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NFRC Spectral Data Library #4 for use with the WINDOW 4.1 Computer Program

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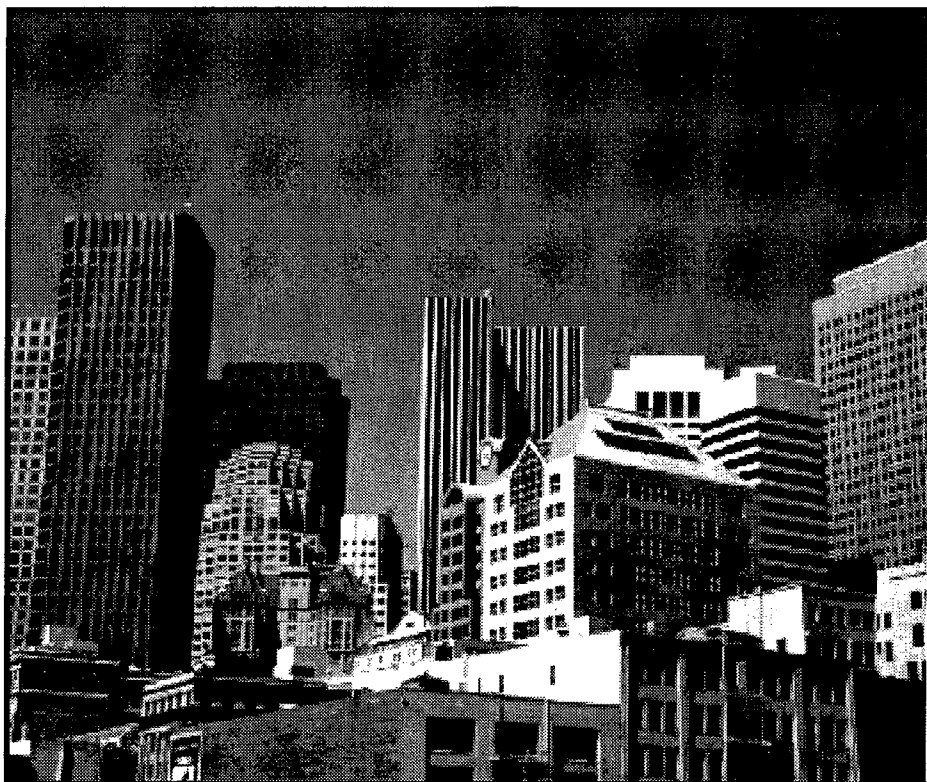
Lawrence Berkeley National Laboratory

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Addendum #4 to Window 4.1

NFRC Spectral Data Library #4



for use with the WINDOW 4.1 Computer Program.

Windows and Daylighting Group
Building Technologies Program
Energy and Environment Division
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This data library was created through a collaborative effort between the individual glass and glazing manufacturers and coaters involved, the National Fenestration Rating Council (NFRC), the Primary Glass Manufacturers Council (PGMC), and the Lawrence Berkeley National Laboratory (LBNL). LBNL effort was supported by the Assistant Secretary for Energy Efficiency and Renewable Energy, Office of Building Technology, State and Community Programs, Office of Building Systems of the U.S. Department of Energy under Contract No. DE-AC03-76SF00098.

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NFRC Spectral Data Library #4

for use with the WINDOW 4.1 Computer Program

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February 1997

This data library was created through a collaborative effort between the individual glass and glazing manufacturers and coaters involved, the National Fenestration Rating Council (NFRC), the Primary Glass Manufacturers Council (PGMC), and the Lawrence Berkeley National Laboratory (LBNL). LBNL effort was supported by the Assistant Secretary for Energy Efficiency and Renewable Energy, Office of Building Technology, State and Community Programs, Office of Building Systems of the U.S. Department of Energy under Contract No. DE-AC03-76SF00098.

NFRC Spectral Data Library #4 For Use With WINDOW 4.1

February 1997

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This library update contains NFRC approved spectral data for the WINDOW analysis program. This information is an update to the spectral data library that is distributed with WINDOW 4.1 and supersedes the NFRC Spectral Data Library Update #3 of April 1996. The NFRC approval stamp appears in the first line of the spectral data file's header. This stamp changes the "*" sign shown in the WINDOW glass library next to spectral data file names to a "#" sign. Any unauthorized changes to an NFRC approved file will cause it to revert to displaying the "*" sign in the WINDOW glass library.

NFRC requires that ALL simulations (for Solar Heat Gain Coefficient and Visible Transmittance) MUST be carried out using NFRC approved spectral data only. Any spectral data file displaying the "*" sign is not allowed for such simulations; only files displaying the "#" sign may be used. U-factor calculations must use the emittances from the most currently approved spectral data disk.

All spectral files must reside directly in the *w4\w4lib\specdat* directory to be accessible to WINDOW.

The table on page 4 summarizes the effects of the library update on the WINDOW glass library structure. A new *glass.dat* file is included on the distribution disk. This library list contains only the NFRC approved files with their most recent ID numbers. Each user may configure their own library to include new NFRC approved data, previous WINDOW data and their own spectral data.

A listing of all products on this disk by ID # begins on page 5.

Instructions for Loading the Spectral Data Files

The spectral data is compressed in a self-extracting archive, **spcdat04.exe**. Uncompressed, the full library contains 724 files and takes approximately 4.6 MB of hard disk space. Uncompressing the data will re-create identical versions of the files contained on the previous

Spectral Data Library for users that have installed that version. There is no problem if this library overwrites your previously installed files. In some cases, the new files may be updates of previous files of the same name. To de-compress the data, use one of the following options:

Option 1: To create subdirectories sorting files by manufacturer, copy **spcdat04.exe** to your hard disk and run

```
spcdat04.exe -d
```

You will have to move the files to *w4\w4lib\specdat* or an equivalent directory to use them with WINDOW.

Option 2: For no subdirectory structure, copy **spcdat04.exe** to the directory *w4\w4lib\specdat* and run

```
spcdat04
```

This option will put the spectral data files directly in the specified directory. All manufacturers' data will be lumped together in the *specdat* subdirectory.

Option 3: If you are already using the NFRC Spectral Data Library #3, note that the only changes from that disk are the addition of ten new Guardian files. These are found, uncompressed, on the attached disk, in subdirectory "Newfiles." If you need these files, you can manually add them to your existing library.

Instruction for Loading the New Glass Library, *glass.dat*

Also included on the disk is the file **glassdat.exe**. It is a self-extracting archive containing the file *glass.dat* only. If you are using options 1. or 2. above, copy the file **glassdat.exe** to the directory *w4\w4lib*. Uncompress it by running:

```
glassdat
```

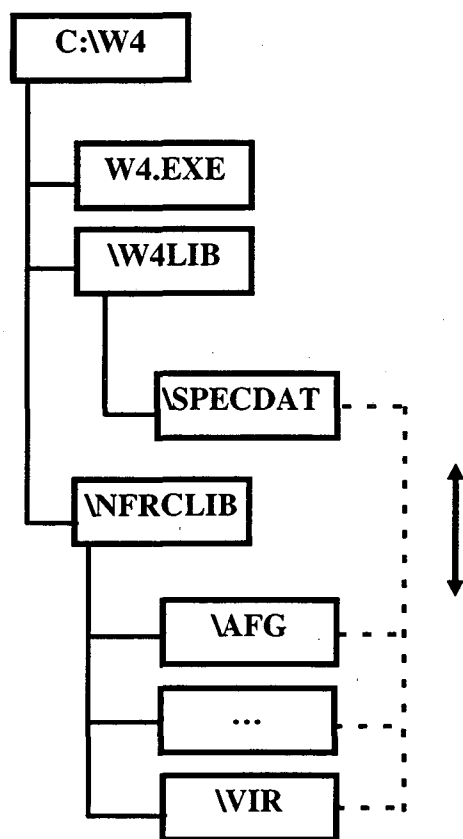
HOWEVER, take care not to overwrite the *glass.dat* file you have been using all along. A suggestion is to rename that file as *glass.bak* before uncompressing the new file.

Spectral Data on the World Wide Web

You may now download the spectral data from the World Wide Web at the following addresses:
<http://eande.lbl.gov/BTP/NFRCSPEC/> or <http://www.nfrc.org>

Notes on the Use of the NFRC Spectral Data with WINDOW 4.1:

It has come to our attention that there is a bug in WINDOW that may cause problems with the new spectral data. This problem occurs when spectral data sorted in separate subdirectories of the \SPECDAT subdirectory is moved in and out of \SPECDAT. The result is that glazing systems created with the spectral data do not remain updated and cannot be imported into the FRAME program. The recommended solution is to create a subdirectory of individual manufacturer subdirectories at the level of the W4.EXE file and move the files in and out of the \SPECDAT from these subdirectories. The diagram below shows a workable alternative for storing spectral data files in individual manufacturers subdirectories.



