



Submission to the Public Consultation on the inclusion in the Authorisation List of (Zirconia-) Aluminosilicate Refractory Ceramic Fibres

The following associations, consortia and companies make this submission jointly:

- The **European Aluminium Association**, which with its 66 member companies and 13 member associations represents the European aluminium industry from alumina and primary production to semi-finished and end-use products, through to recycling. The European aluminium industry directly employs about 255,000 people. (www.alueurope.eu)
 - **Alunorf**, which produces high-value reroll stock for a wide range of products and applications. Its processes comprise the recycling and melting of aluminium, the casting of sheet ingots, the hot and cold rolling as well as the finishing of band. It is the biggest facility of its kind in the world. (www.alunorf.de)
 - The **Cadmium Reach Consortium** that regroups 23 companies importing or producing cadmium or cadmium compounds in Europe. (www.reach-cadmium.eu)
 - The **European Copper Institute** acting as the secretariat for the REACH Copper Consortium, which has 40 members (representing multiple affiliates) across the European mining, production (smelting and refining) and semi-fabricated product sectors. (www.copperalliance.eu/reach)
 - The International Lead Association is a membership body that supports companies involved in the mining, smelting, refining and recycling of lead. The ILA represents the producers of about 3 million tons of lead and almost two thirds of lead production in the western world. As secretariat to the **Lead (Pb) REACH Consortium, ILA Europe** (a regional branch of the ILA) represents approximately 100 companies manufacturing or importing several lead and lead compounds in Europe. (www.reach-lead.eu)
 - **Metallo-Chimique**, which is specialized in recycling and refining of various non-ferrous metals, including copper, tin, lead and nickel from low-grade secondary raw materials (www.metallo.com)

- The **European Precious Metals Federation**, which has 8 companies and 4 specialized associations in its membership. (www.epmf.be)
- The **Wirtschaftsvereinigung Metalle** (WVM) representing the German non-ferrous metals industry towards politics and economy. WVM supports its members in regulatory, occupational health & safety affairs. WVM has 656 member companies, including producers and processors of rare metals and compounds. (www.wvmetalle.de)
- The **Zinc Reach Consortium**, which regroups 97 companies importing or producing zinc or zinc compounds in Europe. (www.reach-zinc.eu)
- **Saft**, which is the world's leading designer and manufacturer of advanced technology batteries for industry and specialised applications. (www.saftbatteries.com)

I. The use of Refractory Ceramic Fibres in the metals industry

No metallurgy without insulating materials

Insulating materials are typically used in pyrometallurgical processes in the internal linings of furnaces, kilns, reactors and vessels as well as in various heat containment applications. These materials be they high-density bricks or 'high temperature insulation wools' (i.e. the technical name given to the RCFs but also covering other materials) are needed to resist at the operating temperatures of equipment in metal smelting and refining processes where they find a critical application. Many base metals as well as recycling processes have a melting temperature above 1000°C (Cu 1084°C, Ni 1454°C...) making the choice of the appropriate insulating material a highly important decision to ensure higher thermal efficiency of furnaces/equipment, increased productivity, longer service life and reduced maintenance costs.. Not only do insulating materials protect the integrity of the pyrometallurgical installations, they are also key to a competitive production given their decisive contribution to energy efficiency.

Selecting an insulating material is difficult and complex

The choice of the insulating material is based on a conjunction of technical factors such as for example classification temperature, maximum continuous temperature of use, thermal conductivity, thermal inertia, melting point, bulk density, mechanical resistance, resistance to thermal shocks, flame contact, furnace atmosphere, type of energy, type of use (continuous or cyclic).

Additionally, other factors to take into consideration are energy consumption (including tax regulations), emissions of green-house gases and other pollutants (including the EU ETS), waste production, weight of the material (important in the case of non-fibrous products, including lightweight bricks and concretes), investment costs, availability (felt e.g.) and price of the material in the form desired.

The use of RCFs

RCF products are a low mass insulating material and are typically used as thermal insulation, heat shields, heat containment, gaskets and expansion joints at temperatures up to 1400°C in industrial furnaces, ovens, kilns, boilers, heating systems and other process equipment.

The function of this insulation material is to reduce the rate of heat flow, i.e. the heat loss through the wall of the furnaces and other equipment and thus to maximize heat conservation. Insulation is effected by providing a layer of material having low heat conductivity, which usually results from a high degree of porosity and certain shape. The RCF products have low thermal conductivity, very low heat storage, extremely light weight, immunity to thermal shocks and are chemically stable. They are mainly used in the form of blanket, felt, strip, module or bloc.

