

VDA comment to the EU public consultation regarding the ECHA recommendation to include „(Zirconia-) Aluminosilicate Refractory Ceramic Fibres“ (RCF) in REACH Annex XIV

1. Usage of RCF in the automotive industry:

(Zirconia-) aluminosilicate RCF are used (where substitution is not possible) for parts of vehicles and in high temperature production processes as well as in specific uses in the automotive supply chain.

Examples for this use in cars are mats within catalytic converter systems, mats within diesel particulate filter systems or special heat insulation purposes, for example in older airbag constructions or heat treatment oven in high temperature manufacturing processes.. For all these uses exemptions need to be granted. The reproduction of automotive spare parts such as catalytic converter systems does essentially depend on the application of those materials used during series production and type approval. For the production of spare parts, the automotive industry does not recognise the option of substituting the use of RCF as it is needed to maintain the integrity of the performance of the parts in relation to the performance of the vehicle as a whole, due to the shortage of “old” vehicles for validation purposes. This is why the “repair as produced” principle has to be applied. Otherwise, spare parts will be unavailable, with the loss for the customer being not acceptable.

In the automotive manufacturing process, (zirconia-) aluminosilicate RCF products are used in heat treatment furnaces in high temperature manufacturing processes above 800°C. There is a range of materials and components undergoing some form of thermal processing in both vehicle production and automotive supplier industries. Without these materials and components, a modern car could not be produced. The use of RCF as thermal insulation material in these processes is indispensable for the production of cars, which need to fulfil stringent requirements today regarding safety, efficiency and comfort on a highly competitive global market.

Many elements in the production of modern vehicles are state-of-the-art in processes and components. These safety-critical parts must fulfil various criteria in terms of stiffness, longevity and predictable deformation characteristics in the case of an accident. At the same time, they must be lightweight and competitively priced. Modern steel alloys are required to produce these parts (often very complex 3D geometries) in a “hot pressing” process – both the steel making and the final forming process involve thermal treatment at various stages – this is one example where RCF in combination with other refractories have proven to be the most effective and efficient process insulation material. Other examples include parts of the drive train (engine, turbocharger and gearbox) as well as various electronic components.

All uses of RCF in the automotive industry manufacturing facilities and various stages in the supply chain are well controlled and do not create any unacceptable risk to workers' health or the environment according to existing regulations (Art. 58.2), see point 3.

2. Identification of aluminosilicate RCF according to ECHA definition:

EU definition by ECHA:

Aluminosilicate Refractory Ceramic Fibres (Al-RCF) are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, and fulfil the three following conditions:

- a) oxides of aluminium and silicon are the main components present (in the fibres) within variable concentration ranges;

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b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (μm);

c) alkaline oxide and alkali earth oxide ($\text{Na}_2\text{O}+\text{K}_2\text{O}+\text{CaO}+\text{MgO}+\text{BaO}$) content less or equal to 18% by weight.

No CAS number is given by ECHA!

EU definition by SCOEL:

Refractory ceramic fibres with the exception of those species elsewhere in Annex VI to Regulation (EC) 1272/2008 (man-made vitreous [silicate] fibres with random orientation with alkaline oxide and alkali earth oxide [$\text{Na}_2\text{O}+\text{K}_2\text{O}+\text{CaO}+\text{MgO}+\text{BaO}$] content less or equal to 18% by weight). Synonyms: vitreous siliceous fibres, aluminosilicate glass wools. Formula: EU classification: Carc. 1B Causes cancer by inhalation

Annex I Index Nr.: 650-017-00-8; CAS: 142844-00-6

Conclusion: identification and definitions have to be consistent! Terminology according to DIN EN 1094-1 part 1 and CAS: 142844-00-6 should be used to overcome the inconsistencies.

3. Risk of aluminosilicate RCF for workers and the environment:

A recommendation from the Scientific Committee on Occupational Exposure Limits (SCOEL) for RCF has been published in September 2011 (SCOEL/SUM/165) with a health based limit value of 0.3 f/ml (or 300000 F/m³) based on the conclusion that RCF are classified into SCOEL carcinogen group: C (genotoxic carcinogens for which a practical threshold is supported). Usage of RCF in the automotive industry is well controlled by safety regulations in Europe, and exposure is far below that limit value. **No appreciable risks for worker are given.**

Investigation of the fibres found in air samples (EURIMA samples) by an independent institute (GSA) could not identify any man-made aluminosilicate RCF in the environment. **The risk for the environment is thus negligible.**

4. Overall Conclusion:

Due to already existing regulations and lacking risks for human (worker) health or the environment, a prioritisation of not clearly identified or defined aluminosilicate RCF for Annex XIV is not purposeful and can cause, in contrast to the aims of REACH, negative effects on the environment and competitiveness of the European automotive industry (Art. 55). In the case of the industrial use of RCF, REACH is a regulation conflicting with other EU regulations, programs and initiatives (EU 2020; ETS, EuP-Lot 4 etc.). This process should therefore be set on hold and be evaluated in an overall view in favour of the environment and economy.