Summary of Current WINDOW Spectral Data Files¹

Reserved ID # Range	Manufacturer	Files on Disk#4
100-199	Generic Data	5 files ²
700-1099	AFG Industries	216 files ²
1100-1199	DuPont	12 files ²
1300-1399	Ford	29 files ²
1500-1599	Southwall Technologies	51 files ²
1700-1799	Marcon Coatings	15 files ²
2000-2099	Cardinal IG	20 files ²
2500-2599	Courtaulds Performance Films	27 files ²
2700-2799	3M Corporation	25 files ²
3000-3199	Guardian	15 files ³
4000-4199	Interpane	0 files ²
5000-5299	PPG Industries	119 files ²
6000-6199	Viracon	147 files ²
9800-9999	Libbey-Owens-Ford	43 files ²

¹ Only NFRC approved files are included on the NFRC WINDOW Spectral Data Library #4 disk

² No updates relative to disk #3

³ 10 new files relative to disk #3

Generic Uncoated Glass Products

These are not measured properties of any particular glass product, but are composed of average spectral data from at least two samples. For simulation purposes, they are considered equivalent files with those listed under the Description heading. They are to be used to avoid re-calculating window performance for several glass products that are similar in performance. All product data files that a specific generic file may stand in place of have Solar Heat Gain Coefficients differing by less than 0.05 for a single glazing layer at normal incidence.

ID #	File Name	Glass Type	Description (files it may stand in place of)	Nominal Thickness s (mm)
100	BRONZE_3.DAT	Bronze	BRONZE3.AFG, BRONZE30.FMC, BRONZ3.LOF, SBRNZ_3.PPG	3.0
101	BRONZE_6.DAT	Bronze	BRONZE6.AFG, BRONZE60.FMC, BRONZ6.LOF, SBRNZ_6.PPG	6.0
102	CLEAR_3.DAT	Clear	CLR_3.AFG, CLEAR30.FMC, CLEAR3.LOF, CLR-3.CIG, CLEAR_3.PPG	3.0
103	CLEAR_6.DAT	Clear	CLR_6.AFG, CLEAR60.FMC, CLEAR6.LOF, CLR-6.CIG, CLEAR_6.PPG,	6.0
104	GRAY_3.DAT	Gray	GRAY3.AFG, GRAY30.FMC, GREY3.LOF, SGRAY_3.PPG	3.0

AFG Industries, Inc.

ID#	File Name	Glass Type	Coating	Description	Nominal Thickness (Inches)
700	B120.AFG	Clear	Titanium Nitride	Silver-Blue	1/4"
701	B130.AFG	Clear	Titanium Nitride	Silver-Blue	1/4"
702	B140.AFG	Clear	Titanium Nitride	Silver-Blue	1/4"
703	B220.AFG	Green	Titanium Nitride	Silver-Blue	1/4"
704	B230.AFG	Green	Titanium Nitride	Silver-Blue	1/4"
705	B240.AFG	Green	Titanium Nitride	Silver-Blue	1/4"
706	B320.AFG	Gray	Titanium Nitride	Silver-Blue	1/4"
707	B330.AFG	Gray	Titanium Nitride	Silver-Blue	1/4"
708	B340.AFG	Gray	Titanium Nitride	Silver-Blue	1/4"
709	B420.AFG	Bronze	Titanium Nitride	Silver-Blue	1/4"
710	B430.AFG	Bronze	Titanium Nitride	Silver-Blue	1/4"
711	B440.AFG	Bronze	Titanium Nitride	Silver-Blue	1/4"
712	B520.AFG	Blue	Titanium Nitride	Silver-Blue	1/4"
713	B530.AFG	Blue	Titanium Nitride	Silver-Blue	1/4"
714	B540.AFG	Blue	Titanium Nitride	Silver-Blue	1/4"
715	B620.AFG	Blue-green	Titanium Nitride	Silver-Blue	1/4"
716	B630.AFG	Blue-green	Titanium Nitride	Silver-Blue	1/4"
717	B640.AFG	Blue-green	Titanium Nitride	Silver-Blue	1/4"
718	B720.AFG	Azurlite *	Titanium Nitride	Silver-Blue	1/4"
719	B730.AFG	Azurlite *	Titanium Nitride	Silver-Blue	1/4"
720	B740.AFG	Azurlite *	Titanium Nitride	Silver-Blue	1/4"
721	B820.AFG	Evergreen **	Titanium Nitride	Silver-Blue	1/4"
722	B830.AFG	Evergreen **	Titanium Nitride	Silver-Blue	1/4"
723	B840.AFG	Evergreen **	Titanium Nitride	Silver-Blue	1/4"
724	C120.AFG	Clear	Copper	Copper	1/4"
725	C130.AFG	Clear	Copper	Copper	1/4"
726	C145.AFG	Clear	Copper	Copper	1/4"
727	C155.AFG	Clear	Copper	Copper	1/4"
728	C220.AFG	Green	Copper	Copper	1/4"
729	C230.AFG	Green	Copper	Copper	1/4"
730	C245.AFG	Green	Copper	Copper	1/4"
731	C255.AFG	Green	Copper	Copper	1/4"
732	C320.AFG	Gray	Copper	Copper	1/4"
733	C330.AFG	Gray	Copper	Copper	1/4"
734	C345.AFG	Gray	Copper	Copper	1/4"
735	C355.AFG	Gray	Copper	Copper	1/4"
736	C420.AFG	Bronze	Copper	Copper	1/4"
737	C430.AFG	Bronze	Copper	Copper	1/4"
738	C445.AFG	Bronze	Copper	Copper	1/4"
739	C455.AFG	Bronze	Copper	Copper	1/4"
740	C520.AFG	Blue	Copper	Copper	1/4"
741	C530.AFG	Blue	Copper	Copper	1/4"
742	C545.AFG	Blue	Copper	Copper	1/4"
743	C555.AFG	Blue	Copper	Copper	1/4"
744	C620.AFG	Blue-green	Copper	Copper	1/4"

AFG Industries, Inc.

ID#	File Name	Glass Type	Coating	Description	Nominal Thickness (Inches)
745	C630.AFG	Blue-green	Copper	Copper	1/4"
746	C645.AFG	Blue-green	Copper	Copper	1/4"
747	C655.AFG	Blue-green	Copper	Copper	1/4"
748	C720.AFG	Azurlite *	Copper	Copper	1/4"
749	C730.AFG	Azurlite *	Copper	Copper	1/4"
750	C745.AFG	Azurlite *	Copper	Copper	1/4"
751	C755.AFG	Azurlite *	Copper	Copper	1/4"
752	C820.AFG	Evergreen **	Copper	Copper	1/4"
753	C830.AFG	Evergreen **	Copper	Copper	1/4"
754	C845.AFG	Evergreen **	Copper	Copper	1/4"
755	C855.AFG	Evergreen **	Copper	Copper	1/4"
756	ES140.AFG	Clear	Silver	Low.%T Low E	1/4"
757	ES152.AFG	Clear	Silver	Med.%T Low E	1/4"
758	ES240.AFG	Green	Silver	Low.%T Low E	1/4"
759	ES252.AFG	Green	Silver	Med.%T Low E	1/4"
760	ES340.AFG	Gray	Silver	Low.%T Low E	1/4"
761	ES352.AFG	Gray	Silver	Med.%T Low E	1/4"
762	ES440.AFG	Bronze	Silver	Low.%T Low E	1/4"
763	ES452.AFG	Bronze	Silver	Med.%T Low E	1/4"
764	ES540.AFG	Blue	Silver	Low.%T Low E	1/4"
765	ES552.AFG	Blue	Silver	Med.%T Low E	1/4"
766	ES640.AFG	Blue-green	Silver	Low.%T Low E	1/4"
767	ES652.AFG	Blue-green	Silver	Med.%T Low E	1/4"
768	ES740.AFG	Azurlite *	Silver	Low.%T Low E	1/4"
769	ES752.AFG	Azurlite *	Silver	Med.%T Low E	1/4"
770	ES840.AFG	Evergreen **	Silver	Low.%T Low E	1/4"
771	ES852.AFG	Evergreen **	Silver	Med.%T Low E	1/4"
772	ESB1.AFG	Clear	Silver	Sunbelt Low E	1/4"
773	ESB2.AFG	Green	Silver	Sunbelt Low E	1/4"
774	ESB3.AFG	Gray	Silver	Sunbelt Low E	1/4"
775	ESB4.AFG	Bronze	Silver	Sunbelt Low E	1/4"
776	ESB5.AFG	Blue	Silver	Sunbelt Low E	1/4"
777	ESB6.AFG	Blue-green	Silver	Sunbelt Low E	1/4"
778	ESB7.AFG	Azurlite *	Silver	Sunbelt Low E	1/4"
779	ESB8.AFG	Evergreen **	Silver	Sunbelt Low E	1/4"
780	ESN1.AFG	Clear	Silver	High. %T Low E	1/4"
781	ESN2.AFG	Green	Silver	High. %T Low E	1/4"
782	ESN3.AFG	Gray	Silver	High. %T Low E	1/4"
783	ESN4.AFG	Bronze	Silver	High. %T Low E	1/4"
784	ESN5.AFG	Blue	Silver	High. %T Low E	1/4"
785	ESN6.AFG	Blue-green	Silver	High. %T Low E	1/4"
786	ESN7.AFG	Azurlite *	Silver	High. %T Low E	1/4"
787	ESN8.AFG	Evergreen **	Silver	High. %T Low E	1/4"
788	G108.AFG	Clear	Copper Aluminum	Gold	1/4"
789	G114.AFG	Clear	Copper Aluminum	Gold	1/4"

