There may be instances when a production facility is temporarily inoperative. This could be caused by, but not limited to, equipment repair or replacement, labor difficulties, energy or material shortages or economic considerations. As a consequence, samples for routine testing may not be available for long periods. The licensee may desire to retain certification during the shutdown period. This shall be done as follows:

- a) Prior to or within 2 weeks after the shutdown, the licensee shall inform the SGCC administrator by certified mail.
- b) The SGCC administrator will immediately supply the licensee with test release bond forms for submission by the licensee. A separate bond shall be submitted for each certified product affected.
- c) Within 2 weeks after receipt of the bond forms, the licensee shall submit them to the SGCC administrator.
- d) During the period covered by the bond the licensee shall retain certification, contingent upon payment of normal certification fees and meeting all other licensee obligations. Bonds will terminate 90 days after acceptance by SGCC but may be renewed by the licensee any number of times. Renewal is an obligation of the licensee and requires all steps listed herein.
- e) Within one week after re-activation of the production facility the licensee shall 1) notify the SGCC administrator by certified mail and 2) submit samples from the first weeks production to an SGCC approved laboratory for testing. In cases where more than one certified product is produced with the same equipment, samples of each must be furnished for testing within the first month. These will be considered as the routine samples for retesting for the six months period during which they are submitted.

f) Failure of the licensee to comply with any of the preceding shall be the basis for removal of certification from the affected products.

**G.24**

When a licensee's production equipment will not produce a size of 34 by 76 inches and the licensee wishes to certify a) a size whose smaller dimension exceeds 34 inches, material shall be tested whose smaller dimension is 34 inches or b) a size whose larger dimension exceeds 76 inches, material shall be tested whose larger dimension is 76 inches.

**G.25**

None

**G.26**

Any label that can be removed intact shall not be considered permanent and is not acceptable to SGCC.

**G.27**

A licensee, by executing a supplementary license agreement, can elect to be in both 16 CFR 1201 and ANSI Z97.1-1984 programs under one SGCC number provided the licensee submits four specimens to be impact tested to ANSI Z97.1-1984 and one specimen to be impact tested to 16 CFR 1201 (all safety glazing materials that are not symmetrical from surface to surface, shall be impacted one specimen on one side and one specimen on the other side for 16 CFR 1201). If any one specimen of the composite sample fails, the entire composite sample will be considered to have failed to comply with both specifications.

**G.28**

The administrator shall construe noncompliance with thickness tolerances as a failure to comply with the specifications. In such cases of noncompliance, Sections a, c, and e of G.11 shall be followed.

**G.29**

For the purposes of certification, the thickness requirements of Federal Specification DD-G-451d shall apply.

**G.30**

For certification purposes, the minimum thickness shall be 0.092 and the maximum thickness shall be 0.108 inches for 0.100 inch glass.

**G.31**

For certification purposes, the nominal thickness of single strength pattern glass shall be 0.094 inches and thickness tolerances shall be plus 0.047 inches and minus 0.015 inches.

**G.32**

When testing to category II requirements, the administrator shall select specimens greater than 9 square feet in surface area.

**TEMPERED TRANSPARENT GLASS****T.1**

Four specimens shall be used for impact testing as detailed in 16 CFR 1201.4(a)(1). Certification of either flat glass or patterned glass will not cover the other except as noted in Guideline T.2. (Flat glass designates ground and polished plate, float and sheet glass.)

**T.2**

Polished plate glass and the rough glass blank from which it is produced will be considered to be of equal nominal thickness. Certification of tempered flat glass with therefore be interpreted as including tempered rough plate blank.

**T.3**

Certification of regular tempered glass will also cover tinted, heat absorbing and coated glasses of the same nominal thickness. Glasses of the same nominal thickness with a ceramic material applied as a continuous or partial coating to one or more surfaces prior to tempering are also covered.

**T.4**

In cases where certified glass is normally not available for sampling, the licensee may make an overrun (of four lights of prototype size that are to be marked with the date of production) when the item is in normal production and these will be accepted by the administrator if other samples are not available the administrator shall notify the licensee to submit prototype size samples to the administrator within six weeks.



