



Building Products

How to ensure you are specifying the right windows and glazing to achieve carbon reduction targets and selecting the right supply chain partner

Steve Bottomley – Key Account Manager

BFRC Window Energy Ratings (WERs)

Q: What is the BFRC?

A: The BFRC is the British Fenestration Rating Council (BFRC), a Government-supported independent body which is now part of the Glass and Glazing Federation, the largest trade association for the glazing and fenestration sector in the UK. The BFRC promote, develop and operate an independent, impartial method of rating the energy efficiency of windows and encourage their use.

Building Regulations

- **Q:** How does the Window Energy Rating scheme relate to Building Regulations?
- **A:** Part L of the Building Regulations for England and Wales (and Part F, Northern Ireland) includes Window Energy Ratings as a method of compliance.
- The minimum level for replacement domestic windows is currently band E.
- For windows in new domestic extensions, the minimum requirement is currently band D.
- However, with the Government's commitment to significantly reduce carbon emissions, these minimum requirements could be tightened when revisions due to be made to Part L are made in the future.

Who gets a BFRC Rating?

- **Q:** Who gets a BFRC rating?
- **A:** A BFRC Window Energy Rating and label applies to a whole window, frame and glass, therefore it is at the point that these components come together to produce a whole window that the rating and label are obtained.
- Usually, it would therefore be the window installer's product which is rated and labelled, although in the case of a factory-glazed window it could be the window manufacturer's product.

WERs – How are they achieved?

- Solaglas Saint Gobain (SSG) – EcoClear
- Windows glazed with SGG EcoClear® allow optimal amounts of the sun's energy to pass through the glass into the room allowing your home to benefit from free solar heat gain.
- At the same time, using advanced glass coating technology, SGG EcoClear® reflects the heat inside your house back into the room rather than allowing it to escape. Both features reduce or eliminate the need for additional heating.
- In fact, SGG EcoClear® offers up to 3 times more thermal insulation than single glazing and more than 25% better insulation than old fashioned thermally insulating glass. All this without compromising the amount of natural light passing through the glass into your home.
- The EcoClear range of high performance, energy efficient double glazed units is made up of three solutions each achieving progressively higher Window Energy Ratings:

WER easy as C, B, A

Combining new SGG Planitherm® Total with argon gas, aluminium spacer bar and standard glass achieves a C rating.

C

Using a warm edge spacer bar achieves a B rating, improved thermal insulation and virtually no condensation

B

Using a warm edge space bar and replacing the standard glass with extra-clear glass achieves an A rating and greatly increases levels of natural light

A



C Rated Ecoclear Specification

- Outer pane: SGG PLANILUX standard float glass
- Cavity: Aluminium spacer bar,
argon gas filled cavity
- Inner pane: New SGG PLANITHERM TOTAL
high performance low-e glass

B Rated Ecoclear Specification

- Outer pane: SGG PLANILUX standard float glass
- Cavity: SGG SWISSPACER V
warm edge spacer bar
argon gas filled cavity
- Inner pane: New SGG PLANITHERM TOTAL
high performance low-e glass

A rated Ecoclear Specification

- Outer pane: SGG DIAMANT low iron,
extra-clear glass

Cavity: SGG SWISSPACER V
warm edge spacer bar
argon gas filled cavity

Inner pane: New SGG PLANITHERM TOTAL
high performance low-e glass

Technical Details

Q: Why is low iron or “extra-clear” glass used in an A rated EcoClear double glazed unit?

A: Low iron or “extra-clear” glass (SGG DIAMANT) is used as the outer pane of the double glazed unit in order to maximise the free solar heat gain (solar factor or g-value) of the window and hence allowing a room to benefit from increased heat transmittance.

Q: What is a warm edge spacer bar?

A: A warm edge spacer bar is made of composite fibreglass which has a very low level of thermal conductivity allowing it to act as a thermal break thus enabling better thermal performance and virtually eliminating condensation for the inside pane. A warm edge spacer bar also eradicates potential frame mould problems.