AFG Industries, Inc.

ID#	File Name	Glass Type	Coating	Description	Nominal Thickness (Inches)
790	G208.AFG	Green	Copper Aluminum	Gold	1/4"
791	G214.AFG	Green	Copper Aluminum	Gold	1/4"
792	G308.AFG	Gray	Copper Aluminum	Gold	1/4"
793	G314.AFG	Gray	Copper Aluminum	Gold	1/4"
794	G408.AFG	Bronze	Copper Aluminum	Gold	1/4"
795	G408.AFG	Blue	Copper Aluminum	Gold	1/4"
796	G414.AFG	Bronze	Copper Aluminum	Gold	1/4"
797	G514.AFG	Blue	Copper Aluminum	Gold	1/4"
798	G608.AFG	Blue-green	Copper Aluminum	Gold	1/4"
799	G614.AFG	Blue-green	Copper Aluminum	Gold	1/4"
800	G708.AFG	Azurlite *	Copper Aluminum	Gold	1/4"
801	G714.AFG	Azurlite *	Copper Aluminum	Gold	1/4"
802	G808.AFG	Evergreen **	Copper Aluminum	Gold	1/4"
803	G814.AFG	Evergreen **	Copper Aluminum	Gold	1/4"
804	GP108.AFG	Clear	Stainless Steel	Pewter	1/4"
805	GP114.AFG	Clear	Stainless Steel	Pewter	1/4"
806	GP120.AFG	Clear	Stainless Steel	Pewter	1/4"
807	GP208.AFG	Green	Stainless Steel	Pewter	1/4"
808	GP214.AFG	Green	Stainless Steel	Pewter	1/4"
809	GP220.AFG	Green	Stainless Steel	Pewter	1/4"
810	GP308.AFG	Gray	Stainless Steel	Pewter	1/4"
811	GP314.AFG	Gray	Stainless Steel	Pewter	1/4"
812	GP320.AFG	Gray	Stainless Steel	Pewter	1/4"
813	GP408.AFG	Bronze	Stainless Steel	Pewter	1/4"
814	GP414.AFG	Bronze	Stainless Steel	Pewter	1/4"
815	GP420.AFG	Bronze	Stainless Steel	Pewter	1/4"
816	GP508.AFG	Blue	Stainless Steel	Pewter	1/4"
817	GP514.AFG	Blue	Stainless Steel	Pewter	1/4"
818	GP520.AFG	Blue	Stainless Steel	Pewter	1/4"
819	GP608.AFG	Blue-green	Stainless Steel	Pewter	1/4"
820	GP614.AFG	Blue-green	Stainless Steel	Pewter	1/4"
821	GP620.AFG	Blue-green	Stainless Steel	Pewter	1/4"
822	GP708.AFG	Azurlite *	Stainless Steel	Pewter	1/4"
823	GP714.AFG	Azurlite *	Stainless Steel	Pewter	1/4"
824	GP720.AFG	Azurlite *	Stainless Steel	Pewter	1/4"
825	GP808.AFG	Evergreen **	Stainless Steel	Pewter	1/4"
826	GP814.AFG	Evergreen **	Stainless Steel	Pewter	1/4"
827	GP820.AFG	Evergreen **	Stainless Steel	Pewter	1/4"
828	P120.AFG	Clear	Stainless Steel	Pewter	1/4"
829	P130.AFG	Clear	Stainless Steel	Pewter	1/4"
830	P140.AFG	Clear	Stainless Steel	Pewter	1/4"
831	P220.AFG	Green	Stainless Steel	Pewter	1/4"
832	P230.AFG	Green	Stainless Steel	Pewter	1/4"
833	P240.AFG	Green	Stainless Steel	Pewter	1/4"
834	P320.AFG	Gray	Stainless Steel	Pewter	1/4"

AFG Industries, Inc.

ID#	File Name	Glass Type	Coating	Description	Nominal Thickness (Inches)
835	P330.AFG	Gray	Stainless Steel	Pewter	1/4"
836	P340.AFG	Gray	Stainless Steel	Pewter	1/4"
837	P420.AFG	Bronze	Stainless Steel	Pewter	1/4"
838	P430.AFG	Bronze	Stainless Steel	Pewter	1/4"
839	P440.AFG	Bronze	Stainless Steel	Pewter	1/4"
840	P520.AFG	Blue	Stainless Steel	Pewter	1/4"
841	P530.AFG	Blue	Stainless Steel	Pewter	1/4"
842	P540.AFG	Blue	Stainless Steel	Pewter	1/4"
843	P620.AFG	Blue-green	Stainless Steel	Pewter	1/4"
844	P630.AFG	Blue-green	Stainless Steel	Pewter	1/4"
845	P640.AFG	Blue-green	Stainless Steel	Pewter	1/4"
846	P720.AFG	Azurlite *	Stainless Steel	Pewter	1/4"
847	P730.AFG	Azurlite *	Stainless Steel	Pewter	1/4"
848	P740.AFG	Azurlite *	Stainless Steel	Pewter	1/4"
849	P820.AFG	Evergreen **	Stainless Steel	Pewter	1/4"
850	P830.AFG	Evergreen **	Stainless Steel	Pewter	1/4"
851	P840.AFG	Evergreen **	Stainless Steel	Pewter	1/4"
852	S108.AFG	Clear	Stainless Steel	Bright Silver	1/4"
853	S114.AFG	Clear	Stainless Steel	Bright Silver	1/4"
854	S120.AFG	Clear	Stainless Steel	Bright Silver	1/4"
855	S140.AFG	Clear	Stainless Steel	Bright Silver	1/4"
856	S208.AFG	Green	Stainless Steel	Bright Silver	1/4"
857	S214.AFG	Green	Stainless Steel	Bright Silver	1/4"
858	S220.AFG	Green	Stainless Steel	Bright Silver	1/4"
859	S240.AFG	Green	Stainless Steel	Bright Silver	1/4"
860	S308.AFG	Gray	Stainless Steel	Bright Silver	1/4"
861	S314.AFG	Gray	Stainless Steel	Bright Silver	1/4"
862	S320.AFG	Gray	Stainless Steel	Bright Silver	1/4"
863	S340.AFG	Gray	Stainless Steel	Bright Silver	1/4"
864	S408.AFG	Bronze	Stainless Steel	Bright Silver	1/4"
865	S414.AFG	Bronze	Stainless Steel	Bright Silver	1/4"
866	S420.AFG	Bronze	Stainless Steel	Bright Silver	1/4"
867	S440.AFG	Bronze	Stainless Steel	Bright Silver	1/4"
868	S508.AFG	Blue	Stainless Steel	Bright Silver	1/4"
869	S514.AFG	Blue	Stainless Steel	Bright Silver	1/4"
870	S520.AFG	Blue	Stainless Steel	Bright Silver	1/4"
871	S540.AFG	Blue	Stainless Steel	Bright Silver	1/4"
872	S608.AFG	Blue-green	Stainless Steel	Bright Silver	1/4"
873	S614.AFG	Blue-green	Stainless Steel	Bright Silver	1/4"
874	S620.AFG	Blue-green	Stainless Steel	Bright Silver	1/4"
875	S640.AFG	Blue-green	Stainless Steel	Bright Silver	1/4"
876	S708.AFG	Azurlite *	Stainless Steel	Bright Silver	1/4"
877	S714.AFG	Azurlite *	Stainless Steel	Bright Silver	1/4"
878	S720.AFG	Azurlite *	Stainless Steel	Bright Silver	1/4"
879	S740.AFG	Azurlite *	Stainless Steel	Bright Silver	1/4"

AFG Industries, Inc.

