

**ReActiv**

<b>Sectors involved</b>	Aluminium, cement
<b>Funding (e.g. RFCS, FP6, FP7, H2020)</b>	H2020
<b>Title</b>	Industrial Residue Activation for sustainable cement production
<b>Acronym</b>	ReActiv
<b>Key words</b>	Decarbonisation, Low CO2 Cement, Bauxite Residue valorization, SCM, alumina, clinker substitution
<b>Start date - End date</b>	2021-2024
<b>Short Description:</b>	
<p>The ReActiv project will create a novel sustainable symbiotic value chain, linking the by-product of the alumina production industry and the cement production industry. Bauxite residue (BR) is the main by-product of the alumina sector produced at rates of 7 million tons per year in EU, while recycling rates are less than 100 thousand tons per year respectively. In ReActiv modification will be made to both the alumina production and the cement production side of the chain, in order to link them through the new ReActiv technologies. The latter will modify the properties of the industrial residue, transforming into an active material (with pozzolanor hydraulic activity) suitable for new, low CO<sub>2</sub> footprint, cement products. In this manner ReActiv proposes a win-win scenario for both industrial sectors (reducing wastes and CO<sub>2</sub> emissions respectively).</p>	
<b>Industrial Symbiosis (YES or NO):</b>	YES
<b>Energy Efficiency (YES or NO):</b>	YES
<b>Energy/Material flows exchanged:</b>	
Bauxite residues	
<b>Objectives:</b>	
<p>To achieve its objectives the ReActiv project brings together the global leader in cement production with the biggest alumina producers along with top research and technology centers with significant expertise in the field. Furthermore, the European alumina association and the international Aluminium institute are participating in the project to safeguard the industrial dissemination and deployment of project results.</p>	
<b>Meaningful outcomes<sup>1</sup>:</b>	
<p>The methodology developed under ReActiv can be replicated in by-products of other industrial sectors as well. To this end the project will seek to include in modelling and/or lab-scale environment other by-products in the developed flowsheets.</p>	
<b>Available on:</b>	
<p><a href="https://reactivproject.eu/">https://reactivproject.eu/</a></p>	

<sup>1</sup>technical (e.g. by-products recycling, digitalization, etc.), regulatory (e.g. environmental legislation), economic (e.g. new business models) and social/organisational (e.g. impact on the workforce) aspects should be highlighted.