## T.5

Certification of any nominal thickness of tempered safety plate, float or sheet glass will also cover the other two types. 16 CFR 1201 does not require the permanent label on tempered safety glass to specify which type of glass is used. Nor is it required that the test specimens be identified in this regard.

**TEMPERED PATTERN GLASS**

## TP.1

Four specimens shall be used for impact testing as detailed in 16 CFR 1201.4(a)(1). For the purposes of certification, the nominal thickness of patterned, figured, or rough rolled glass are the common fractions found in DD-G-451d. The permanent label must contain this fraction or a metric or decimal dimension within the tolerance of this thickness as published in DD-G-451d.

The patterns in each thickness will be classified as to the ratio of minimum to maximum thickness as follows:

<u>Pattern depth class</u>	<u>Ratio</u>
Shallow pattern glass	0.90 or above
Medium pattern glass	0.80 through 0.89
Deep pattern glass	0.79 or below

Certification will be by nominal thickness and pattern depth class. Any pattern in a certified thickness and pattern depth class is certified.

New or unlisted patterns must be submitted to the pattern subcommittee for classification and file, prior to certification. After measurement, the new pattern will be assigned to a pattern depth class.

In the case of 5/32 inch tempered pattern glass refer to DD-G-1403b because this thickness is not included in DD-G-451d.

Certification of deep also covers medium and shallow patterns of the same nominal thickness.

Certification of medium also covers shallow patterns of the same nominal thickness.

## TP.2

The maximum thickness shall be recorded when measuring the thickness of pattern glass.

## TP.3

For tempered pattern glass, one specimen must be weighed and the weight of ten square inches determined from the weight, width and height of that specimen to use for 16 CFR 1201 test purposes.

## TP.4

For certification purposes, the nominal thickness of 210 tempered pattern glass shall be 0.210 inches and thickness tolerances shall be plus 0.031 inches and minus 0.016 inches.

## TP.5

When medium pattern glass is not available for routine sampling, the licensee submitted specimens must be a medium pattern (a shallow pattern is not acceptable).

## TP.6

When deep pattern glass is not available for routine sampling, the licensee submitted specimens must be a deep pattern (shallow or medium patterns are not acceptable).

## L.1

Four specimens shall be used for impact testing as detailed in 16 CFR 1201.4(a)(1). Certification of regular laminated glass will also cover tinted, heat absorbing and coated glasses, both flat and bent of the same nominal thickness.

## L.2

In cases where certified laminated glass is normally not available for sampling the licensee may make an overrun (of four lights of prototype size that are to be marked with the date of production) when the item is in normal production and these will be accepted by the administrator if other samples are not available. Otherwise, when production samples are not available the administrator shall notify the licensee to submit prototype size samples to the administrator within six weeks.

**LAMINATED GLASS**

L.3  
Certification of 7/32 inch laminated glass also covers SS/DS and vice versa.

L.4  
When a laminated glass is certified, other laminated glasses having the same thickness or thicknesses of glass and a greater thickness of plastic interlayer will be considered to be of equal nominal thickness and will be included in the certification.

L.5  
Laminated safety glass need not be identified by type of base glass.

L.6  
Thickness of the plastic interlayer shall be measured by the SGCC standard method.

L.7  
For certification purposes the following thickness tolerances shall be used. Thickness tolerance shall apply only to the overall thickness. The plus tolerance shall be the sum of all the individual plus tolerances of each layer of the laminate. The minus tolerance shall be the sum of all of the individual minus tolerances of each layer of the laminate. Polyurethane interlayer shall have a thickness tolerance of plus or minus 0.015 inches.

The tolerance of the polyvinylbutyral (PVB) shall be based on the nominal thickness of the interlayer with a plus tolerance of 0.002 and a minus tolerance of 0.004 inches.

L.8  
When a laminated annealed glass is certified, other laminated glasses having the same thickness or thicknesses of heat strengthened or tempered glass and the same or greater thickness of plastic interlayer of the same chemical composition will be considered to be included in the certification.