ID#	File Name	Glass Type	Coating	Description	Nominal Thickness (Inches)
880	S808.AFG	Evergreen **	Stainless Steel	Bright Silver	1/4"
881	S814.AFG	Evergreen **	Stainless Steel	Bright Silver	1/4"
882	S820.AFG	Evergreen **	Stainless Steel	Bright Silver	1/4"
883	S840.AFG	Evergreen **	Stainless Steel	Bright Silver	1/4"
884	CLR_P16.AFG	Clear		P16	0.072
885	CLR_SS.AFG	Clear		Single Strength	0.086
886	CLR_LAMI.AFG	Clear		Lami Strength	0.106
887	CLR_3.AFG	Clear			1/8"
888	CLR_4.AFG	Clear			5/32"
889	CLR_5.AFG	Clear			3/16"
890	CLR_6.AFG	Clear			1/4"
891	CLR_8.AFG	Clear			5/16"
892	CLR_10.AFG	Clear			3/8"
893	CLR_12.AFG	Clear			1/2"
894	BRONZE55.AFG	Bronze		Single Strength	0.090
895	BRONZE_3.AFG	Bronze			1/8"
896	BRONZE_4.AFG	Bronze			5/32"
897	BRONZE_5.AFG	Bronze			3/16"
898	BRONZE_6.AFG	Bronze			1/4"
899	GRAY_3.AFG	Gray			1/8"
900	GRAY_4.AFG	Gray			5/32"
901	GRAY_5.AFG	Gray			3/16"
902	GRAY_6.AFG	Gray			1/4"
903	CMFTE1_2.AFG		Comfort E	Single Strength	0.086
904	CMFTE1_3.AFG		Comfort E		1/8"
905	CMFTE1_5.AFG		Comfort E		3/16"
906	CMFTE2_2.AFG		Comfort E ²	Single Strength	0.086
907	CMFTE2_3.AFG		Comfort E ²		1/8"
908	CMFTE2_4.AFG		Comfort E ²		5/32"
909	CMFTE2_5.AFG		Comfort E ²		3/16"
910	CMFTE2_6.AFG		Comfort E ²		1/4"
911	GREEN_2.AFG	Green		Single Strength	0.090
912	GREEN_3.AFG	Green			1/8"
913	GREEN_5.AFG	Green			3/16"
914	GREEN_6.AFG	Green			1/4"
915	GREEN_12.AFG	Green			1/2"

* Azurlite is a registered trademark of PPG Industries

** Evergreen is a registered trademark of Libbey-Owens-Ford

DuPont Polymer Products

ID #	File Name	Glass Type (2 Ply)	Butacite Designation	Construction (ply+Butacite+ply) (mm)	Nominal Thickness of Laminate (mm)
1100	15PVB6.DUP	3 mm Clear	.015 Clear	3+0.38+3	6.38
1101	30PVB6.DUP	3 mm Clear	.030 Clear	3+0.76+3	6.76
1102	60PVB6.DUP	3 mm Clear	.060 Clear	3+1.52+3	7.52
1103	15PVB10.DUP	5 mm Clear	.015 Clear	5+0.38+5	10.38
1104	30PVB10.DUP	5 mm Clear	.030 Clear	5+0.76+5	10.76
1105	60PVB10.DUP	5 mm Clear	.060 Clear	5+1.52+5	11.52
1106	BLUGREEN.DUP	3 mm Clear	#2377300	3+0.76+3	6.76
1108	BZE_LITE.DUP	3 mm Clear	#0637600	3+0.76+3	6.76
1110	BRN_LITE.DUP	3 mm Clear	#0645200	3+0.76+3	6.76
1111	BRN_MEDM.DUP	3 mm Clear	#0365500	3+0.76+3	6.76
1112	BRN_DARK.DUP	3 mm Clear	#0362800	3+0.76+3	6.76
1117	AZURBLUE.DUP	3 mm Clear	#0360900	3+0.76+3	6.76

Ford Motor Company

ID #	File Name	Glass Type	Coating	Description	Nominal Thickness (mm)
1300	CLEAR25.FMC	Clear			2.5
1301	CLEAR30.FMC	Clear			3.0
1302	CLEAR40.FMC	Clear			4.0
1303	CLEAR50.FMC	Clear			5.0
1304	CLEAR60.FMC	Clear			6.0
1305	GREEN25.FMC	Sunglas ^(s) Green			2.5
1306	GREEN30.FMC	Sunglas ^(s) Green			3.0
1307	GREEN40.FMC	Sunglas ^(s) Green			4.0
1308	GREEN50.FMC	Sunglas ^(s) Green			5.0
1309	GREEN60.FMC	Sunglas ^(s) Green			6.0
1310	BRONZE25.FMC	Sunglas ^(s) Bronze			2.5
1311	BRONZE30.FMC	Sunglas ^(s) Bronze			3.0
1312	BRONZE40.FMC	Sunglas ^(s) Bronze			4.0
1313	BRONZE50.FMC	Sunglas ^(s) Bronze			5.0
1314	BRONZE60.FMC	Sunglas ^(s) Bronze			6.0
1315	GREY25.FMC	Sunglas ^(s) Grey			2.5
1316	GREY30.FMC	Sunglas ^(s) Grey			3.0
1317	GREY40.FMC	Sunglas ^(s) Grey			4.0
1318	GREY50.FMC	Sunglas ^(s) Grey			5.0
1319	GREY60.FMC	Sunglas ^(s) Grey			6.0
1320	BLUE25.FMC	Sunglas ^(s) Blue			2.5
1321	BLUE30.FMC	Sunglas ^(s) Blue			3.0
1322	BLUE40.FMC	Sunglas ^(s) Blue			4.0
1323	BLUE50.FMC	Sunglas ^(s) Blue			5.0
1324	BLUE60.FMC	Sunglas ^(s) Blue			6.0
1325	REFLGREY.FMC	Sunglas ^(s) Reflective Grey			6.0
1326	REFLBRZ.FMC	Sunglas ^(s) Reflective Bronze			6.0
1327	JADEICE.FMC	Sunglas ^(s) Jadeice TM			6.0
1328	REFLBLUE.FMC	Sunglas ^(s) Reflective Blue			6.0

Southwall Technologies, Inc.

ID #	File Name	Glass Type	Film	Description	Nominal Thickness (Inches)
1500	HM22.SWT		Heat Mirror™22	Suspended Film	0.003
1501	HM33.SWT		Heat Mirror™33	Suspended Film	0.003
1502	HM44.SWT		Heat Mirror™44	Suspended Film	0.003
1503	HM55.SWT		Heat Mirror™55	Suspended Film	0.003
1504	HM66.SWT		Heat Mirror™66	Suspended Film	0.003
1505	HM77.SWT		Heat Mirror™77	Suspended Film	0.003
1506	HM88.SWT		Heat Mirror™88	Suspended Film	0.003
1507	HMHPR18.SWT		HM-HPR18	Suspended Film	0.003
1508	HMHPR28.SWT		HM-HPR28	Suspended Film	0.003
1509	HMHPR38.SWT		HM-HPR38	Suspended Film	0.003
1510	HMSC75.SWT		HM-SC75	Suspended Film	0.003
1511	HMTC88.SWT		HM-TC88	Suspended Film	0.003
1512	CSBGRF12.SWT	Blue-Green Reflective			1/2"
1513	CSBRRF12.SWT	Bronze Reflective			1/2"
1514	CSCG06.SWT	Carmel Gray			1/4"
1515	CSCG12.SWT	Carmel Gray			1/2"
1516	CSCLRF12.SWT	Clear Reflective			1/2"
1517	CSGLRF12.SWT	Gold Reflective			1/2"
1518	CSGYRF12.SWT	Gray Reflective			1/2"
1519	CSLESF06.SWT	Low-e Sea Foam Clear			1/4"
1520	CSLESF12.SWT	Low-e Sea Foam Clear			1/2"
1521	CSMB06.SWT	Mojave Bronze			1/4"
1522	CSMB12.SWT	Mojave Bronze			1/2"
1523	CSMG06.SWT	Moss Green			1/4"
1524	CSMG12.SWT	Moss Green			1/2"
1525	CSPB12.SWT	Pacific Blue			1/2"
1526	CSSFC06.SWT	Sea Foam Clear			1/4"
1527	CSSFC12.SWT	Sea Foam Clear			1/2"
1528	CSSG06.SWT	Sierra Green			1/4"
1529	CSSG12.SWT	Sierra Green			1/2"
1530	CSTB06.SWT	Tahoe Green			1/4"
1531	CSTB12.SWT	Tahoe Green			1/2"
1532	CSWWC06.SWT	Water White Crystal			1/4"
1533	CSWWC12.SWT	Water White Crystal			1/2"
1534	SLCLAZ03.SWT	Azurlite * Glass	Solis Clear		1/8"
1535	SLCLAZ06.SWT	Azurlite * Glass	Solis Clear		1/4"
1536	SLCLBZ03.SWT	Bronze Glass	Solis Clear		1/8"
1537	SLCLBZ06.SWT	Bronze Glass	Solis Clear		1/4"
1538	SLCLCL03.SWT	Clear Glass	Solis Clear		1/8"
1539	SLCLCL06.SWT	Clear Glass	Solis Clear		1/4"
1540	SLCLEG03.SWT	Evergreen ** Glass	Solis Clear		1/8"
1541	SLCLEG06.SWT	Evergreen ** Glass	Solis Clear		1/4"
1542	SLCLFB06.SWT	Blue Glass	Solis Clear		1/4"
1543	SLCLGN03.SWT	Green Glass	Solis Clear		1/8"
1544	SLCLGN05.SWT	Green Glass	Solis Clear		1/4"
1545	SLCLGY03.SWT	Gray Glass	Solis Clear		1/8"

