

- Optimize performance
- Avoid cost
- Increase innovation & quality
- Comply with regulations
- Enable eco design
- Identify replacement materials

Industrial relevance

Aerospace, wind energy, defense, motorsports, nuclear, any application making innovative use of alloys or composite materials

CES Aero Selector

CES Aero Selector is a specialist edition of the PC-based software that aids critical decisions relating to materials, processes, and eco design. CES Aero Selector helps engineers and materials experts in high-performance engineering industries.

As its name suggests, a key focus of this product is aerospace and data about the alloys, composites, and ceramics used in that industry. But many of these materials also find uses in other areas where reliable mechanical performance or materials innovation are important—examples include wind energy, defense, and nuclear applications.



Core tools and data

Core CES Selector tools and data are described in the 'CES Selector' product overview. Combined with aerospace property data (below), these allow you to analyze and select from the widest possible range of relevant engineering materials.

Alloy and composite property data

The information resources available with the Aero Selector edition are:

MaterialUniverse—Granta's comprehensive data module providing properties for a complete range of materials and processes - ideal for broad-based comparisons and initial screening during materials selection.

MMPDS (formerly Mil-Handbook-5)—the authoritative source of aerospace design allowables for alloys and fasteners. MMPDS contains over 2,000 records of statistically-derived design data for aerospace alloys and more than 1,000 sheet material/fastener combinations. MMPDS maintains this data with input from its Industrial Steering Group (ISG). Granta is an active ISG member.

CMH-17 (formerly Mil-Handbook-17)—over 1,000 records of test data for polymer matrix, metal matrix, and ceramic matrix composites. Data covers a wide range of environmental conditions, including the worst case 'hot-wet' scenario.

ESDU MMDH (optional)—the preeminent European source of design strength data for metallic materials in aerospace. The handbook started out as UK Def Stan 00-932, following ten years of data collection and analysis. The current version contains nearly 600 materials specifications in over 2,500 datasheets.

Firehole Composites—data covering over 300 continuous fiber reinforced polymer composite grades, drawn from manufacturers, leading testing labs, and research institutions. Supports design using composite materials. Enables easy comparison between composites and traditional materials.