L.9  
When laminated glass is not available for routine sampling, the licensee submitted specimens must contain the identical thickness plastic interlayer that was contained in the prototype specimens.

**PLASTICS - GENERAL**

P.1  
One piece of at least one square foot area shall be used for testing the hardness and modulus of elasticity. Certification of one tint or color of rigid plastic will also cover other tints, colors, flat configurations or bent and formed configurations.

P.2  
For certifying all plastics covering a range of thicknesses, prototype impact tests are required of the minimum thickness and also of the maximum thickness (except that 0.250 inch thickness would be tested if the maximum thickness exceeds 0.250 inches). Only one certification number will be issued and shall be marked upon all thicknesses. Routine evaluation samples are to be selected by the administrator from any of the certified thicknesses.

P.3  
The following thickness tolerances shall be used for certification purposes:

Outdoor use plastic materials Class 1. Cast acrylic. (Including continuously cast sheet): As specified in Federal Specification LP-391, latest issue.

Outdoor use plastic materials Class 2. Extruded acrylic: As specified in Federal Specification LP-507, latest issue.

Outdoor use plastic materials Class 3. Extruded polycarbonate: As specified in Military Specification MIL-P-46144, latest issue.

Indoor use plastic materials Class 1: Plus or minus 10 percent of nominal thickness.

## P.4

The maximum thickness shall be recorded when measuring the thickness of patterned plastics.

## P.5

Certification of either smooth plastic or patterned plastic will not cover the other.

**PLASTICS - EXTERIOR USE**

## PE.1

Sheet plastics for exterior use must comply with 16 CFR 1201.4(e)(2)(ii)(A) accelerated weathering test Table 1 or simulated weathering test. The equipment shall be an apparatus commercially known as a "Weather-Ometer" or its function equivalent incorporating a carbon arc. It shall be operated in accordance with "Standard Recommended Practice for Operating Light-and-Water-Exposure Apparatus (Carbon-Arc Type) for Exposure of Nonmetallic Materials", ASTM G 23069, March 21, 1969, as augmented for plastics (for plastic test specimens only) by "Standard Recommended Practice for Operating Light-and-Water-Exposure Apparatus (Carbon-Arc Type) for Exposure of Plastics", ASTM D 1499-64, August 31, 1964. Specimens shall be mounted and control specimens shall be used in the manner specified in the Standard at section 1201.4(d)(2)(ii)(A) or (B), as appropriate. An appropriate water spray cycle shall be used. The specimens shall be exposed in the Weather-Ometer for a period of time which, irradiation equivalent to the accumulated ultraviolet irradiation of 2,000 plus or minus 1 hours of exposure in a twin enclosed carbon-arc Weather-Ometer. Evaluate the test results by using the test criteria set forth in the Standard at section 1201.4(e)(2)(ii)(A) or (B), as appropriate.

Intensified weathering test. The test equipment shall be the Equatorial Mount with Mirrors for Acceleration with Water, such as that found at the Desert Sunshine Exposure Tests, Inc. near Phoenix, Arizona. It shall be operated in accordance with "Standard Recommended Practice for Operating EMMA (QUA)R - A Fresnel-Concentrator Accelerated Weathering Machine Employing Natural Sunshine as Source", ASTM draft standard dated October 1, 1976. The standard water spray cycle of eight minutes on followed by 52 minutes off shall be used. Mounting of specimens and use of control specimens shall be specified in the Standard at section 1201.4(d)(2)(ii)(A) or (B), as appropriate. The specimens shall be exposed to 375,000 plus or minus 10,000 langley (375 plus or minus 10 kilo-calories per square centimeter) or irradiation. Evaluate the test results by using the test criteria set forth in the Standard at section 1201.4(e)(2)(ii)(A) or (B), as appropriate.

Outdoor weather test. The specimens shall be exposed in outdoor exposure test racks set facing the equator at an angle from the horizontal equal to the latitude of the exposure site. The specimens shall be exposed to 375,000 plus or minus 10,000 langley (375 plus or minus 10 kilo-calories per square centimeter) or irradiation. Mounting of specimens and use of control specimens shall be as specified in the Standard at section 1201.4(d)(2)(ii)(A) or (B), as appropriate. Evaluate the test results by using the test 1201.4(d)(2)(ii)(A) or (B), as appropriate.

