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Argon Statement

Argon gas filled airspaces are an option in Sealed Insulated Glass Units (IGU) utilized to increase the insulation value of the sealed unit by exchanging the normal dry atmosphere environment of the sealed unit with one that is made up of highly concentrated argon gas. Unfortunately despite its common use, there are very few standards guiding or governing argon in IGU. For example, the most recognized standards body in North America, ASTM, has no standard addressing the use of argon in IGU manufacturing.

In Canada, some standards regarding argon do exist but they do very little to address the most critical issues surrounding this controversial subject. CAN/CGSB E 2190-02 states that for argon filled units, **Initial Argon Gas Concentration (3.6.3)** "...shall be filled to a minimum volume of 90% Argon..." This standard does not address the Argon content beyond the time of initial fill, statistical variation of process and product, or measuring methods.

The combination of a lack of effective standards and the fact that argon is an invisible gas which requires expensive and unreliable equipment to measure has resulted in a trend of increasing litigation in North America over both initial fill levels and depletion rates. This increase in litigation makes the manufacturing and sale of argon filled units a risk proposition. Everyone in the supply chain of fenestration products, including IGU manufacturers, window manufacturers and commercial and architectural glazing companies share this risk.

At Vitrum Glass Group we believe that our argon filling processes, procedures and testing are among the best in the industry. However, due to the litigious nature of the marketplace and the fact that North American Industry Standard groups appear reluctant to adequately address the issue, we believe it is important to find and adopt the best and most comprehensive standards in use to clarify our position regarding the use of argon in IGU's. As a result we have adopted the following British Standards for argon filling and concentrations, as they are the most comprehensive and effective standards we've found to date.

British Standard BS EN 1279-6:2002 Glass in building – Insulating glass units – Part 6: Factory production control and periodic tests.

- and -

British Standards BS EN 1270-3:2002 Glass in building – Insulating glass units – Part 3: Long-term testing method and requirements for gas leakage and for gas concentration tolerances

The above standards very clearly detail "best practices" for suppliers to use to assure as much as possible their argon fill and depletion rates. Vitrum follows these best practices above and beyond the recommended audit intervals, exceeding the requirements of these standards. Currently, this is the only claim or assurance we make regarding argon in IGUs produced by Vitrum; Vitrum Glass Group manufacturing practices regarding argon filled units will meet or exceed BS EN 1270-6:2002 and BS EN 1270-3:2002.

Given all of the issues surrounding the use of argon in IGUs, we believe that the benefits of gas filling are outweighed by the increasing risk of having to defend baseless litigation. Variation in initial fill rate of argon IGUs is unavoidable. Gradual depletion of argon from the IGU through the perimeter materials is unavoidable. The net result is that we believe it no longer makes economic sense for anyone in the glass industry to manufacture or supply an argon filled IGU without significant legal disclaimers.

Therefore beyond the statement underlined above, Vitrum does not provide any warranty concerning argon content or effectiveness. It is our recommendation that argon be avoided as a selling feature in fenestration products unless no other acceptable option can be found. However, if requested by a customer who has read and agreed to the terms and conditions set forth on this bulletin, Vitrum will supply argon gas units utilizing the best available practices and a good faith effort to reach the highest possible initial fill rates in accordance with BS EN 1270-3:2002 and BS EN 1270-6:2002.

If desired, the expert sales people at Vitrum Glass Group would be happy to assist you in looking for low risk alternatives to argon to allow your fenestration product to meet any energy code requirement. Also, for a detailed copy of the standards references above please contact your Vitrum Sales Rep.