Position on interpreting definitions in accordance with Art. 3 Nos. 2 and 3 of the REACH Regulation for welding flux, stick electrodes, flux cored wires, welding rods and wires

In accordance with Art. 3, No. 2 of the REACH Regulation, a mixture is defined as a 'mixture or solution composed of two or more substances' and in accordance with No. 3, an article means 'an object which, during production, is given a special shape, surface or design which determines its function to a greater degree than does its chemical composition'.

Whenever the term 'mixture' or 'article' is assigned to a product, borderline cases will always occur. For instance, this is the case with filler metals, where a differentiation is made between welding flux, stick electrodes, flux cored wires, welding rods and wires.

Welding fluxes consist of two or more substances and, in addition, they do not have any specific shape, surface or design. Therefore, they are mixtures as defined in the REACH Regulation. Steel products, on the other hand, such as wires, rods, tubes or steel strips fall under the definition of articles.[1]

This leads to the conclusion that products such as stick electrodes, flux cored wires, welding rods and wires, which are produced in subsequent process steps by using the aforementioned steel products, retain their status of 'articles' as defined in the REACH Regulation. As, in line with the definition, a mixture consists of substances, it would not be possible, in this specific case, to make the articles used in the production of the aforementioned welding products into a mixture.

In addition, the above-mentioned stick electrodes, flux cored wires, welding rods and wires are, to a far greater extent, defined by their shape, surface or design than by their chemical composition. This can be justified as follows: The steel rods and wires are articles in the same form in which they are produced and/or imported. As such, they can be used or further processed for specific purposes, i.e. also for welding. Stick electrodes, flux cored wires, welding rods and wires have standard measurements

[1] See also the Eurofer Position Papers under: http://www.eurofer.eu

(see DIN EN ISO 544: Welding consumables - Technical delivery conditions for filler materials and fluxes - Type of product, dimensions, tolerances and markings), i.e. an exactly defined shape, which is an indispensable precondition for their further function in the welding process. This is a crucial difference to ingots in the aluminium or steel industry (which by definition are considered a mixture), which are used in the electro slag re-melting process as current-carrying electrodes that are re-melted. Although the aforementioned welding fillers are also re-melted in the course of their 'end-of-life-use', this is done for a different purpose, namely to create a welding joint or pad within a metal construction. During this process, the article 'filler metal' becomes part of a different article, namely a structural component. The release of substances (typically in the form of welding fumes) is an unavoidable side effect during the use of the article. Without this release, the article 'welding filler' would not be able to fulfil its function, although this release is not intentional. Whereas in the case of erasers which release aromatic substances when used, the release is definitely intentional (see example on page 36 of the 'Guidance on requirements for substances in articles' of May 2008). Welding fillers are delivered with information on their safe use. This information includes relevant suggestions from both the iron and steel industry and the producers of welding fillers in order to ensure a complete information chain.

Conclusion:

Stick electrodes, flux cored wires, welding rods and wires are articles in the meaning of the REACH Regulation Art. 3 No. 3.