Southwall Technologies, Inc.

ID #	File Name	Glass Type	Film	Description	Nominal Thickness (mm)
1546	SLCLGY06.SWT	Gray Glass	Solis Clear		1/4"
1547	SLCLLE06.SWT	Pyrolitic Low-e	Solis Clear		1/4"
1548	SLGYCL03.SWT	Clear Glass	Solis Gray		1/8"
1549	SLGYCL06.SWT	Clear Glass	Solis Gray		1/4"
1550	SOLIS70.SWT		Solis Clear	Film Alone	.002

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*** Evergreen is a registered trademark of Libbey-Owens-Ford*

Marcon Coatings

ID #	File Names	Glass Type	Coating	Description	Nominal Thickness (mm)
1700	E1-2M-25.MAR	Clear	Low E II		2.5
1701	E1-2M-3.MAR	Clear	Low E II		3.0
1702	E1-2M-4.MAR	Clear	Low E II		4.0
1703	E1-2M-5.MAR	Clear	Low E II		5.0
1704	E1-2M-6.MAR	Clear	Low E II		6.0
1705	E1-55-25.MAR	Clear	Southern Low E		2.5
1706	E1-55-3.MAR	Clear	Southern Low E		3.0
1707	E1-55-4.MAR	Clear	Southern Low E		4.0
1708	E1-55-5.MAR	Clear	Southern Low E		5.0
1709	E1-55-6.MAR	Clear	Southern Low E		6.0
1710	E1-85-25.MAR	Clear	Northern Low E		2.5
1711	E1-85-3.MAR	Clear	Northern Low E		3.0
1712	E1-85-4.MAR	Clear	Northern Low E		4.0
1713	E1-85-5.MAR	Clear	Northern Low E		5.0
1714	E1-85-6.MAR	Clear	Northern Low E		6.0

Cardinal IG

ID #	File Name	Glass Type	Coating	Description	Nominal Thickness (mm)
2000	CLR_2.CIG	Clear			2.2
2001	CLR_3.CIG	Clear			3.0
2002	CLR_4.CIG	Clear			4.0
2003	CLR_5.CIG	Clear			5.0
2004	CLR_6.CIG	Clear			6.0
2005	E78_2.CIG	Clear	LoE-78		2.2
2006	E78_3.CIG	Clear	LoE-78		3.0
2007	E78_4.CIG	Clear	LoE-78		4.0
2008	E78_5.CIG	Clear	LoE-78		5.0
2009	E78_6.CIG	Clear	LoE-78		6.0
2010	EE72_2.CIG	Clear	LoE ² -72		2.2
2011	EE72_3.CIG	Clear	LoE ² -72		3.0
2012	EE72_4.CIG	Clear	LoE ² -72		4.0
2013	EE72_5.CIG	Clear	LoE ² -72		5.0
2014	EE72_6.CIG	Clear	LoE ² -72		6.0
2015	SUN45_2.CIG	Clear	LoE SUN-45		2.2
2016	SUN45_3.CIG	Clear	LoE SUN-45		3.0
2017	SUN45_4.CIG	Clear	LoE SUN-45		4.0
2018	SUN45_5.CIG	Clear	LoE SUN-45		5.0
2019	SUN45_6.CIG	Clear	LoE SUN-45		6.0

Courtaulds Performance Films

ID #	File Name	Film Type	Coating	Description	Nominal Thickness (Inches)
2500	DL30GR.CPF	DL-30GR (Green) SR CDF		Deluxe	.0015
2501	N1020B.CPF	N-1020B (Bronze) SR CDF		N (Neutral)	.0015
2502	N1020G.CPF	N-1020 (Gray) SR CDF		N (Neutral)	.0015
2503	N1035B.CPF	N-1035B (Bronze) SR CDF		N (Neutral)	.0015
2504	N1035G.CPF	N-1035 (Gray) SR CDF		N (Neutral)	.0015
2505	N1050B.CPF	N-1050B (Bronze) SR CDF		N (Neutral)	.0015
2506	N1050G.CPF	N-1050 (Gray) SR CDF		N (Neutral)	.0015
2507	NRM.CPF	NRM-PS2 (Frosty)		Non-Reflective	.0015
2508	NRMB.CPF	NRMB-PS2 (Bronze)		Non-Reflective	.0015
2509	NRMBL.CPF	NRMBL-PS2 (Black)		Non-Reflective	.0015
2510	NRMS.CPF	NRMS-PS2 (Silver)		Non-Reflective	.0015
2511	R15B.CPF	R-15B (Bronze) SR CDF		Reflective	.0015
2512	R15BL.CPF	R-15BL (Blue) SR CDF		Reflective	.0015
2513	R15G.CPF	R-15G (Gray) SR CDF		Reflective	.0015
2514	R15GO.CPF	R15GO (Gold) SR CDF		Reflective	.0015
2515	R20.CPF	R-20 (Silver) SR CDF		Reflective	.0015
2516	R30B.CPF	R30B (Bronze) SR CDF		Reflective	.0015
2517	R30G.CPF	R-30G (Gray) SR CDF		Reflective	.0015
2518	R50.CPF	R-50 (Silver) SR CDF		Reflective	.0015
2519	SCL_PS4.CPF	SCL SR-PS4 (Clear)		Safety	.0015
2520	SCL_PS7.CPF	SCL SR-PS7 (Clear)		Safety	.0015
2521	SCL_PS11.CPF	SCL SR-PS11 (Clear)		Safety	.0015
2522	V28.CPF	V-28 SR CDF		Vista	.0015
2523	V30.CPF	V-30 SR CDF		Vista	.0015
2524	V38.CPF	V-38 SR CDF		Vista	.0015
2525	V45.CPF	V-45 SR CDF		Vista	.0015
2526	V58.CPF	V-58 SR CDF		Vista	.0015

3M Corporation

ID #	File Name	Film Type	Coating	Description	Nominal Thickness (Inches)
2700	P19AR.MMM	P19AR		Low e, Silver	.0015
2701	LE20SIAR.MMM	LE20SIARL		Low e, Silver	.0015
2702	LE35AMAR.MMM	LE35AMARL		Low e, Amber	.0015
2703	LE50AMAR.MMM	LE50AMARL		Low e, Amber	.0015
2704	LE30CUAR.MMM	LE30CUARL		Low e, Copper	.0015
2705	RE15SIX.MMM	RE15SIX		Sun Control, Silver	.0015
2706	P18AR.MMM	P18AR		Sun Control, Silver	.0015
2707	RE35AMAR.MMM	RE35AMARL		Sun Control, Amber	.0015
2708	RE20NEAR.MMM	RE20NEARL		Sun Control, Neutral	.0015
2709	RE35NEAR.MMM	RE35NEARL		Sun Control, Neutral	.0015
2710	RE50NEAR.MMM	RE50NEARL		Sun Control, Neutral	.0015
2711	RE70NEAR.MMM	RE70NEARL		Sun Control, Neutral	.0015
2712	RE20BRAR.MMM	RE20BRARL		Sun Control, Bronze	.0015
2713	RE35BRAR.MMM	RE35BRARL		Sun Control, Bronze	.0015
2714	RE50BRAR.MMM	RE50BRARL		Sun Control, Bronze	.0015
2715	RE25SLAR.MMM	RE25SLARL		Sun Control, Slate	.0015
2716	RE35SLAR.MMM	RE35SLARL		Sun Control, Slate	.0015
2717	RE50SLAR.MMM	RE50SLARL		Sun Control, Slate	.0015
2718	PNTHR5.MMM	PNTHR5		Non reflective, Neutral	.0015
2719	PNTHR20.MMM	PNTHR20		Non reflective, Neutral	.001
2720	PNTHR35.MMM	PNTHR35		Non reflective, Neutral	.001
2721	PNTHR50.MMM	PNTHR50		Non reflective, Neutral	.001
2722	S35NEAR.MMM	S35NEARL		Safety, Neutral	.003
2723	SCLAR150.MMM	SCLARL150		Safety, Clear	.002
2724	SCLAR400.MMM	SCLARL400		Safety, Clear	.004

