

# FACTS AND CONSEQUENCES

## REACH-CANDIDATE LISTING OF ALUMINO-SILICATE RCF (ASW/RCF)<sup>1</sup>

**CAEF** The European Foundry Association

**CECOF** The European Committee of Industrial Furnace and Heating Equipment Associations

**CERAME UNIE** The European Ceramic Industry Association

**ECFIA** Representing the High Temperature Insulation Wool Industry

**EIGA** European Industrial Gases Association AISBL

**EUROFER** European Confederation of Iron and Steel Industries

**EUROFORGE** Liaison Committee of European Stamping and Forging Industries

**PRE** Federation Europeene des Fabricants de Produits Refractaires

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### REACH status of ASW/RCF

Manufacturers and importers pre-registered ASW/RCF back in November 2008 and are in the process of completing the registration dossier for submission before the end of 2010 – in line with the REACH requirements and deadlines.

On the initiative of the German Competent Authority (CA) for the REACH process, two specific types of ASW/RCF were suggested for inclusion on the candidate list. Justification was compiled in September 2009 in the form of two dossiers that were published on the ECHA website as part of the public consultation process. Numerous comments on the dossiers were submitted by industry experts and independent scientists, highlighting several important errors and issues in the dossiers:

- Substance identification
- Availability of substitutes
- Worker exposure and risk management
- The actual classification as a Cat. 2 carcinogen (following Directive 67/548/EEC)

Despite these comments, the Member States Committee (MSC) decided to include two types of ASW/RCF on the candidate list at its December 2009 meeting. “Responses to comments” from the German CA were published on the ECHA website<sup>2</sup> at the end of December and the candidate list was updated on the 13th January 2010.

The objective of REACH is to reduce the risk associated with the use of hazardous substances.

In this specific case, the German CA suggested that worker protection could be improved by candidate listing and consecutive regulatory measures under REACH – namely the authorisation requirement.

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1 The term RCF stands for “Refractory Ceramic Fibres”. A more precise description is “Alumino-Silicate-Glass-Wools” (ASW).

2 See: Link to the CA’s response on comments  
[http://www.echa.europa.eu/about/organisation/committees/msc/msc\\_agreement\\_svhc\\_en.asp](http://www.echa.europa.eu/about/organisation/committees/msc/msc_agreement_svhc_en.asp)

## General facts on ASW/RCF

Like most “high tech” products, products made from ASW/RCF have complex properties leading to its technical advantages on one hand and to a need to manage any possible associated risk through carefully designed worker protection procedures on the other hand. This section provides a short overview of some important facts related to ASW/RCF.

**Benefits** Thermal processing accounts for approx. 40 % of the final energy consumption in several EU key industries (i.e. steel, cast iron, non ferrous metals, petrochemicals, glass, ceramics etc.). Modern technologies in combination with ASW/RCF products allow industrial high-temperature processes to use existing resources efficiently and help make an important contribution to CO<sub>2</sub> reduction and climate protection. Where possible, using ASW/RCF products instead of or in combination with common heavyweight refractory linings and with the addition of other components (e.g. modern burner systems) can result in energy savings up to 50 % in high-temperature installations, helping the EU industry to remain competitive on a global scale.

**To meet the demand for more resource and energy efficiency in industry and the associated reduction of greenhouse gases (CO<sub>2</sub>), the use of ASW/RCF products is indispensable.**

**Regulation** Classification and labelling of the substance has been regulated through directive 97/69/EC, now being replaced by the CLP regulation. The ASW/RCF industry already labelled not only the substance, but also “articles” and provided SDS (safety data sheets) long before the substance was classified. In addition, the “Carcinogens Directive” calls for substitution and a hierarchy of worker protection measures (technical, organisational and individual measures); sales are restricted to professional users. Where national OELs (occupational exposure levels) are defined, industry complies with these.

**ASW/RCF is extensively regulated on a European and national Member State level.**

**Substitution** Over the last 20 years, ASW/RCF products have been substituted by other, non-classified high-temperature insulation wools in a range of applications following the development of new materials wherever this has proven to be technically feasible. Substitution has, however, levelled off – despite intensive research and development for applications where operating conditions has proven more difficult. Most of the materials (incl. AES wools and lightweight insulation on bricks) are made by the manufacturers of ASW/RCF – hence when the industry highlights the limitation of substitution, this is driven purely by technical considerations. The manufacturers have experience with both product types in different applications and have no interest in preferring one product or the other.

