

How to start an aerogel company

Dr. Samuel J. Cryer, Rozalie Ryclova, Alexander Murdock.

*Thermulon Ltd., Netpark Thomas Wright Way, Sedgfield, Stockton-On-Tees,
County Durham, United Kingdom, TS21 3FD*

Abstract

Thermulon Ltd. is a UK based process chemistry start-up whose ultimate goal is the industrial production of super insulating aerogel powders for the built environment. The UK construction industry is currently facing increasing regulatory pressure from both an environmental perspective to meet Net Zero 2050 targets; as well as fire safety regulation after the tragic Grenfell fire tower block incident in 2017 that took 72 lives.

This regulatory change means that developers face a trade-off when using insulation materials between fire-safety, thermal performance and price. The banning of high-performance plastic materials (PIR / phenolics) in any building over 18m means developers are going back to A2 fire rated products like mineral wool. Although mineral wool satisfies the new fire regulation, its poorer thermal performance means developers are losing millions of dollars in lost floorspace due to thicker wall build-ups.

Thermulon is developing a fire-safe, low lambda aerogel insulation powder to be the first to beat this trade-off between thermal performance, fire-safety and price. Originating from the Deep Science Ventures start-up builder in London, Thermulon was started by Dr, Sam Cryer to directly meet this market need for new insulating materials. This talk will look into Thermulon's origins; the challenges of spinning out of an accelerator as opposed to an academic lab; the importance of commercial and fundraising strategy in building early stage tech start-ups; our current route to market via heritage homes plasters; and our growth trajectory and need for new chemists and engineers to join the team.

Acknowledgments

Thermulon Ltd. would like to acknowledge Innovate UK who have part funded their development so far.