## PE.2

None

## PE.3

For all plastics requiring UV weathering tests an infrared spectrogram shall be obtained of all prototype weathering specimens. An infrared spectrogram shall be obtained of all routine evaluation samples and shall be compared with that of the prototype in lieu of conducting weathering test. The spectral scan shall be made using a minimum film thickness of 0.002 inches or its equivalent.

## PE.4

When initial Charpy unnotched specimens do not break, then notched specimens shall be used for both initial and exposed Charpy impact testing. The specimens shall be notched prior to UV exposure and the notched surface shall be exposed to the UV.

**PLASTICS - INDOOR USE ONLY**

## PI.1

Sheet plastics used in indoor applications only, must comply with Table 1 in the standard.

## PI.2

The permanent label authorized by SGCC must include "Indoor Use Only".

## PI.3

For all indoor plastics requiring aging tests, an infrared spectrogram shall be obtained of all prototype aging specimens. An infrared spectrogram shall be obtained of all routine re-evaluation samples and shall be compared with that of the prototype in lieu of conducting aging tests. The spectral scan shall be made using a minimum film thickness of 0.002 inches or its equivalent.

**ORGANIC COATED GLASS**

**AG.1**

Four specimens shall be used for impact testing as detailed in 16 CFR 1201.4(a)(1). Thickness of the applied plastic coating shall be measured by the SGCC standard method.

**AG.2**

The SGCC authorized permanent label, which complies with Guideline G.26 must be imprinted upon or applied to a surface of the plastic for all plastic coated annealed glasses.

**AG.3**

None

\* \* \* \* \*

Copies of the Standard 16 CFR 1201 may be obtained from:

Consumer Products Safety Commission  
5401 Westbard Avenue  
Bethesda, MD 20016

\* \* \* \* \*

SGCC APPROVED TESTING LABORATORIES  
APPROVED FOR TESTING IN THE ANSI AND CPSC  
CERTIFICATION PROGRAMS

Architectural Testing, Inc.  
Two Interchange Place  
York, PA 17402-9899  
Attention: Mr. Bruce W. Croak  
Telephone: 717-846-7700

Bowser-Morner, Inc.  
420 Davis Avenue; Box 51  
Dayton, OH 45401  
Attention: Mr. Robert J. Rosencrans  
Telephone: 513-253-8805

ETL Testing Laboratories, Inc.  
5855 P-Oakbrook Parkway  
Norcross, GA 30093  
Attention: Mr. William D. Penue1  
Telephone: 404-446-7294

ETL Testing Laboratories, Inc.  
Route 11 - Industrial Park  
Cortland, NY 13045  
Attention: Mr. Claude F. Robb  
Telephone: 607-753-6711

Inspection and Research Laboratory, Inc.  
4749 West State Street; Building H  
Ontario, CA 91761  
Attention: Mr. H. Stanley Espenship, P.E.  
Telephone: 714-591-1789

Miami Testing Laboratory, Inc.  
1640 West 32nd Place  
Hialeah, FL 33012  
Attention: Mr. James W. Bailey  
Telephone: 305-822-1141

Northwest Laboratories  
1530 First Avenue South  
Seattle, WA 98134  
Attention: Mr. Alan Potter  
Telephone: 206-622-0680

Patzig Testing Laboratories Company, Inc. (ANSI ONLY)  
3922 Delaware Avenue  
Des Moines, IA 50313  
Attention: Mr. Byron A. Marks, P.E.  
Telephone: 516-266-5101

Southwestern Laboratories  
2900 Cullen Street; P.O. Box 1379  
Fort Worth, TX 76101  
Attention: Mr. Wayne Tessener  
Telephone: 817-332-5181

United States Testing Company, Inc.  
1415 Park Avenue  
Hoboken, NJ 07030  
Attention: Mr. James E. Fuller  
Telephone: 201-792-2400



safety glazing certification council

ETL TESTING LABORATORIES, INC.

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Cortland, NY 13045-0950

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