

Ductmate GreenSeam II Product Development

Impact: Studies indicate that duct leakage in heating, ventilation, and air-conditioning (HVAC) systems is as much as 10 to 25% in commercial building systems and 15 to 25% in residential systems. This leakage has a significant effect on the energy consumed by commercial and residential buildings. As duct leakage can contribute to the potential for mold production in walls and other unconditioned spaces, duct leakage can also impact the health of the building and its occupants.

GreenSeam II will provide developers with the ability to significantly reduce duct leakage within the low pressure side of the HVAC system which will increase overall energy efficiency of commercial and residential buildings and reduce material use in the installation process. This product will be of value to HVAC ductwork companies, building designers, and developers and owners.

Project Overview: The project team lead by Ductmate Industries is extending its research and development on leakage by reviewing how the unique manufacturing process and proprietary sealant used in the manufacturing of Ductmate's GreenSeam™ technology can be adapted to seal the transverse joints in self-sealing snap lock pipe. The University of Pittsburgh will provide assistance in identifying appropriate gasket materials, as well as testing and documentation of system performance. The project has the potential to reduce duct leakage from transverse connections of snap-lock pipe and fittings by as much as 95% without the use of traditional sealants.

GBA Product Innovation Grant Amount: \$100,000

Leadership Team: The Ductmate Industries' leadership team includes Andrew Male, Manager of New Product Development, and Vince Bloom, Chemical Engineer of Ductmate Industries. The University partner is Dr. Patrick Smolinski, Associate Professor in the Department of Mechanical Engineering and Materials Science at the University of Pittsburgh. Ductmate is an industry leader in the manufacturing of commercial ductwork connections and ductwork accessories and its history and innovative design is well-documented through numerous patents which reduce duct leakage and improve overall duct system performance.

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