BV Glas response to the public consultation: Recommendation for inclusion of Zirconia-Aluminosilicate Refractory Ceramic Fibres (Zr-RCF) in Annex XIV REACH

The Federal Association of the German Glass Industry (Bundesverband Glasindustrie e. V. - BV Glas) acts as a spokesperson for glass manufacturing enterprises in Germany. As the central organisation for the German glass industry, it represents the environmental, economic and energy policy interests of around 80 percent of German glass manufacturing enterprises. In 2012 the total glass industry revenue in Germany amounted to 8,95 billion Eur.

BV Glas comprises four sections representing the different sectors of the glass industry:

- container glass industry: produces all kinds of glass packaging for the beverage and food industry, pharmaceutical manufacturers and for the cosmetics industry
- flat glass industry: manufactures flat glass for the construction industry, architectural applications, automobile and vehicle construction and the furniture industry
- utility and special glass industry: manufactures products for the electrical industry, precision mechanics and optics, plant manufacturers, communications and environmental technology
- glass processing and finishing industry: refines flat, hollow and special glass for the construction, automobile, pharmaceutical and other industries.

The glass industry's product, glass, is a provably environmentally friendly article, 100 percent recyclable and causes no detriment to the environment. Glass is also used to make solar products (PV systems, solar energy modules) which harness the power of regenerative energies, and the glass used in insulating glazing helps to save energy. These are all examples of how the glass industry makes a proactive contribution to the protection of our climate and environment.

Zirconia-Aluminosilicate Refractory Ceramic Fibres (Zr-RCF) are important for the glass industry. The material – in the form of formed shapes, boards, blankets and mats – is used in the glass melting process as high temperature insulation material for moulds, mould release agents, transport media and tool protection since more than 50 years.

In the glass melting process Zr-RCFs are needed as electrical and thermal insulation of platinum components as well as sealing of floor drains in the glass melting tank and for sealing of electrode feeders and permanent insulation of the expansion joints between the melting tank and the plate block. Zr-RCFs are also used to insulate the glass feeder, the stirring unit and various parts during hot repairs. Furthermore it is used for temporary repairs such as covering small holes in the roof or crown of a melting tank, and gaps in the rear and side wall. These types of insulation materials are also applied in laboratory furnaces for glass melting research & development. Zr-RCF products are

the best solutions for many industrial insulation needs over 900 °C and the production of many glass types is currently not possible without products based on Zr-RCF as insulation material.

In the melting process glass is heated up in the furnace to temperatures of over 1,200 °C. Therefore the glass industry is one of the energy intensive industries and energy costs are of high importance. The unique advantages of Zr-RCF products are of major importance in the context of the EU climate and energy package 2030 and diverse EU initiatives on efficient use of resources. Compared to traditional refractory materials the utilisation of Zr-RCF products allows for important advantages in raw material savings and the high quality of the end glass product. Therefore, without these materials and thus without proper insulation of glass furnaces energy consumption will increase substantially for glass melting processes and CO_2 emissions and environmental pollution will increase.

The use of RCF products is restricted to an absolute minimum since substitution became mandatory after classification in 1997. The places where these materials are used are mostly inaccessible during normal operations, since they will be located inside the glass tank or otherwise inaccessible locations. Therefore, contact of Zr-RCF products (specifically exposures to fibrous dust) with workers is only possible during furnace construction and repairs. In these situations, glass industry employees, employees of furnace construction companies or demolition companies are concerned. These employees are experienced and trained in dealing with Zr-RCF products. The working places are monitored regularly by the competent authorities, e. g. the German Employer's Insurance Association (Verwaltungs-Berufsgenossenschaft VBG) in Germany. No occupational diseases have been recorded.

Zr-RCF products are used only under controlled conditions. Risk assessment and the implementation of suitable risk reduction measures (RRMs) are applied. Employees installing or removing these products are obliged to use protective clothing, sealed gloves and respirators. Those workers are periodically submitted to medical surveillance to monitor their health.

Alternative materials have been investigated in glass furnaces applications. Glass manufacturers have in many cases already implemented the use of alternative materials, where technically and economically feasible. However, so far alternative materials available are still not suitable for all applications, as no appropriate materials have been found corresponding to the high thermal, chemical and mechanical stress experienced in the high temperature glass melting process.

In conclusion, BV Glas opposes the priorisation of Zirconia-Aluminosilicate Refractory Ceramic Fibres and its inclusion in annex XIV REACH. Where the Zr-RCF products are still used, substitution is not possible. Worker safety is ensured without further regulation beyond the existing rules. The priorisation with the consequence of authorisation would lead to negative impacts on energy saving and environmental protection.

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