High-temperature processes involving the RCF products vary widely in nature and are often highly application-specific. Experience demonstrated that because of the operating challenges, the choice of materials should be focused on application-specific requirements. It should also not be based on a comparison of product catalogue specifications but on actual performance records starting with a combination of the relevant technical properties such as thermal and mechanical performance, chemical and mechanical stability, energy and resource efficiency.

The choice of insulation material is therefore made at the design stage of the equipment, as it is decisive for the operating conditions of the equipment. Changing this during the lifetime of a furnace or other such equipment is very difficult if not impossible without replacing the technology itself. Moreover such heavy equipment smelter installations are built to last several years, given the high investment cost and robust technology required.

The professionalism with which insulation materials are installed or removed at end of operating life is as important as the choice of the material itself. The workmanship involved in such activities does include full awareness of the measures to take to ensure avoidance of exposure given the suspected CMR properties of the fibres. Where technically and economically possible, RCF producers have therefore already introduced alternative products.

II. The Public Consultation about RCFs

II.1 Uncertainties on the definitions

Lack of clarity on the definition of the 2 RCFs

The lack of clarity on the (complex) definition of the 2 RCFs is notable, given the sector recently received offers for “alternative fibres that would not be covered by the suggested Annex XIV entry” but that actually fitted the definition as the metals sector interprets it. This is worrying particularly if this confusion were to persist until the Authorisation Application stage.

Uncertainty why Zr- and Al fibres are covered and others with equal properties not

The description of RCF products as provided in the Annex XV dossiers does not seem to cover the range of RCFs available on the market for common applications and expressing the same hazard categories. It is for example unclear whether the RCF grades with for example a chromium oxide content of above 2,5% are covered. As a downstream user sector and given the long investment cycle, the non-ferrous metals industry mainly focuses on the far-reaching consequences that would result from the availability of substitutes within the RCF product range, with the same hazard profile. It prefers therefore a clear view on what fibres are actually covered in practice and what would be the criteria (other than the hazard profile) to not select some other sub-grades. Such clarification would allow defining what fibres would be available in the longer term that fit the technical specifications in terms of performance so that substitution can be investigated. It is regretful that this information is not available at the moment of the Public Consultation, meaning that an opinion is requested from industry stakeholders without the possibility for them to estimate the impact of the proposed chemicals management option.

II.2 Grouping the two entries

Grouping of entries

The difference between the two current entries is minimal and the hazard profile is the same. Their uses and technical performance are the same and both fibres are covered by the same CSR.

As a user sector we therefore do not understand why the two entries were not merged given it will only (potentially) result in higher Authorisation fees, resources and administrative costs and efforts without further benefits.

There is therefore a strong case to make to **regroup** the two entries for Authorisation into one.

Risk of intersubstitutability

It is our understanding that the submitting country (D) designed the definitions with the aim to cover all RCFs expressing CMR properties, a condition consolidated at MSC. Failure to cover all RCF products with similar physicochemical, toxicological and ecotoxicological properties (in this case, the same C classification) and used for the same applications and conditions, would encourage **intersubstitutability** with other RCFs. We don't believe this can be the objective of the Authorisation process neither would it be in the interest of the metals sector to invest into very significant technically challenging and highly costly substitution programs without benefits for the protection of the health status of workers.

In line with previous cases, the matter of intersubstitutability should be addressed before proceeding further, even at the cost of a postponement so as to avoid a failure of the Authorisation policy.

II.3 Priority scoring

Raising the scorings

The metals sector noted a higher overall scoring for RCF fibres than in a previous assessment report (2 years ago). It is unclear to us how this can be justified given that the potential for exposure, number of users or the hazard properties did not change and the volumes rather declined due to the split entries and somewhat declining market.

We would therefore request ECHA and MSC to clarify and motivate the changes to ensure and maintain a transparent and objective prioritisation process.

No significant exposure

The exposure level considered as 'tolerated' of 0,1 f/ml in the Annex XV dossier is not in line with the September 2011 SCOEL recommendation. SCOEL concluded, that the "no observed adverse effect level" (NOAEL) can be interpreted as an OEL of 0.3 f/ml. The scoring as 'significant' of the exposure is therefore not justifiable and also in contradiction with the fact that only skilled specialised workers wearing highly protective clothing conduct these jobs that could potentially lead to exposure.

Instead of "significant" the scoring should be limited to "controlled", in line with the use situation in the non-ferrous metals installations and others. There is therefore "no uncontrolled exposure" in the installations.