Guardian Industries Glass Products

ID #	File Name	Glass Type	Coating	Description	Nominal Thickness (mm)
3100	PPLUS23C.GRD	Clear	Performance Plus	Low-E	2.3
3101	PPLUS30C.GRD	Clear	Performance Plus	Low-E	3
3102	PPLUS30G.GRD	Green	Performance Plus	Low-E	3
3103	PPLUS31B.GRD	Bronze	Performance Plus	Low-E	3.1
3104	PPLUS31Y.GRD	Gray	Performance Plus	Low-E	3.1
3110	LEPPIIC2.GRD	Clear	Performance Plus II	Low-E	2
3111	LEPPIIC3.GRD	Clear	Performance Plus II	Low-E	3
3112	LEPPIIC4.GRD	Clear	Performance Plus II	Low-E	4
3113	LEPPIIC5.GRD	Clear	Performance Plus II	Low-E	5
3114	LEPPIIC6.GRD	Clear	Performance Plus II	Low-E	6
3120	LEPPIIN2.GRD	Green	Performance Plus II	Low-E	2
3121	LEPPIIN3.GRD	Green	Performance Plus II	Low-E	3
3122	LEPPIIN4.GRD	Green	Performance Plus II	Low-E	4
3123	LEPPIIN5.GRD	Green	Performance Plus II	Low-E	5
3124	LEPPIIN6.GRD	Green	Performance Plus II	Low-E	6

PPG Industries, Inc.

ID #	File Name	Glass Type	Coating	Description	Nominal Thickness (mm)
5001	STRPH_3.PPG	STARPHIRE®			3.3
5002	STRPH_4.PPG	STARPHIRE®			4.0
5003	STRPH_5.PPG	STARPHIRE®			5.0
5004	STRPH_6.PPG	STARPHIRE®			6.0
5005	STRPH_8.PPG	STARPHIRE®			9.0
5006	STRPH_10.PPG	STARPHIRE®			10.0
5007	STRPH_12.PPG	STARPHIRE®			12.0
5008	CLEAR_2H.PPG	Clear			2.5
5009	CLEAR_3.PPG	Clear			3.3
5010	CLEAR_4.PPG	Clear			4.0
5011	CLEAR_5.PPG	Clear			5.0
5012	CLEAR_6.PPG	Clear			6.0
5013	CLEAR_8.PPG	Clear			8.0
5014	CLEAR_10.PPG	Clear			10.0
5015	CLEAR_12.PPG	Clear			12.0
5016	SOLEX_2H.PPG	SOLEX®			2.5
5017	SOLEX_3.PPG	SOLEX®			3.3
5018	SOLEX_4.PPG	SOLEX®			4.0
5019	SOLEX_5.PPG	SOLEX®			5.0
5020	SOLEX_6.PPG	SOLEX®			6.0
5021	SOLEX_8.PPG	SOLEX®			8.0
5024	SLGRN_2H.PPG	SOLARGREEN®			2.5
5025	SLGRN_3.PPG	SOLARGREEN®			3.3
5026	SLGRN_4.PPG	SOLARGREEN®			4.0
5027	SLGRN_5.PPG	SOLARGREEN®			5.0
5028	SLGRN_6.PPG	SOLARGREEN®			6.0
5029	SLGRN_8.PPG	SOLARGREEN®			8.0
5032	AZURL_2H.PPG	AZURLITE®			2.5
5033	AZURL_3.PPG	AZURLITE®			3.3
5034	AZURL_4.PPG	AZURLITE®			4.0
5035	AZURL_5.PPG	AZURLITE®			5.0
5036	AZURL_6.PPG	AZURLITE®			6.0
5037	AZURL_8.PPG	AZURLITE®			8.0
5038	AZURL_10.PPG	AZURLITE®			10.0
5040	SBRNZ_2H.PPG	SOLARBRONZE®			2.5
5041	SBRNZ_3.PPG	SOLARBRONZE®			3.3
5042	SBRNZ_4.PPG	SOLARBRONZE®			4.0
5043	SBRNZ_5.PPG	SOLARBRONZE®			5.0
5044	SBRNZ_6.PPG	SOLARBRONZE®			6.0
5045	SBRNZ_8.PPG	SOLARBRONZE®			8.0
5046	SBRNZ_10.PPG	SOLARBRONZE®			10.0
5047	SBRNZ_12.PPG	SOLARBRONZE®			12.0
5049	SGRAY_3.PPG	SOLARGRAY®			3.3
5050	SGRAY_4.PPG	SOLARGRAY®			4.0

PPG Industries, Inc.

ID #	File Name	Glass Type	Coating	Description	Nominal Thickness (mm)
5051	SGRAY_5.PPG	SOLARGRAY®			5.0
5052	SGRAY_6.PPG	SOLARGRAY®			6.0
5053	SGRAY_8.PPG	SOLARGRAY®			8.0
5054	SGRAY_10.PPG	SOLARGRAY®			10.0
5055	SGRAY_12.PPG	SOLARGRAY®			12.0
5056	GRLITE_3.PPG	GRAYLITE®			3.3
5057	GRLITE_6.PPG	GRAYLITE®			6.0
5060	GL20_3.PPG	GL20™			3.3
5061	GL20_6.PPG	GL20™			6.0
5064	GL35_3.PPG	GL35™			3.3
5065	GL35_6.PPG	GL35™			6.0
5091	SC_AZ_2.PPG	AZURLITE®	SOLARCOOL®	R1 Coated	2.5
5092	SC_AZ_3.PPG	AZURLITE®	SOLARCOOL®	R1 Coated	3.3
5093	SC_AZ_4.PPG	AZURLITE®	SOLARCOOL®	R1 Coated	4.0
5094	SC_AZ_5.PPG	AZURLITE®	SOLARCOOL®	R1 Coated	5.0
5095	SC_AZ_6.PPG	AZURLITE®	SOLARCOOL®	R1 Coated	6.0
5096	SC_AZ_8.PPG	AZURLITE®	SOLARCOOL®	R1 Coated	8.0
5102	SC_BR_3.PPG	SOLARBRONZE®	SOLARCOOL®	R1 Coated	3.3
5104	SC_BR_4.PPG	SOLARBRONZE®	SOLARCOOL®	R1 Coated	4.0
5106	SC_BR_5.PPG	SOLARBRONZE®	SOLARCOOL®	R1 Coated	5.0
5108	SC_BR_6.PPG	SOLARBRONZE®	SOLARCOOL®	R1 Coated	6.0
5110	SC_BR_8.PPG	SOLARBRONZE®	SOLARCOOL®	R1 Coated	8.0
5112	SC_BR_10.PPG	SOLARBRONZE®	SOLARCOOL®	R1 Coated	10.0
5114	SC_GR_3.PPG	SOLARGRAY®	SOLARCOOL®	R1 Coated	3.3
5116	SC_GR_4.PPG	SOLARGRAY®	SOLARCOOL®	R1 Coated	4.0
5118	SC_GR_5.PPG	SOLARGRAY®	SOLARCOOL®	R1 Coated	5.0
5120	SC_GR_6.PPG	SOLARGRAY®	SOLARCOOL®	R1 Coated	6.0
5122	SC_GR_8.PPG	SOLARGRAY®	SOLARCOOL®	R1 Coated	8.0
5124	SC_GR_10.PPG	SOLARGRAY®	SOLARCOOL®	R1 Coated	10.0
5126	SC_GL_3.PPG	GRAYLITE®	SOLARCOOL®	R1 Coated	3.3
5128	SC_GL_6.PPG	GRAYLITE®	SOLARCOOL®	R1 Coated	6.0
5140	S100CL_2.PPG	Clear	SUNGATE®100	R1 Coated	2.5
5142	S100CL_3.PPG	Clear	SUNGATE® 100	R1 Coated	3.3
5144	S100CL_4.PPG	Clear	SUNGATE® 100	R1 Coated	4.0
5146	S100CL_5.PPG	Clear	SUNGATE® 100	R1 Coated	5.0
5148	S100CL_6.PPG	Clear	SUNGATE® 100	R1 Coated	6.0
5150	S100SX_2.PPG	SOLEX®	SUNGATE® 100	R2 Coated	2.5
5151	S100SX_3.PPG	SOLEX®	SUNGATE® 100	R2 Coated	3.3
5152	S100SX_4.PPG	SOLEX®	SUNGATE® 100	R2 Coated	4.0
5153	S100SX_5.PPG	SOLEX®	SUNGATE® 100	R2 Coated	5.0
5154	S100SX_6.PPG	SOLEX®	SUNGATE® 100	R2 Coated	6.0
5160	S100SN_2.PPG	SOLARGREEN®	SUNGATE® 100	R2 Coated	2.5
5161	S100SN_3.PPG	SOLARGREEN®	SUNGATE® 100	R2 Coated	3.3
5162	S100SN_4.PPG	SOLARGREEN®	SUNGATE® 100	R2 Coated	4.0
5163	S100SN_5.PPG	SOLARGREEN®	SUNGATE® 100	R2 Coated	5.0

