



# SUCCESS

COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENT

## CONTRACT NUMBER:

17-RH-01-CRD

## COMPANY NAME:

Owens Corning  
Toledo, OH

## TECHNICAL PROJECT OFFICE:

711HPW  
WPAFB, OH

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## AFRL AGREEMENT Aimed at Protecting Public from UAS Noise

**WRIGHT-PATTERSON AIR FORCE BASE, Ohio** – The Air Force Research Laboratory 711th Human Performance Wing, Airman Systems Directorate, Battlespace Acoustics Branch and Owens Corning have entered into a Cooperative Research and Development Agreement to develop and understand best practices for measuring and labeling the sound produced by small commercial unmanned air systems.

The Department of Defense uses a variety of UAS platforms to perform military functions. Similarly, commercial entities use UASs as a cost-effective solution for numerous activities, including agriculture and forestry management, cellular tower inspection, and landfill monitoring. Given the growing current and potential



*A small unmanned aerial system undergoes tests in the Acoustics Laboratory at Owens Corning Science and Technology Center in Granville, Ohio. (Photo courtesy of Owens Corning)*

use of these devices in the future, UASs could become a source of sound pollution. As a result, researchers at the AFRL are working to develop sound regulations to avoid what could become a critical issue for the public.

Under the agreement, Owens Corning will measure the acoustic characteristics of UAS platforms in its world-class acoustic laboratory while the Air Force will provide open-air characterization at its White Sands Missile Range site in New Mexico. The research obtained from this agreement will be utilized to develop a national standard which could include measuring and labeling innovative acoustic materials and structures as well as defining manufacturing specifications for key technologies.

“The goal of this agreement is to recommend a national measurement and sound power labeling standard for small unmanned air systems. If adopted by the Federal Aviation Administration, all manufacturers of these products would be required to label their drones, similar to how appliance manufacturers attach a sound power label to a dishwasher,” stated John Hall, program manager for AFRL/711HPW.

“Through this agreement, we are able to capture the sound power radiating from drones as measured in an anechoic (echo free) facility in a practical way rather than trying to measure drones in flight,” continued Hall.

The Owens Corning Acoustic Research Laboratory in Granville, Ohio was designed by Hale Sabine, a pioneer of acoustic research, and is accredited through the National Voluntary Laboratory Accreditation Program (NVLAP). The lab houses three reverberant chambers and an anechoic chamber that enables precise sound measurements that acoustically simulate a drone in the sky at a high altitude.

For more information about CRADAs and other technology transfer opportunities with the Air Force, call the Air Force Technology Transfer Program Office at 937-904-9830.

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