

Argon Gas Fill

The space between the two panes of glass in a double glazed sealed unit is filled with air as the unit is sealed in the ambient atmosphere. Although air is a good insulator, there are better options and the Noble gases fit the bill. They are colourless, odourless, non-flammable, non-reactive and have low conductivity. They are also known as inert gases.

The commonly used inert gases in glazing are Argon, Krypton and Xenon. For the common air spaces, (16-20mm) Argon offers the best insulation properties. For the smaller cavities (8-12mm) Krypton may be used, offering better thermal insulation. However, the cost of Krypton and xenon proves to be prohibitive in most applications.

Argon offers a cost effective way of delivering top performing insulated glass. Here at Regency, we fill our sealed units with Argon (when required) in two ways:

We have an off line machine that we use for unusual shaped sealed units and other products that we cannot process on our automatic production lines.

We have invested in an on-line Gas press so we can gas fill when required during our normal processing. The Lisec gas press represented an investment in excess of £150,000.00

Since April 2002, it has been a legal requirement to hold an EN1279 part 3 pass for gas filled sealed units. Regency glass hold BS EN1279 Part 3 pass certificates for both our off-line and on-line processes.

EN1279 part 3 independently tests the concentration of gas present within the sealed unit and the rate at which the gas leaks from the sealed unit. Should the gas fall below 80% concentration, the insulation properties are lost.

The EN1279 part 3 stipulations are :

Gas concentrations quoted are allowed a tolerance of +10%/-5%

Leakage rates must be less than 1% per annum.

Regency Glass meet both of these rules and specify a concentration level of 90%. Regency Glass are BSI Kitemarked for all sealed unit production.

Companies manufacturing without an EN1279 part 3 pass are breaking the law. This becomes costly when non compliant sealed units have to be replaced with products that have been proven to comply.

Regency Glass Ltd's products comply with all aspects of EN1279 parts 1 – 6.

All GONE GAS or Argon GAS - which do you prefer???

As Document L of the building regulations continues to be tightened for both new and existing dwellings, Argon gas filling will become a standard process in sealed unit manufacture.

BS EN 1279 is now mandatory for all sealed unit manufacturers and clearly defines the rules for gas filling compliance. EN1279 part 3 : units must be within -5%/+10% of a specified single gas concentration and must have a leakage rate of less than 1% per year, over a 10-year period. It is reasonable to take 90% as a concentration level for Argon because this is the level that all WER windows are calculated at.



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As part of our EN1279 part 6 compliance responsibilities, we have to undertake daily testing of our gas production. We are required to log and record the concentration levels for a minimum of 3 random units per day from the Argon batch. We actually test many more to check that all our systems are working correctly, ensuring that our customers will not be faced with a huge product recall due to either non-compliant or unfit for purpose products. Ask Toyota what their current recall issue is going to cost them.

Our calibrated external Sparklike Gas test machine gives instant readings of Argon content. We can test a unit that is in-situ, glazed in a house, as easily as testing units from our production. We would recommend that any window company buying gas filled sealed units asks their sealed unit supplier for the following:

- To visit their factory and view their gas production and testing systems
- Examine their EN1279 part 3 pass report
- To bring their in house gas testing machine to site and test the gas content of random units
- Repeat these actions regularly to ensure that they maintain quality.

We welcome window companies with any doubts about their products to bring a unit to our factory for a confidential Argon concentration test. We think that the peace of mind would be worth the trip.

