

LOW-IRON
CLEAR GLASS

USES AND APPLICATIONS

DATA SHEET / Quebec

Version 2.0

MULTIVER Ltd
436, Berube Street, Quebec (Quebec) G1M 1C8
tel. : 1 800 463-2810 and fax : 418 687-0804

 **MULTIVER**
Cutting edge of the glass industry



Glass Offered by Multiver **CLEAR GLASS**

Is ordinary clear glass completely clear ? Silica, the main ingredient in the making of glass, contains a percentage of iron that gives it a faint green tinge. Low-iron glass has a clearer look, which is especially noticeable around the edges.

STANDARDS AND CERTIFICATES

Multiver meets the following requirements :

- ASTM C1036 – Flat Glass
- CAN/CGSB-12.3-M91 – Flat, Clear Float Glass

**Other standards and certificates may apply.*

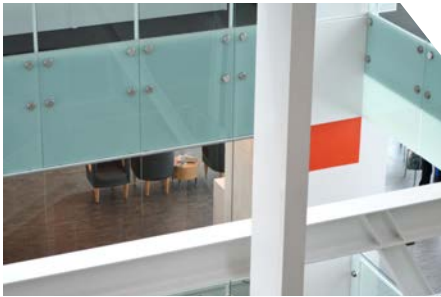




USES

Low-iron clear glass is utilized in a vast number of applications, such as :

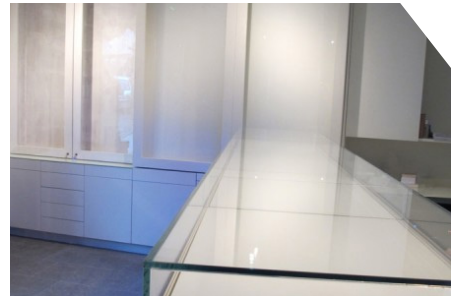
Glass partitions



Shower enclosures



Shelving and display cases



Display windows



Mirrors



Framing glass



Greenhouses



Furniture



Floors and stairs





BENEFITS

- ▶ **Low-e glass allows better light transmission.**
- ▶ **It eliminates the green cast** inherent to ordinary glass.
- ▶ **It has a crystal clear appearance.**
- ▶ **This type of glass is the perfect choice when the glass must be devoid of colour** to let the decoration shine on its own.
- ▶ It is **clearer** around the edges.
- ▶ **It maintains the integrity of the colouring** of patterned, silk-screened or coloured laminated spandrel glass.

MANUFACTURING SIZE

Due to the wide range of products available as well as the number of suppliers, maximum sizes may vary depending on the suppliers and demand. Minimum sizes may also vary depending on intended uses. That being said, the average maximum size of a glass sheet is approximately **96 inches X 144 inches (2438 mm X 3657 mm)**.

MAINTENANCE

Once the glass is installed, **it is recommended that all exposed surfaces be cleaned, if needed**, in order to preserve the esthetic qualities of the product. Rub gently with a soft cloth, using cold or warm water and non-aggressive chemicals for all glass surfaces. Caution should be exercised when choosing cleaners. Abrasive cleaners must never be used as they can cause damage to the glass surface. Several products are specifically designed to clean glass. Metallic objects should not be used because they could scratch the glass.

To prevent thermal stress breakage and increase the safety factor, glass can be heat-strengthened, tempered and/or laminated. A **laser-engraved logo appears at one of the edges of all tempered** and heatstrengthened glass products.

Never use any products containing solvents.



SUPPLIERS OF LOW-IRON PRODUCTS

Multiver offers a large variety of low-iron glass products, most of which are listed below. Products may be added to the list or removed from it, depending on demand.

TABLE 1 : Name and Thickness of Available Glass Products

					
Krystal Klear™	3-4-6-8-10-12 mm*	UltraWhite™	3-6-10-12 mm	Optiwhite™	2-3-4-6-8-10-12-15-19 mm*

*Certain glass products are not kept in stock. A minimum quantity is required for some products

