Characteristics on the database: Knovel Library

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Content

Database of full-text e-books and other interactive tools. The subscription of Poznan University of Technology (PUT) allows to access approximately **11 000 book titles** that can be searched in full text **in 20 thematic collections**:

Aerospace & Radar Technology (783)	Mechanics & Mechanical Engineering (1266)
Biochemistry, Biology & Biotechnology (354)	Metals & Metallurgy (932)
Chemistry & Chemical Engineering (1192)	Nanotechnology (240)
Civil Engineering & Construction Materials (1306)	Oil & Gas Engineering (993)
Electrical & Power Engineering (633)	Plastics & Rubbers (707)
Electronics & Semiconductors (669)	Regulatory Information (4)
Fire Protection Engineering& Emergency Response (138)	Sustainable Energy & Development (960)
Food Science (565)	Try Knovel (244)
General Engineering and Projec Administration (1732)	Knovel Sampler (132)
Industrial Engineering & Operations Management (427)	
ASM International Materials Collection (76) **– Premium collection**	

The database encompasses a comprehensive array of disciplines, including chemical engineering, mechanical engineering, civil engineering, food science, environmental engineering, and materials science. The Knovel platform employs sophisticated search and interactive analytical tools, facilitating access to 45 highly specialized databases. It includes interactive tables, graphs, equations, diagrams, as well as specialized dictionaries (36) and encyclopedias (27) pertinent to the aforementioned disciplines.

Search

- **Property Search** – search by material or substance name and their properties, with the option to select (drag and drop in the search window) many different parameters, e.g., chemical composition, physicochemical, toxic, thermodynamic, anticorrosive, optical, spectroscopic, physical constants, and others. Data on material properties contained in the literature are searched for using the tool **Material Property Search.**
- **Browse** – browse the collection of books subscribed to by PUT, organised by topic (My Subscription) or all those in the database (All Content).
- **Search Knovel** – search by various criteria using defined keywords or phrases “in quotation marks” with the use of logical operators such as: AND, OR, NOT, wildcards *, in search fields such as author, book title, keyword field, ISBN, with the option of searching for synonyms. Searches can also be performed in equations, tables and interactive graphs (see **Knovel Overview**– an instructional video covering the most important features of the Knovel database, search options, filtering results, and an overview of the “section "My Knovel”).

Full-text publications are enriched with tables, charts, and interactive equations.

The database provides access to over 5,000 **Interactive Equations** in 13 thematic collections. Interactive graphs in spreadsheets are created based on data contained in tables. Interactive equations, with built-in programming and calculation tools, enable calculations according to specified parameters verified in the literature. The equations can be accessed from the book's table of contents and from the **Browse all Subject tab, then Interactive Equations.**

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The More Tools tab provides access to all tools, including the interactive **Periodic Table** and the **Stems Calculators** tool, which covers the thermodynamic properties of water and steam and their transport properties, developed by the International Association for the Properties of Water and Steam - International Association for the Properties of Water and Steam - IAPWS-IF-97 (2012).

In the Unit Converter tab, you can also use the measurement converter, available in two modes. The mode for licensed users offers many more options customized for the user.

Selected databases available on the Knovel platform (others in the Browse/Tools & Content tab):

Knovel Data Analytics – NIST Standard Reference Database 103b is a large electronic database containing detailed descriptions and property data for approximately 27,000 pure compounds. The chemicals are described by relevant metadata, and expert software-generated recommended property data based on approximately 5.6 million experimental thermophysical and thermochemical property data points and their uncertainties.

1. **MatWeb Ceramics Material Data Sheets** – contains reference data for above 10,000 ceramic materials. These materials fall under twenty types with various sub-types, including Ceramic, Aerogel, Boride Carbide, Ceramic Matrix Composite, Clay, Concrete, Glass, Glaze, Halide, High Temp Ceramic Resin, Hydride Machinable Ceramic, Nitride Oxide, Phosphide/Pnictide, Piezoelectric, Potting/Casting Ceramic, Slurry, Sulfide/Chalcogenide. The reference data in the Database is organized and presented for viewing in two ways, i.e. interactive tables in US Customary and Metric formats and HTML material datasheets.

2. **MatWeb Composite Material Data Sheets** – contains reference data for almost 1,800 composite materials. These materials fall under nine types: Carbon Fiber/Thermoset Composite, Ceramic Matrix Composite, Composite Core Material, Composite Fibers, Composite SMC, Epoxy/Carbon Fiber Composite, Metal Matrix Composite, Phenolic, Carbon Fiber Composite and Phenolic, Graphite Cloth Composite.

3. **MatWeb Fluids Material Data Sheets** - contains reference data for above 7,000 Fluid materials. These materials fall under three types, namely Lubricant (with 18 sub-categories), Quenchant and Solvent. The reference data in the Database is organized and presented for viewing in two ways, i.e. interactive tables in US Customary and Metric formats and HTML material datasheets.

4. **MatWeb Metal Material Data Sheets** – contains over 17,000 material data sheets (MDS) for ferrous and nonferrous groups, electronic/magnetic alloy, intermetallic, metal matrix composite and metal foam, mesh or honeycomb. Ferrous includes all varieties of steel and iron. Nonferrous include aluminum, copper, nickel, zinc, precious metals and other non-iron based alloys. There are two data tables, one in US Customary Units, one Metric, with basic properties and links to MDS making it easy to filter, sort, and search for specific materials or properties. Most groups have overviews summarizing the properties, processing methods and applications, which are available in the Category Overview Datasheets section. Most properties in tables and MDS are field searchable. MDS can be

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opened from the Table of Contents page and from links in the interactive tables, and all data from the MDS are indexed in the Knovel Material Property Search to support numeric value search.

5. **MatWeb Plastic Material Data Sheets** - This newly updated version of MatWeb Plastic Material Data Sheets (MDS) has been expanded to include additional 28,000 new datasheets for a total of more than 102,000 plastic materials. The majority of the materials (more than 90 %) fall under two main types, namely thermoplastics and thermosets. Thermoplastics include nylons, polyesters, polyethylenes, polypropylenes, ABS and thermoplastic elastomers. Thermosets include polyurethanes, epoxies, phenolics and polyesters.

Access Online

Additional possibilities Knovel platform`s

The Knovel Library offers the possibility of individual registration (in the **My Knovel** tab) and allows you to set up an **individual MyKnovel account**.

Registration is possible only from computers of the university network with an email address from university domains (*put.poznan.pl; doctorate.put.poznan.pl; student.put.poznan.pl*).

Individual account in My Knovel allows to:

- remote access from outside the university network,
- creating and organizing your own folders,
- sharing folders with selected users,
- saving the titles and content of your favorite books,
- saving your search history and search queries.

See also: **Knovel Quick Start Guide**

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