AGILE TOOLING DATABASE

Printing your own tools is here and now with the advancement of 3D printing. The importance of thermal conductivity, electrical resistivity and compression strength are essential to design stamping, forming, casting, and injection molding tools, but these material property values are not currently included in additive manufacturing literature. There is a need for an agile tooling database that provides typical material properties used by engineers.

PROPOSAL

CDME is proposing test prints to allow for validation of published data and for the collection of additional data relevant to additive materials. A line-up of initial collaborators has been assembled, and we are looking for additional sponsors to help us identify materials or material types to be tested.

PROJECT GOALS

• Create a library of test prints using different materials
• Create a standard database that includes values for conductivity, electrical resistivity, compression strength, tensile strength, temperature resistance, elasticity, and yielding for different materials used in agile tooling.

MARKET OPPORTUNITIES

Manufacturing and industrial applications:
• Automotive
• Commercial products
• Prototyping
• Tooling

KEY FEATURES AND BENEFITS

• Universal and available to all manufacturers
• Eliminates trial and testing of materials for critical material properties

HOW TO JOIN

This multi-industry project is intended to continuously evolve as new additive materials, equipment, and processes enter the marketplace. The program will be executed and managed by CDME, which performs engineering and manufacturing services for industry partners.

Interested industrial sponsors may join this program for a minimum price of $5,000, renewable each year based on the needs of the sponsor. Industry sponsors will have the ability to provide input into the work being performed that year, receive a monthly report detailing the program progress, participate in bi-monthly industry meetings, and receive the yearly edition of the technical report. The price for direct work will be negotiated on a case-by-case basis. Each year, the project team and current sponsors will set new targets for the work to be completed in the subsequent year.

CONTACTS

CDME
1314 Kinnear Road, Columbus OH, 43212
614-292-6570 • cdme.osu.edu

John Bockbrader, Project Manager
bockbrader.2@osu.edu

Richard Teynor, Project Engineer
teynor.2@osu.edu