TABLE 2 : Low-Iron Glass Performance Data

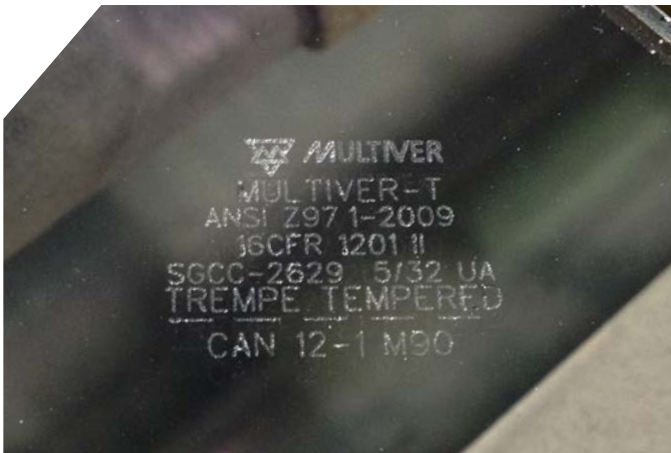
PRODUCT	U-VALUE BTU/ HFT ² -°F	R-VALUE H-FT ² - °F/BTU	TRANSMITTANCE %			VISIBLE LIGHT REFLECTANCE %		SHADING COEF.	SOLAR HEAT GAIN COEF.	RELATIVE HEAT GAIN BTU/H-FT ²
			VISIBLE LIGHT	SOLAR TRANSM.	U.V. TDW- ISO	OUT	IN			
ORDINARY CLEAR GLASS										
- 6 mm clear	1.03	0.98	88	80	82	8	18	0.97	0.84	206
LOW-IRON CLEAR GLASS										
6 mm clear Krystal Klear™	1.03	0.97	91	89	81	8	8	1.04	0.90	222
6 mm clear UltraWhite™	1.02	0.98	90	87	84	8	8	1.02	0.88	217
6 mm clear Optiwhite™	1.04	0.98	91	89	89	8	8	1.04	0.90	221



GLAZING REPLACEMENT

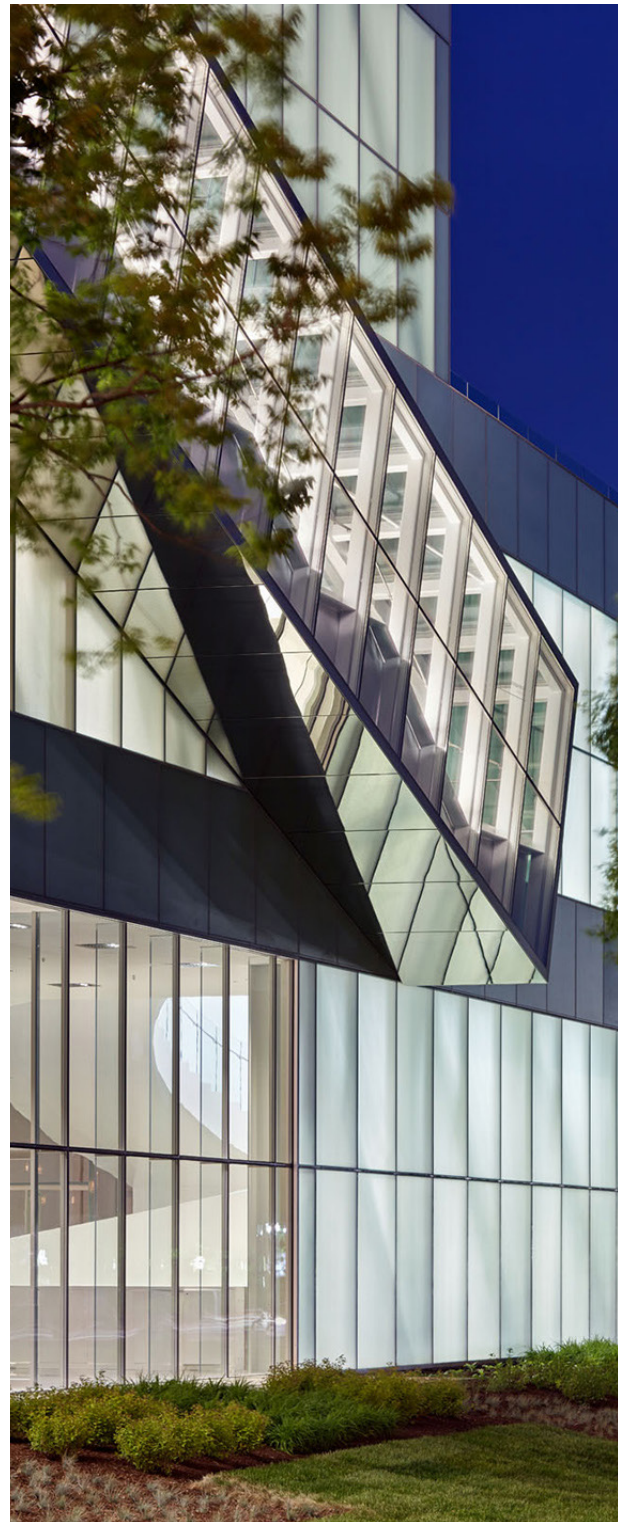
To help us identify the insulated unit with low-iron clear glass that needs to be replaced, we strongly recommend that you **look at the spacer in the insulated unit**. You will then know **who was the original manufacturer of the unit as well as its year of manufacture**. We also require **the project name and location** to conduct extensive research.