Reduce your energy bills

- **SGG EcoClear® makes Clear sense.**
- **Reduce your energy bills**
- Windows glazed with SGG EcoClear® can save you in excess of [£9,000 over their lifetime*](#).
- **Reduce your carbon footprint**
- In the UK, our homes create over a quarter of all CO2 emissions. SGG EcoClear® windows will help eliminate energy loss from your home, saving in CO2 terms the equivalent of a jumbo jet flying from London to New York...

Reduced Energy Bills - Calculations

		Dwelling		
		Terraced	Semi Detached	Detached
Glass Replaced	Single Glazing	£7523 (21.6T CO2)	£9404 (27T CO2)	£12539 (36T CO2)
	Basic Double Glazing	£2340 (6.7T CO2)	£2926 (8.4T CO2)	£3901 (11.2T CO2)

CO2 saving by replacing one metre square of single glazing by EcoClear double glazing represents 90kg CO2 per year.

- CO2 saving by replacing one metre square of basic double glazing by EcoClear double glazing represents 28kg CO2 per year.
- All calculations in the above table assume the following glazed areas in the 'average' dwelling:
Area of glazing in an average terraced house = 12m²
Area of glazing in an average semi-detached house = 15m²
Area of glazing in an average detached house = 20m²
- Pence saving for every Kg CO2 saved = £0.1216 (rounded, based on 740kg CO2 saving = approximately £90 saving)
- All financial data in the above table assumes that energy costs will continue to rise by 10% on an annualised basis.
- Data assumes lifetime of windows to be 20 years



Building Products

● Who are Remploy?

● **Products & services**

- Remploy provides a wide range of world class products and services through its extensive factory network across the UK. From protective clothing for emergency services and military personnel to components for leading car manufacturers, we commit ourselves to delivering tailored solutions which add real value to our private and public sector customers.
- Our [A to Z Directory](#) provides more details on our product and services.
- We are the UK's leading employer of disabled people so when you buy a solution from us, you will also benefit from contributing towards [social and economic sustainability](#) – a subject high on government, business and community agendas. Furthermore, if you are a public body you can take advantage of the Public Contracts Regulations 2006 which allow buyers to restrict tendering to supported businesses like ourselves. Read more about such '[reserved contracts](#)'.
- Our client list includes the police, high street retailers, leading vehicle manufacturers, national government and thousands of hospitals and schools, so you may already be benefiting from the considerable capabilities of our businesses. Established over 60 years ago, our experience and expertise enables us to touch and improve people's lives every day.

● **Did you know?**

- 1 in 3 children sit on Remploy furniture every day
- Over 30 town centres are kept safe by Remploy's trained CCTV operators
- 30,000 children in Africa learn on computers refurbished by Remploy



Building Products

- Remploy's purpose is to significantly increase the employment opportunities of disabled people and those who experience complex barriers to work.
- We passionately believe that this group of people has the right to full inclusion in society and a key step to achieving this is being able to find inclusive and rewarding work. We believe that work is a key element of an independent and fulfilling life, and that everyone has skills and abilities to offer. We work extensively with people to help them to identify, develop and make the most of those abilities.
- To achieve this goal, we are investing significant resources into supporting disabled people and those experiencing complex barriers to work into mainstream employment. We have an expanding network of town and city centre [branches](#) and a comprehensive range of tailored support services provided through them. Developing partnerships with employers is key to delivering success, ensuring we place the right people in the right roles.
- We have committed to supporting 20,000 people per year into mainstream employment by 2012/13 and we are on track to achieve this. In 2007/8 we found 6,500 jobs for disabled people and those facing complex barriers to work - an increase of 27% on the previous year.
- [Our businesses](#) offer a diverse range of products and services to multiple private and public sector customers throughout the UK. With a commitment to delivering high quality products underpinned by great customer service and the highest levels of customer satisfaction, we remain one of the largest employers of disabled people in the UK.



Building Products

- Remploy Building Products and WER
- Where are we?
 - C Rated window tested
 - Waiting for changes to Part L of Building Regulations
 - Fully committed through our partnership with WHS Halo (Bowaters) to achieve an A Rated window if required by the market place