



sustainable mineral recovery

Geo40 Carbon Footprint Statement

Geo40's low carbon colloidal silica is sustainably recovered from geothermal fluids.

Geo40 has successfully developed sustainable technology for the recovery of low-carbon colloidal silica from geothermal fluids, adding value by reducing silica scaling in geothermal power stations. The technology is unique, scalable and has been fully commercialised with the completion of Geo40's Ohaaki Northern Plant located in New Zealand in early 2021.

Independent environmental consultant, start2see, a well-recognised industry expert in carbon accounting based in Melbourne, Australia, has completed a streamlined Life Cycle Assessment on Geo40's world-first technology. This includes quantification of all direct and indirect emissions, to derive the carbon footprint of the Company's colloidal silica products.

Quantifying the cradle-to-gate carbon footprint of the Company's colloidal silica products is important in establishing carbon intensity. Start2see has determined that the current cradle-to-gate carbon footprint of Geo40's colloidal silicas are under 200kg of carbon dioxide equivalent per metric ton of 30wt% product, across Scope 1, 2 and 3 carbon dioxide emissions.

Conventionally, colloidal silica is manufactured by refining quartz sand in a blast furnace (though there are other methods). We believe this manufacturing method gives rise to carbon-intensive colloidal silicas, however definitive published cradle-to-gate data is scarce, particularly across Scope 1, 2 and 3 categories. Geo40 believes that its manufacturing method offers customers a lower carbon footprint choice. We encourage our partners to seek full life cycle emissions data as part of their procurement diligence.

Geo40 is working to be impactful in both traditional and emerging markets. In traditional markets such as refractory and casting or admixtures, Geo40 silicas offer buyers a lower carbon choice. Emerging markets offer the opportunity to use low-carbon silicas to replace less sustainable alternatives. Examples include coatings, where colloidal silica can reduce titanium dioxide use, and in civil construction where colloidal silica can replace soil polymers. These polymers potentially break down to microplastics and can pollute waterways.

Geo40 works with customers to improve environmental outcomes and to make a meaningful contribution to decarbonisation. Geo40 is committed to the highest standards of corporate responsibility and has adopted a formal Environmental, Social and Governance framework.

-  World-first technology
-  Silica recovery reduces silica scaling in reinjection assets
-  Life-cycle assessment undertaken by start2see
-  Cradle-to-gate carbon footprint of <200kgs CO₂/tonne
-  Geo40 believes it offers colloidal silica customers a low carbon choice
-  Contributing to decarbonisation in traditional and emerging markets