In the case of insulated units including one or more tempered or heat-strengthened glass layers, **you should be able to see a laser-engraved logo** in one of the corners, unless it is covered. A date as well as the name of the company that tempered the glass should also be indicated.



MULTIVER LOGO / TEMPERED GLASS

Slight glass colour variations can occur during the manufacturing process and result in a colour different from the original tint, in the event of a replacement.



Musée National des Beaux-Arts
Pavillon Pierre Lassonde
Low-iron clear glass



ADVICE ON APPLICATIONS WITH LAMINATED GLASS

Here are a few options we recommend :

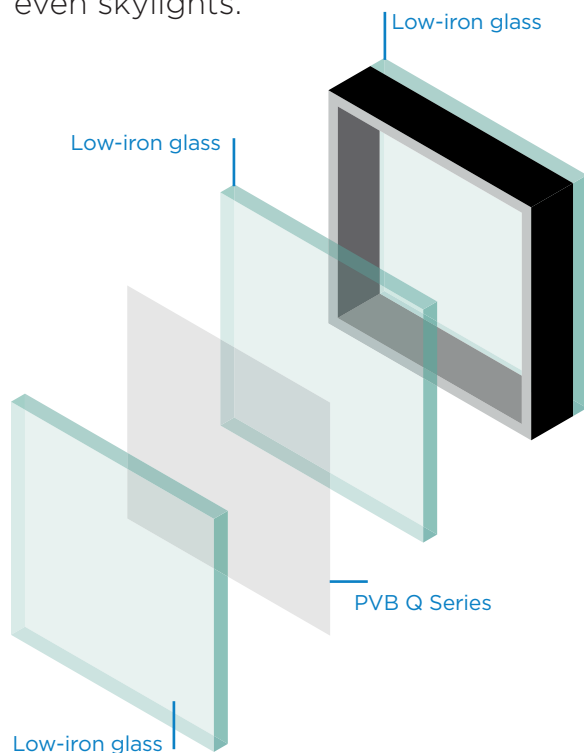
FOR ENHANCED ACOUSTIC PERFORMANCE :

Low-iron glass laminated with an acoustic polyvinyl butyral interlayer, commonly known as **Saflex® Q series acoustic PVB interlayer** (see the Laminated Glass document), and laminated with another type of glass of your choice. Several layers can be laminated, offering virtually endless combination possibilities.

Assembling the laminated glass described above **in an insulated unit** offers a wide range of new options.

PURPOSE :

Reducing inside and outside noise opposite insulated glass units, glass partitions or even skylights.



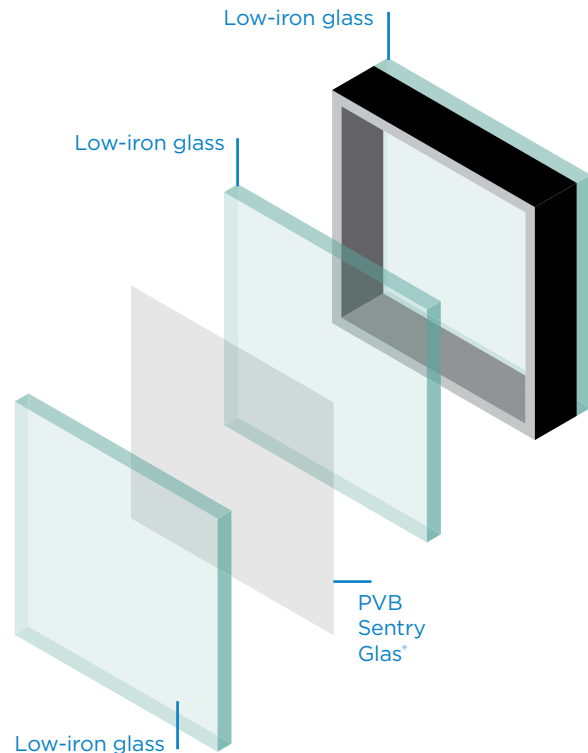
TO INCREASE GLASS SAFETY FACTOR AND MECHANICAL STRENGTH :

Low-iron glass laminated to a **PVB DuPont™ SentryGlas® interlayer**, and laminated with another type of glass. PVB SentryGlas® is nearly 100 times stiffer and five times stronger than standard PVB.

Assembling the laminated glass described above **in an insulated unit** offers a wide range of new options.