**No adequate substitutes are as yet available for a number of applications where ASW/RCF is used.**

**Exposure and Risk Management** In Europe around 1.250 trained employees in production and further processing regularly handle ASW/RCF products. Overall, around 25.000 employees come occasionally into contact with the products. Exposure levels have been reduced over time by means of extended monitoring surveys and implementation of technical and organisational measures, thanks to the CARE Programme (Controlled And Reduced Exposure).

Users have been informed about the potential hazard via product labelling and safety data sheets for years. Exposure to fibrous dust occurs when handling the material but can be reduced and limited when the specific and practice-oriented handling instructions provided by the manufacturers are complied with. ASW/RCF is used under controlled conditions.

**After more than 50 years of commercial application of ASW/RCF, there is no known case of fibrosis, lung cancer or mesothelioma worldwide related to the exposure to fibrous dusts released from ASW/RCF products.**

**Toxicology and Regulation** ASW/RCF was classified as a Cat. 2 carcinogen in 1997, predominantly based on the outcome of one set of industry-sponsored animal experiments (RCC study). Since that date new peer-reviewed evidence has thrown serious doubts onto the conclusion of this study, and re-evaluation and re-classification of the substance have been proposed.<sup>3</sup>

**Regulators have not taken up this issue and the new scientific findings have not been adequately discussed with regard to the existing regulation.**

### **ASW/RCF candidate listing & authorisation – present and future**

ASW/RCF will be registered under the REACH regulation. Imposing further obligations such as the potential authorisation requirement will not result in any benefits expected by the REACH process but are likely to endanger the achievement of other European objectives. The reasons are:

- The authorisation process would **increase administrative work and bureaucracy**, binding scarce human resources necessary for other – and possibly more important – tasks, **without improving worker protection**.
- **Actions implemented along the lines of the latest regulation** like Directive 2004/37 on carcinogens (substitution, avoiding exposure or where not feasible minimising it as far as technically possible) **have proven to work effectively and efficiently**. Further actions like starting a process aimed at phasing out ASW/RCF would not help but would certainly increase the societal risks related to diesel particle emissions and CO<sub>2</sub> consumption.

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3 See: Survey of the Biological Effects of Refractory Ceramic Fibres: Overload and Its Possible Consequences - Brown et al., 2005  
[www.ecfia.eu/files/Brown-et-al-2005.pdf](http://www.ecfia.eu/files/Brown-et-al-2005.pdf)

- **Substitution has been made wherever technically possible.** The use of ASW/RCF remains technically the best solution for many high-temperature processes.
- **Substitution with inadequate alternatives would lead to negative effects** on process control, product quality and environmental conditions.
- Few substances have been studied and monitored to the same extent as ASW/RCF.
- **Products made of ASW/RCF are used by trained professionals.** Their working conditions are controlled and monitored.
- The **advantage of raw material savings** compared to common refractories **would be lost** by not using ASW/RCF products in a number of applications. **Higher energy efficiency** resulting in the **reduction of CO<sub>2</sub>-emissions** during use is of utmost importance for the user industry in order **to maintain or improve its global competitiveness.**
- User industries need **certainty on future investment decisions and innovations** that will help keep industry in Europe and help achieve the energy-saving goals.

### Concluding remarks

ASW/RCF should be a low priority for authorisation because it is well controlled by compliance with the carcinogens directive and other existing regulations. Sales to the general public are already banned. ASW/RCFs are industrial products and there are relatively few exposed workers, all of whom are well informed. Exposure monitoring results using personal samplers in a structured sampling programme (CARE) are available for almost all ASW/RCF applications.

Authorisation would neither reduce significantly the number of exposed workers nor affect their exposure levels and duration. It might detract from the additional initiatives of industry such as exposure monitoring in its CARE programme and the development of further hazard communication initiatives.

Investment decisions incorporating ASW/RCF products are in line with the goals set by the EU in respect of economic growth, energy efficiency and environmental protection. To maintain a high standard in worker protection without jeopardising the achievement of other European objectives, it is suggested to improve the regulatory environment of ASW/RCF by

- an expert evaluation of the scientific data available on ASW/RCF in order to determine its correct classification
- efforts to establish a European-wide harmonised OEL based on applied science and prudent risk management

ECFIA and user industries are confident that the authorities and stakeholders can be convinced that prioritisation and authorisation of ASW/RCF is not needed. A further escalation of unwarranted bureaucracy caused by the introduction of prioritisation for authorisation must be prevented.

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