The SCOEL recommendation should thus be integrated and the scoring should accordingly be reviewed.

Threshold versus non-threshold

SCOEL concluded in its 2011 assessment, that RCF is a carcinogen that has a "no observed adverse effect level" (NOAEL) and is a carcinogen of group C i.e. genotoxic carcinogen for which a practical threshold is supported. The scoring as a non-threshold substance is therefore unjustified and provides the users a wrong impression about the Authorisation application route to be followed if the concerned RCFs would be listed on Annex XIV.

It is therefore proposed to change the scoring appropriately in line with the scientific evidence and to ensure that a consistent and right signal is provided to industry.

III. Additional concerns and questions of principle

III.1 Reliance on RCFs for some processes and duration of use

Recognising that the potential for substitution is not a criterion considered during the prioritisation discussion, the metals sector considers it worthwhile to mention that there are **a number of applications that have remained reliant on RCF materials** despite the knowledge of the RCF hazard profile and the development of other insulation products (AES e.g.). Examples are casting nozzle coverings, hot tops, insulation of crucibles and their holders, canals, and melting furnace roofs. Most of the RCFs are used as so-called 'safety or insulating linings' selected to reduce heat loss and to maintain vessel shell temperature within safe levels. The **duration of use of the fibres varies significantly** from a few months or years (crucibles, canals) to 7 or 8 or even more years (furnace relinings). These realities of use should also be taken into consideration in the further analysis of the RCF dossiers.

III.2 Chemicals management and climate policy

The function of refractory fibres including the two listed entries is not restricted to insulation. Indeed they play a crucial role **in energy saving policies** of pyrometallurgical processes in the metals sector and so in climate policy. The high cost of energy means that companies have carefully investigated the best technical performing materials to achieve the climate targets. Moreover, these policies are relatively new meaning the assessments covered a careful assessment of the materials used including their associated hazards/risks given the carcinogens at work legislation applied when most of them were installed. A constrained view solely focused on hazard, like under the prioritisation scheme, may therefore challenge the possibility for industry to meet its regulatory obligations under the Kyoto convention without gains for the protection of workers. The metals sector believes therefore that this balance should be recognised under the regulatory efficiency assessment of the prioritisation step.

III.3 Authorisation is not an effective Risk Management tool for RCFs

As a user sector, the metals sector does not expect that the listing of the 2 concerned RCFs on Annex XIV would increase the level of protection in the European Union given that:

- the high skills required to install or eliminate the RCFs resulted in the development of a specialised expertise provided by external firms that apply the highest safety standards. Exposure to the fibres during these critical phases is consequently completely controlled;
- articles including these fibres can still be imported and will have to be installed by a specialised workforce;
- the lack of clarity around the definition may lead to intersubstitutability to RCF forms with equal hazard properties that are not covered by Annex XIV.

We would therefore like to challenge the value as well as the efficacy of the Authorisation process in terms of an increased level of chemicals management for RCFs. This option, which raises principle concerns, may find its origin in the lack of (or at least not publically available) RMO assessment that would have investigated the efficiency and efficacy of the different tools. If any potential for exposure (even would) exist, this would be limited to the specialised workers that install or remove insulation materials at the plants. Other Risk Management tools could be more effective although we have no knowledge of uncontrolled exposure.

The metals sector is concerned that given the low number of substances available for potential entry into Annex XIV, the pressure to select them all may be very high, independent from the scoring, effectiveness or potential intersubstitutability. The metals sector therefore urges ECHA and MSC to

provide a transparent and objective opinion based on the facts presented in the Annex XV dossier and the additional information provided in the public consultation.

IV. Latest Application Date and Sunset Date

Achievable Latest Application Date and Sunset Date

A latest application date of 21 months after inclusion in Annex XIV of the RCFs is unpractical and most presumably even unachievable considering the technical and organisational challenges the many hundreds of operations of different types will face to get organised in Authorisation consortia. The CrVI experience clearly demonstrated that getting such wide diversity of sectors and users including SME's well organised takes a year. This is in this particular case even more complicated given the lack of a separate CSR for each of the substances.

One can hence conclude that based on the CrVI experience and on the expectation that many users including SMEs may need to apply for Authorisation if the substances were to be listed on Annex XIV, at least one additional year should be granted for the LAD (so minimally 30 months in total).

In addition, it is the metals sector interpretation that the 'embedded' use in furnaces and other installations operating for many years prior to the latest application date cannot be considered as in scope of any Authorisation requirement by the expected sunset date of 2018.