PPG Industries, Inc.

ID #	File Name	Glass Type	Coating	Description	Nominal Thickness (mm)
5164	S100SN_6.PPG	SOLARGREEN®	SUNGATE® 100	R2 Coated	6.0
5170	S100AZ_2.PPG	AZURLITE®	SUNGATE® 100	R2 Coated	2.5
5171	S100AZ_3.PPG	AZURLITE®	SUNGATE® 100	R2 Coated	3.3
5172	S100AZ_4.PPG	AZURLITE®	SUNGATE® 100	R2 Coated	4.0
5173	S100AZ_5.PPG	AZURLITE®	SUNGATE® 100	R2 Coated	5.0
5174	S100AZ_6.PPG	AZURLITE®	SUNGATE® 100	R2 Coated	6.0
5180	S100BR_2.PPG	SOLARBRONZE®	SUNGATE® 100	R2 Coated	2.5
5181	S100BR_3.PPG	SOLARBRONZE®	SUNGATE® 100	R2 Coated	3.3
5182	S100BR_4.PPG	SOLARBRONZE®	SUNGATE® 100	R2 Coated	4.0
5183	S100BR_5.PPG	SOLARBRONZE®	SUNGATE® 100	R2 Coated	5.0
5184	S100BR_6.PPG	SOLARBRONZE®	SUNGATE® 100	R2 Coated	6.0
5191	S100GR_3.PPG	SOLARGRAY®	SUNGATE® 100	R2 Coated	3.3
5192	S100GR_4.PPG	SOLARGRAY®	SUNGATE® 100	R2 Coated	4.0
5193	S100GR_5.PPG	SOLARGRAY®	SUNGATE® 100	R2 Coated	5.0
5194	S100GR_6.PPG	SOLARGRAY®	SUNGATE® 100	R2 Coated	6.0
5220	S300CL_2.PPG	Clear	SUNGATE® 300	R1 Coated	2.5
5222	S300CL_3.PPG	Clear	SUNGATE® 300	R1 Coated	3.3
5224	S300CL_4.PPG	Clear	SUNGATE® 300	R1 Coated	4.0
5226	S300CL_5.PPG	Clear	SUNGATE® 300	R1 Coated	5.0
5228	S300CL_6.PPG	Clear	SUNGATE® 300	R1 Coated	6.0
5240	S500CL_2.PPG	Clear	SUNGATE® 500	R1 Coated	2.5
5242	S500CL_3.PPG	Clear	SUNGATE® 500	R1 Coated	3.3
5244	S500CL_4.PPG	Clear	SUNGATE® 500	R1 Coated	4.0
5246	S500CL_5.PPG	Clear	SUNGATE® 500	R1 Coated	5.0
5248	S500CL_6.PPG	Clear	SUNGATE® 500	R1 Coated	6.0
5260	S1000CL2.PPG	Clear	SUNGATE® 1000	R2 Coated	2.5
5261	S1000CL3.PPG	Clear	SUNGATE® 1000	R2 Coated	3.3
5262	S1000CL4.PPG	Clear	SUNGATE® 1000	R2 Coated	4.0
5263	S1000CL5.PPG	Clear	SUNGATE® 1000	R2 Coated	5.0
5264	S1000CL6.PPG	Clear	SUNGATE® 1000	R2 Coated	6.0

Viracon Glass Products

ID #	File Name	Glass Type	Coating	Description	Nominal Thickness (mm)
6000	VA113.VIR	Clear	Antique		6.0
6001	VA118.VIR	Clear	Antique		6.0
6002	VA122.VIR	Clear	Antique		6.0
6003	VA135.VIR	Clear	Antique		6.0
6004	VA213.VIR	Green	Antique		6.0
6005	VA218.VIR	Green	Antique		6.0
6006	VA222.VIR	Green	Antique		6.0
6007	VA235.VIR	Green	Antique		6.0
6008	VA313.VIR	Gray	Antique		6.0
6009	VA318.VIR	Gray	Antique		6.0
6010	VA322.VIR	Gray	Antique		6.0
6011	VA335.VIR	Gray	Antique		6.0
6012	VA413.VIR	Bronze	Antique		6.0
6013	VA418.VIR	Bronze	Antique		6.0
6014	VA422.VIR	Bronze	Antique		6.0
6015	VA435.VIR	Bronze	Antique		6.0
6016	VA513.VIR	Blue	Antique		6.0
6017	VA518.VIR	Blue	Antique		6.0
6018	VA522.VIR	Blue	Antique		6.0
6019	VA535.VIR	Blue	Antique		6.0
6020	VA613.VIR	Blue-Green	Antique		6.0
6021	VA618.VIR	Blue-Green	Antique		6.0
6022	VA622.VIR	Blue-Green	Antique		6.0
6023	VA635.VIR	Blue-Green	Antique		6.0
6024	VA713.VIR	Azurlite *	Antique		6.0
6025	VA718.VIR	Azurlite *	Antique		6.0
6026	VA722.VIR	Azurlite *	Antique		6.0
6027	VA735.VIR	Azurlite *	Antique		6.0
6028	VA813.VIR	Evergreen **	Antique		6.0
6029	VA818.VIR	Evergreen **	Antique		6.0
6030	VA822.VIR	Evergreen **	Antique		6.0
6031	VA835.VIR	Evergreen **	Antique		6.0
6032	VB114.VIR	Clear	Blue		6.0
6033	VB120.VIR	Clear	Blue		6.0
6034	VB214.VIR	Green	Blue		6.0
6035	VB220.VIR	Green	Blue		6.0
6036	VB614.VIR	Blue-Green	Blue		6.0
6037	VB620.VIR	Blue-Green	Blue		6.0
6038	VC124.VIR	Clear	Cinnamon		6.0
6039	VC224.VIR	Green	Cinnamon		6.0
6040	VC324.VIR	Gray	Cinnamon		6.0
6041	VC424.VIR	Bronze	Cinnamon		6.0
6042	VC524.VIR	Blue	Cinnamon		6.0
6043	VC624.VIR	Blue-Green	Cinnamon		6.0
6044	VC724.VIR	Azurlite *	Cinnamon		6.0
6045	VC824.VIR	Evergreen **	Cinnamon		6.0
6046	VE12M.VIR	Clear	Low-E		6.0