PURPOSE :

Insulated glass units resistant to impacts, powerful wind gusts, gunfire, explosions, vandalism, falling broken glass, etc. (certain conditions apply). Useful for protecting valuables against theft. Note that other combinations should be considered to meet your specific needs.





ADVICE ON APPLICATIONS WITH LAMINATED GLASS

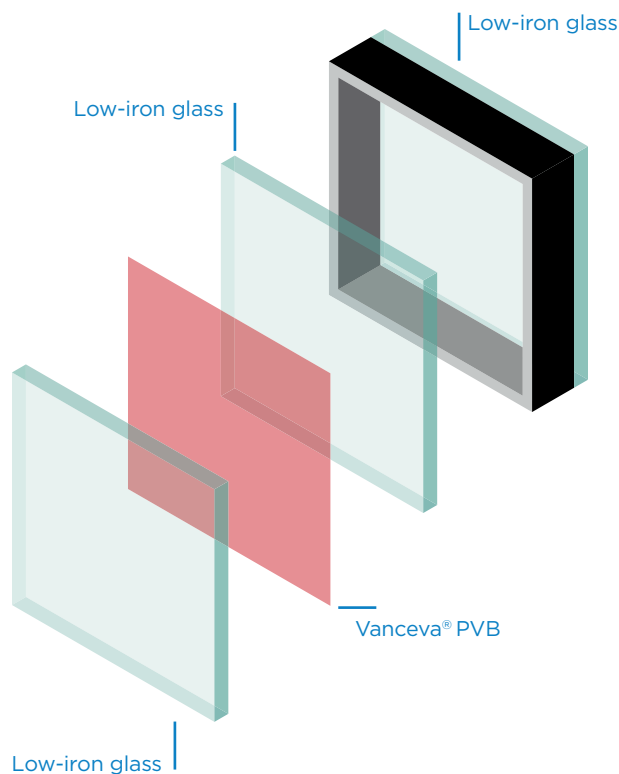
FOR AN OPAQUE GLAZING OR ORIGINAL COLOURS :

Low-iron glass laminated to an **opaque black or white PVB interlayer and/or a Saflex® Vanceva® colour PVB interlayer**, and laminated with another type of glass of your choice. To discover the impressive range of colours we offer, go to Vanceva's Web site (www.vanceva.com). Once again, numerous combinations are possible.

Assembling the laminated glass described above **in an insulated unit** offers a wide range of new options.

PURPOSE :

There is a whole variety of uses to choose from for both indoor and outdoor glazing designs that are **anything but ordinary**.



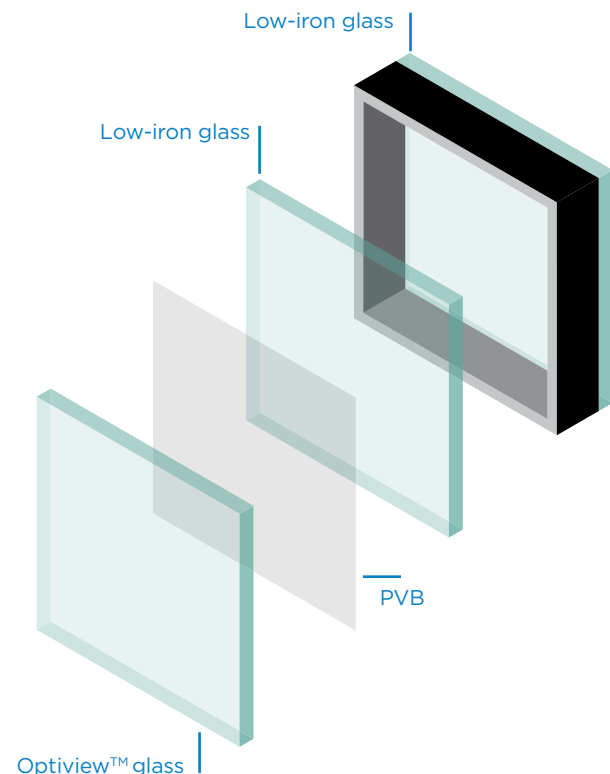
TO REDUCE GLARE :

OptiView™ anti-reflective glass laminated to a PVB interlayer of your choice as well as another type of glass. By reducing reflections and increasing visible light transmittance, this product offers **better visibility through the glass**.

Assembling the laminated glass described above **in an insulated unit** offers a wide range of new options.

PURPOSE :

For any projects **where reflections are undesirable**, such as condos, museums, storefronts, car dealerships, etc.





This document gives a general description of the product. For further information, please contact an authorized supplier of Multiver products. The use of any of the products mentioned here in is the sole responsibility of the users. Multiver assumes no responsibility for the use of its products.