CES Selector™ enables smart materials decisions. It is the industry standard software tool for materials selection and graphical analysis of materials properties.

**Key benefits**

- Use materials to innovate and evolve your products
- Quickly identify solutions to materials issues
- Confirm and validate your choice of materials
- Reduce material and development costs
- Change the way you work with colleagues and suppliers.

Find, plot, and compare materials data. Fast access to comprehensive, easy-to-search data on your PC. Use interactive charting and comparison tools with the unique MaterialUniverse™ data, covering almost 4,000 engineering materials, plus specialist data modules on plastics, metals, composites (details overleaf), and additive manufacturing.

**Materials selection.** Get your materials choices right first time during product development. Its easy to apply a proven, auditable, repeatable materials selection method. Gain confidence in your decisions and generate new ideas.

**Materials substitution and equivalency.** Respond quickly to problems with material supply, regulation, increasing cost, or obsolescence. Find equivalent or similar materials at the touch of a button and easily compare material properties.

**Minimize cost.** Identify low-cost routes early in design, applying cost data, ‘cost per unit of function’ tools, and part cost estimation.

**Materials development.** Use graphical tools to identify gaps in the market that can be filled by new material solutions. Understand how your new material compares and communicate its advantages.

**Lightweighting and hybrid materials.** Experiment with the Hybrid Synthesizer™ models for predicting hybrid material properties, reducing development time and guiding your materials testing.

**Eco design and restricted substances.** Reduce environmental impact and minimize restricted substances risk at the design stage by using detailed eco and regulatory materials data and tools.

www.grantadesign.com/products/ces
Materials information

At the heart of CES Selector is a database of materials and process properties. It comes pre-loaded with your choice of data from Granta’s comprehensive library. Of particular value is MaterialUniverse™—nearly 4,000 records providing properties for virtually every type of purchasable engineering material. A strength is that there are no ‘holes’ in this data—property values are either populated with known, referenced data or estimated using Granta technology. The result is that you can screen the complete ‘universe’ of candidate materials without excluding those for which you may not have complete data. New links to the Senvol Database™ enhance the inclusion of additive manufacturing materials and machines information.

New for CES Selector 2019 – consider additive manufacturing (AM) in material selection studies and compare the performance of materials produced by additive and conventional technologies. The chart above shows the strength and elongation characteristics of precipitation hardened stainless steel (17-4PH) produced by AM (orange) and conventional (teal) technologies.

Choose your data. Choose the editions of the software which is right for you:

<table>
<thead>
<tr>
<th>Edition</th>
<th>Included data and focus of Edition</th>
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<tbody>
<tr>
<td>CES Polymer Selector</td>
<td>CAMPUS®, M-Base, and Prospector® (formerly IDES) plastics data, plus ChemRes (chemical and solvent resistance). For plastics and thermoplastic elastomers (TPEs).</td>
</tr>
<tr>
<td>CES Metal Selector</td>
<td>MI-21 metals, SteelSpec and StahlDat SX steels. For study of metals, e.g., global equivalencies.</td>
</tr>
<tr>
<td>CES Aero Selector</td>
<td>MMPDS aero alloys, Mil-Handbook-17, and Firehole composites. Used in aerospace, defense, motorsports, energy, and related industries.</td>
</tr>
<tr>
<td>CES Medical Selector</td>
<td>Medical MaterialUniverse data for medical device design, plus all Polymer Selector modules.</td>
</tr>
<tr>
<td>Add-on data (available for all editions)</td>
<td>ASM Medical Materials, ASME BPV Code, Coatings, ecoivent Key Materials Indicators, ESDU MMDH, Global Powder Metallurgy, JAHM Curve Data for simulation and high temperature properties, Senvol Database™ for Additive Manufacturing, and StahlDat Sheet Steels.</td>
</tr>
</tbody>
</table>

CES Constructor™ (optional) enables you to add and edit data in your database.

More information: read the case studies and watch videos at www.grantadesign.com/products/ces