Viracon Glass Products

ID #	File Name	Glass Type	Coating	Description	Nominal Thickness (mm)
6047	VE140.VIR	Clear	Low-E		6.0
6048	VE152.VIR	Clear	Low-E		6.0
6049	VE155.VIR	Clear	Low-E		6.0
6050	VE185.VIR	Clear	Low-E		6.0
6051	VE22M.VIR	Green	Low-E		6.0
6052	VE240.VIR	Green	Low-E		6.0
6053	VE252.VIR	Green	Low-E		6.0
6054	VE255.VIR	Green	Low-E		6.0
6055	VE285.VIR	Green	Low-E		6.0
6056	VE32M.VIR	Gray	Low-E		6.0
6057	VE340.VIR	Gray	Low-E		6.0
6058	VE352.VIR	Gray	Low-E		6.0
6059	VE355.VIR	Gray	Low-E		6.0
6060	VE385.VIR	Gray	Low-E		6.0
6061	VE42M.VIR	Bronze	Low-E		6.0
6062	VE440.VIR	Bronze	Low-E		6.0
6063	VE452.VIR	Bronze	Low-E		6.0
6064	VE455.VIR	Bronze	Low-E		6.0
6065	VE485.VIR	Bronze	Low-E		6.0
6066	VE52M.VIR	Blue	Low-E		6.0
6067	VE540.VIR	Blue	Low-E		6.0
6068	VE552.VIR	Blue	Low-E		6.0
6069	VE555.VIR	Blue	Low-E		6.0
6070	VE585.VIR	Blue	Low-E		6.0
6071	VE62M.VIR	Blue-Green	Low-E		6.0
6072	VE640.VIR	Blue-Green	Low-E		6.0
6073	VE652.VIR	Blue-Green	Low-E		6.0
6074	VE655.VIR	Blue-Green	Low-E		6.0
6075	VE685.VIR	Blue-Green	Low-E		6.0
6076	VE72M.VIR	Azurlite *	Low-E		6.0
6077	VE740.VIR	Azurlite *	Low-E		6.0
6078	VE752.VIR	Azurlite *	Low-E		6.0
6079	VE755.VIR	Azurlite *	Low-E		6.0
6080	VE785.VIR	Azurlite *	Low-E		6.0
6081	VE82M.VIR	Evergreen **	Low-E		6.0
6082	VE840.VIR	Evergreen **	Low-E		6.0
6083	VE852.VIR	Evergreen **	Low-E		6.0
6084	VE855.VIR	Evergreen **	Low-E		6.0
6085	VE885.VIR	Evergreen **	Low-E		6.0
6086	VG105.VIR	Clear	Gold		6.0
6087	VG114.VIR	Clear	Gold		6.0
6088	VG120.VIR	Clear	Gold		6.0
6089	VG414.VIR	Bronze	Gold		6.0
6090	VG420.VIR	Bronze	Gold		6.0
6091	VS108.VIR	Clear	Stainless Steel		6.0
6092	VS114.VIR	Clear	Stainless Steel		6.0
6093	VS120.VIR	Clear	Stainless Steel		6.0

Viracon Glass Products

ID #	File Name	Glass Type	Coating	Description	Nominal Thickness (mm)
6094	VS208.VIR	Green	Stainless Steel		6.0
6095	VS214.VIR	Green	Stainless Steel		6.0
6096	VS220.VIR	Green	Stainless Steel		6.0
6097	VS308.VIR	Gray	Stainless Steel		6.0
6098	VS314.VIR	Gray	Stainless Steel		6.0
6099	VS320.VIR	Gray	Stainless Steel		6.0
6100	VS408.VIR	Bronze	Stainless Steel		6.0
6101	VS414.VIR	Bronze	Stainless Steel		6.0
6102	VS420.VIR	Bronze	Stainless Steel		6.0
6103	VS508.VIR	Blue	Stainless Steel		6.0
6104	VS514.VIR	Blue	Stainless Steel		6.0
6105	VS520.VIR	Blue	Stainless Steel		6.0
6106	VS608.VIR	Blue-Green	Stainless Steel		6.0
6107	VS614.VIR	Blue-Green	Stainless Steel		6.0
6108	VS620.VIR	Blue-Green	Stainless Steel		6.0
6109	VS708.VIR	Azurlite *	Stainless Steel		6.0
6110	VS714.VIR	Azurlite *	Stainless Steel		6.0
6111	VS720.VIR	Azurlite *	Stainless Steel		6.0
6112	VS808.VIR	Evergreen **	Stainless Steel		6.0
6113	VS814.VIR	Evergreen **	Stainless Steel		6.0
6114	VS820.VIR	Evergreen **	Stainless Steel		6.0
6115	VT120.VIR	Clear	Titanium		6.0
6116	VT130.VIR	Clear	Titanium		6.0
6117	VT135.VIR	Clear	Titanium		6.0
6118	VT140.VIR	Clear	Titanium		6.0
6119	VT220.VIR	Green	Titanium		6.0
6120	VT230.VIR	Green	Titanium		6.0
6121	VT235.VIR	Green	Titanium		6.0
6122	VT240.VIR	Green	Titanium		6.0
6123	VT320.VIR	Gray	Titanium		6.0
6124	VT330.VIR	Gray	Titanium		6.0
6125	VT335.VIR	Gray	Titanium		6.0
6126	VT340.VIR	Gray	Titanium		6.0
6127	VT420.VIR	Bronze	Titanium		6.0
6128	VT430.VIR	Bronze	Titanium		6.0
6129	VT435.VIR	Bronze	Titanium		6.0
6130	VT440.VIR	Bronze	Titanium		6.0
6131	VT520.VIR	Blue	Titanium		6.0
6132	VT530.VIR	Blue	Titanium		6.0
6133	VT535.VIR	Blue	Titanium		6.0
6134	VT540.VIR	Blue	Titanium		6.0
6135	VT620.VIR	Blue-Green	Titanium		6.0
6136	VT630.VIR	Blue-Green	Titanium		6.0
6137	VT635.VIR	Blue-Green	Titanium		6.0
6138	VT640.VIR	Blue-Green	Titanium		6.0
6139	VT720.VIR	Azurlite *	Titanium		6.0

Viracon Glass Products

ID #	File Name	Glass Type	Coating	Description	Nominal Thickness (mm)
6140	VT730.VIR	Azurlite *	Titanium		6.0
6141	VT735.VIR	Azurlite *	Titanium		6.0
6142	VT740.VIR	Azurlite *	Titanium		6.0
6143	VT820.VIR	Evergreen **	Titanium		6.0
6144	VT830.VIR	Evergreen **	Titanium		6.0
6145	VT835.VIR	Evergreen **	Titanium		6.0
6146	VT840.VIR	Evergreen **	Titanium		6.0

* Azurlite is a registered trademark of PPG Industries

** Evergreen is a registered trademark of Libbey-Owens-Ford

Libbey-Owens-Ford

ID #	File Name	Glass Type	Coating	Description	Nominal Thickness (mm)
9800	CLEAR2.LOF	Clear			2.5
9801	CLEAR3.LOF	Clear			3
9802	CLEAR4.LOF	Clear			4
9803	CLEAR5.LOF	Clear			5
9804	CLEAR6.LOF	Clear			6
9805	CLEAR8.LOF	Clear			8
9806	CLEAR10.LOF	Clear			10
9807	CLEAR12.LOF	Clear			12
9808	CLEAR16.LOF	Clear			16
9809	CLEAR19.LOF	Clear			19
9810	CLEAR25.LOF	Clear			25
9831	GREY3.LOF	Grey			3
9833	GREY5.LOF	Grey			5
9834	GREY6.LOF	Grey			6
9835	GREY8.LOF	Grey			8
9836	GREY10.LOF	Grey			10
9837	GREY12.LOF	Grey			12
9851	BRONZ3.LOF	Bronze			3
9853	BRONZ5.LOF	Bronze			5
9854	BRONZ6.LOF	Bronze			6
9855	BRONZ8.LOF	Bronze			8
9856	BRONZ10.LOF	Bronze			10
9857	BRONZ12.LOF	Bronze			12
9874	BLGRN6.LOF	Blue-Green			6
9875	BLGRN8.LOF	Blue-Green			8
9876	BLGRN10.LOF	Blue-Green			10
9881	EVGRN3.LOF	Evergreen™			3
9883	EVGRN5.LOF	Evergreen™			5
9884	EVGRN6.LOF	Evergreen™			6
9891	SUPGRY3.LOF	SuperGrey™			3
9893	SUPGRY5.LOF	SuperGrey™			5
9894	SUPGRY6.LOF	SuperGrey™			6
9900	ECLCLR6.LOF	Clear	ECLIPSE® Clear		6
9901	ECLBLG6.LOF	Blue-Green	ECLIPSE® Blue-Green		6
9902	ECLGRY6.LOF	Grey	ECLIPSE® Grey		6
9903	ECLBRZ6.LOF	Bronze	ECLIPSE® Bronze		6
9904	ECLGLD6.LOF	Clear	ECLIPSE® Gold		6
9905	MIROPN6.LOF	Grey	MIRROPANE E.P.®		6
9920	LOW-E_2.LOF	Clear	Energy Advantage® Low-E		2.5
9921	LOW-E_3.LOF	Clear	Energy Advantage® Low-E		3
9922	LOW-E_4.LOF	Clear	Energy Advantage® Low-E		4
9923	LOW-E_5.LOF	Clear	Energy Advantage® Low-E		5
9924	LOW-E_6.LOF	Clear	Energy Advantage® Low-E		6



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